# *Appendix*

### *A1 Compound 3.2 binding with SA*

To investigate the interaction between **3.2** and SA. The changes in absorption of **3.2** upon addition of SA were measured in buffer (25 mM MOPS, pH 7.0, 50 mM NaCl) at 25° C (Figure A1.1).

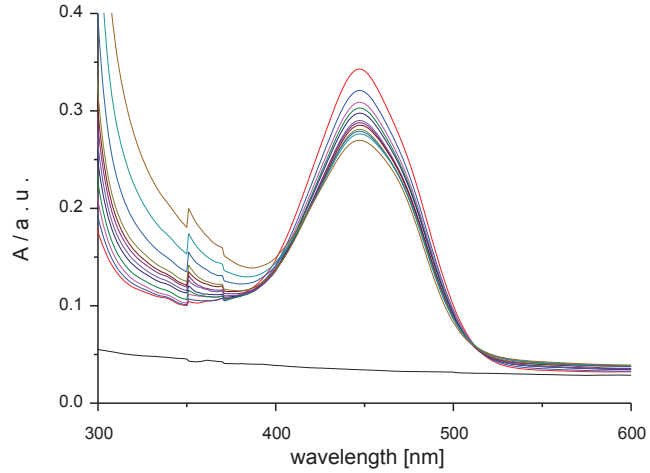



**Figure A1.1:** UV-visible spectra for 0.0187 mM **3.2** upon addition of 0 - 0.118 mM SA, at 25 °C in buffer (25 mM MOPS, pH 7.0, 50 mM NaCl).

Figure A1.1 shows that compound **3.2** displays a hypochromic shift in absorbance upon addition of SA with a maximum change in absorbance at 447 nm. This decrease in UV-visible absorption may have occurred as a result of geometrical distortion of **3.2** when it interacts with SA, but it may also be as a consequence of a local medium effect. The binding of **3.2** to SA is also accompanied by a small red-shift in the UV-visible absorption. The red shift suggests an increase in effective conjugation, *i.e.,* an increase in the planarity of **3.2** upon interaction with SA.) Ligand **3.2.** This observation suggests absorbance and scattering of light by SA in the solution. As result of that, we need to remove any effect caused by SA from the UV-visible spectra. Otherwise, there could be on the effect on the binding constant parameters.

To quantify the affinity of **3.2** for SA by plotting the corrected absorbances 447 nm as a function of the concentration of SA (Figure A1.2, for data in tabular format see appendix, Tables A55.15) and (A55.16).

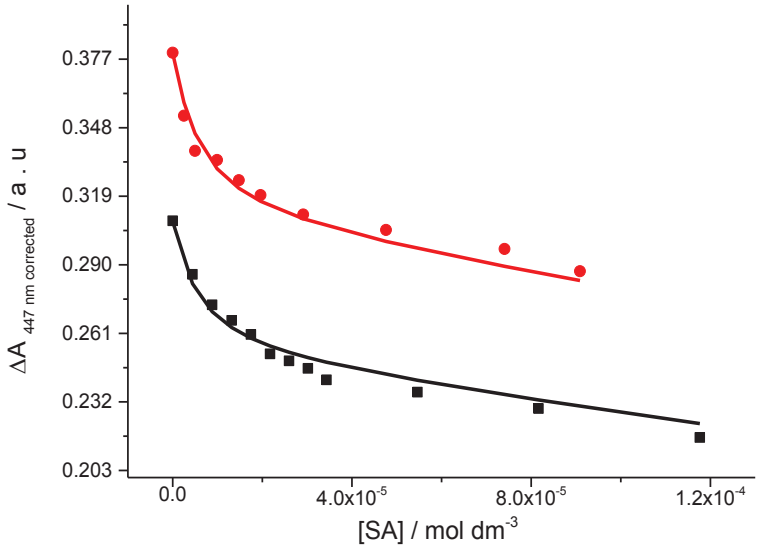



**Figure A 1.2:** Corrected absorbance at 447 nm for 0.018 mM **3.2** (●) upon addition of 0 - 0.11 mM SA concentration and 0.023 mM **3.2** (■) at 447 nm upon addition of 0 - 0.09 mM SA concentration, at 25 °C in buffer (25 mM MOPS, pH 7.0, 50 mM NaCl). The solid lines represent a global fit of a multiple independent sites model to the data.

Figure A1.2 shows a decrease in absorbances at 447 nm upon addition of SA. The binding affinity $K_{binding}$ and the binding site per protein $1/n$ were determined by fitting a multiple independent binding sites model, which also takes ligand dilution into account, giving an equilibrium constant $K_{binding}$ of $(1.7 \pm 0.7) \times 10^5$ $M^{-1}$ and a binding site were restricted at 0.5 mole of SA per mole of **3.2**. As the same with **3.1,** the stoichiometry was restricted because the line fit does not give reasonable parameters with variable stoichiometry. The fit suggests that two molecules of **3.2** interacts with one SA and that SA has a binding site accessible to **3.2**.

### *A2. Compound 3.5 binding with SA*

We also wanted to know whether the binding of **3.5** to SA. The changes in absorption of **3.5** upon addition of SA were measured in buffer (25 mM MOPS, pH 7.0 and 50 mM NaCl) at 25 °C (Figure A2.1).

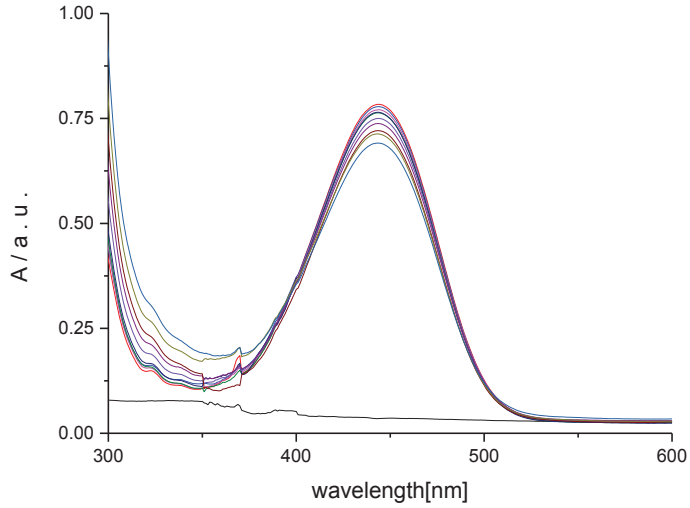



**Figure A2.1:** UV-visible spectra for 0.069 mM **3.5** upon addition of 0 − 0.014 mM SA, at 25 °C in buffer (25 mM MOPS, pH 7.0, 50 mM NaCl).

Figure A2.1 illustrates that **3.5** exhibits a hypochromic shift in absorbance upon addition SA with a maximum change in absorbance at 444 nm. This decrease in UV-visible absorption may have occurred because of geometrical distortion of **3.5** when it interacts with SA, but it may also be as a result of a local medium effect.

To quantify the affinity of **3.5** for SA, the absorbances at 444 nm the absorbances was plotted as a function of concentration of SA (Figure A2.2, for data in tabular format see appendix, Tables A55.19).

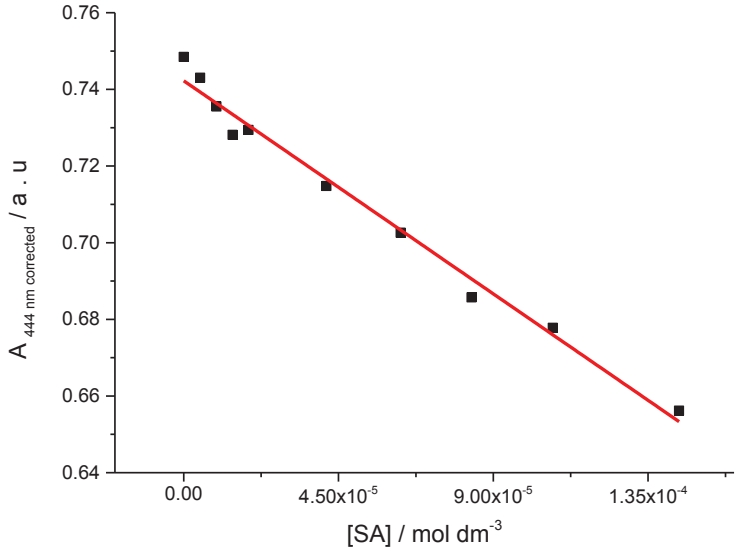



**Figure A2.2:** Absorbance at 444 nm of for 0.069 mM **3.5** as a function of SA concentration, at 25 °C in buffer (25 mM MOPS, pH 7.0, 50 mM NaCl). The solid line represents the best fit to the data in terms of a multiple independent binding sites model.

The binding affinity $K_{binding}$ and binding site were determined by fitting a multiple independent binding sites model which also takes ligand dilution into account to the data. The fit gives giving very a small an equilibrium constant $K_{binding}$ of ($8.7 \times 10^{38} \pm 6.0 \times 10^{42}$) $M^{-1}$ for a binding site of ($5434 \pm 8.7 \times 10^{10}$). The fit suggests that **3.5** does not interact with SA and the decrease in absorbance as result of simple dilution only.

### *A3 Compound 3.6 binding with SA*

We need to study the binding of **3.6** to SA using UV-visible spectroscopy. The changes in absorption of **3.6** upon addition of SA were measured in buffer (25 mM MOPS, pH 7.0, 50 mM NaCl) at 25 °C (Figure A3.1).

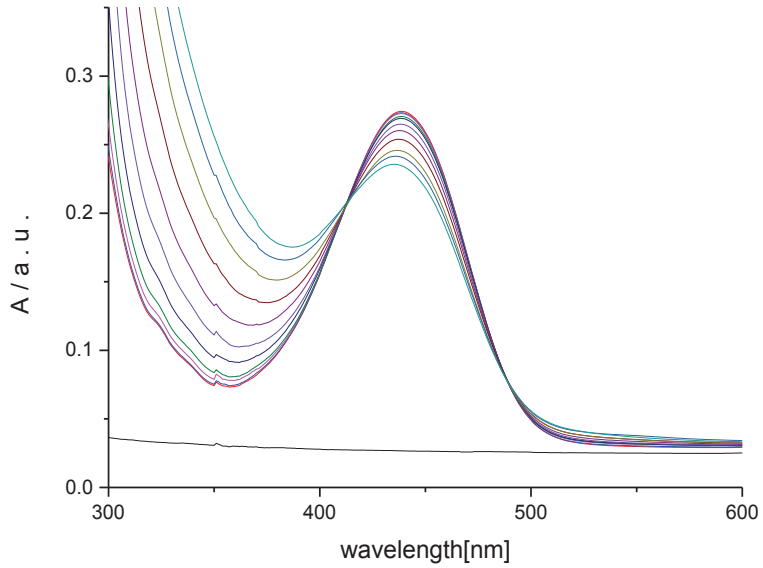



**Figure A3.1**: UV-visible spectra for 0.015 mM **3.6** upon addition of 0 − 0.28 mM SA, at 25 °C in buffer (25 mM MOPS, pH 7.0, 50 mM NaCl).

Addition of SA to **3.6** was found a decrease in absorbance at 440 nm and an isosbestic point at 380 nm. As before the increase around 350 nm is caused by the increasing scattering of SA. Hence the apparent isosbestic point does not indicate equilibrium between free and bound ligand in this case.

To quantify the affinity of **3.6** for SA, the absorbances at 440 nm were plotted as a function of concentration of SA (Figure A3.2, for data in tabular format see appendix, Tables A55.20).

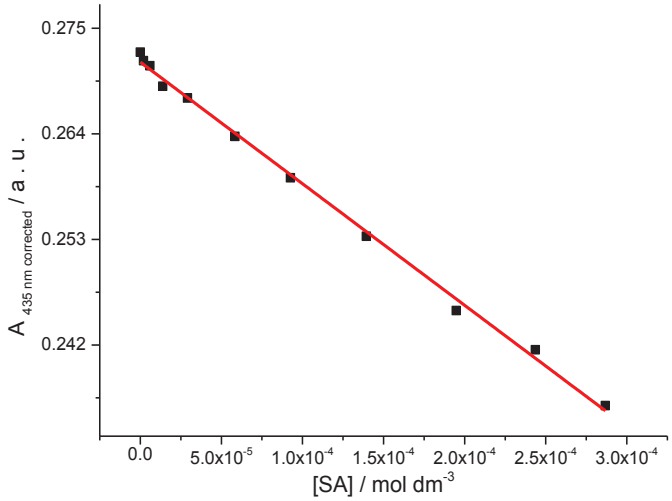



**Figure A3.2:** Absorbance at 440 nm for 0.015 mM **3.6** as a function of SA concentration, at 25 °C in buffer (25 mM MOPS, pH 7.0, 50 mM NaCl). The solid line represents the best fit to the data in terms of a multiple independent binding sites model.

Figure A3.2 shows the binding affinity $K_{binding}$ and binding site $1/n$ were determined by fitting a multiple independent binding sites model, which also takes ligand dilution into account to the data. The fit gives giving small an equilibrium constant $K_{binding}$ of $(4.9 \times 10^{22} \pm 1.2 \times 10^{32})$ $M^{-1}$ for binding site of (9973 ± 0.0) mole of SA per mole of ligand **3.6**. The fit corresponded to simple dilution and thus suggests that **3.6** does not interact with SA and the decrease in absorbance is the result of simple dilution only.

### *A4 Compound 3.8 binding with SA.*

We need to study the binding of **3.8** to SA, the changes in absorption of **3.8** upon addition of SA were measured in buffer (25 mM MOPS, pH 7.0 and 50 mM NaCl) at 25 °C (Figure A4.1).

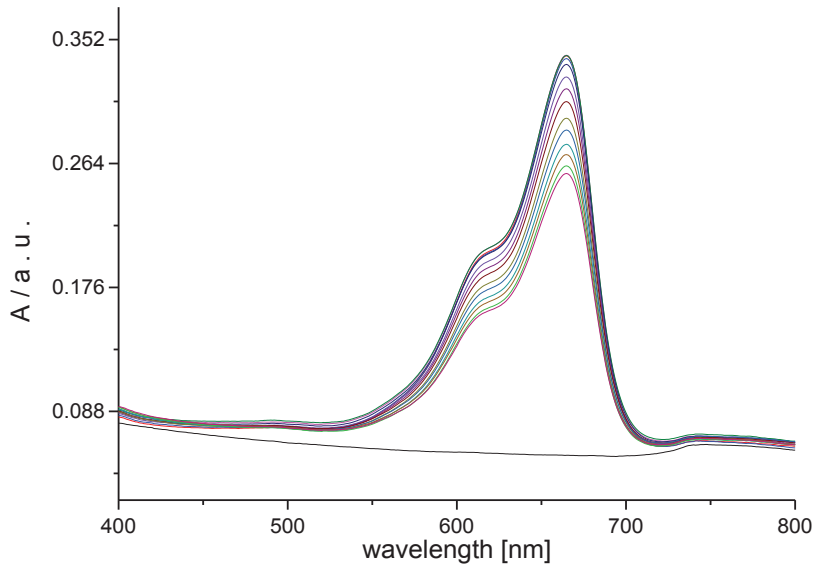



**Figure A4.1:** UV-visible spectra for 0.0042 mM **3.8** upon addition of 0 - 0.025 mM SA, at 25 °C in buffer (25 mM MOPS, pH 7.0, 50 mM NaCl).

Figure A4.1 shows a hypochromic with a maximum change at 664 nm for **3.8** upon addition of SA. This decrease in UV-visible absorption may have occurred as a result of geometrical distortion of **3.8** when it interacts with SA, but it may also be as a result of local medium effect.

To quantify the affinity of **3.8** for SA, the absorbance at 664 nm was plotted as a function of concentration of SA (Figure A4.2, for data in tabular format see appendix, Tables A55.22).

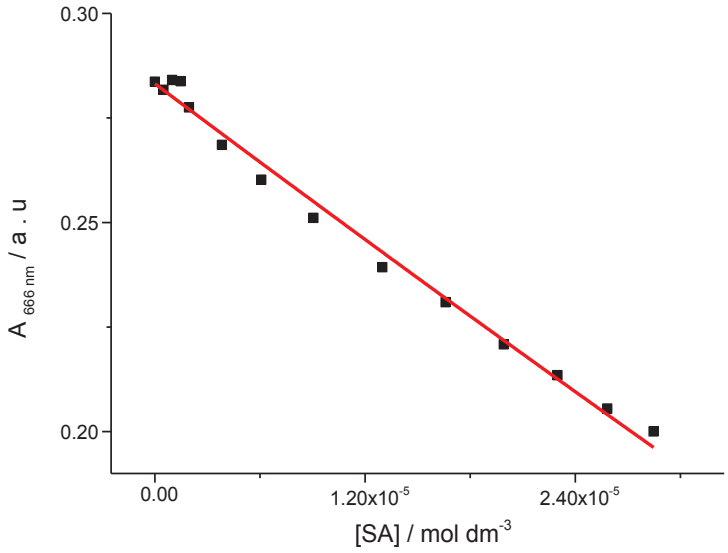



**Figure A4.2**: Absorbance at 664 nm for 0.0042 mM **3.8** as a function of SA concentration, at 25 °C in buffer (25 mM MOPS, pH 7.0, 50 mM NaCl). The solid line represents the best fit to the data in terms of a multiple independent binding sites model.

Figure A4.2 shows an obvious decrease in the absorbance of **3.8** upon addition of SA. The binding affinity $K_{binding}$ and binding site *n* were determined by fitting a multiple independent binding sites model, which also takes ligand dilution into account, to the data. The fit gives giving small an equilibrium constant $K_{binding}$ of (0.0007± 2.4) $\times 10^5$ $M^{-1}$ for a binding site of (0.0002± 7.8) $\times 10^6$. The fit corresponded to simple dilution and thus suggests that **3.8** does not interact with SA and the decrease in absorbance is the result of simple dilution only.

### *A5. Compound 3.10 binding with SA*

We wanted to study the binding of **3.10** to SA. The changes in absorption of **3.10** upon addition of SA were measured in buffer (25 mM MOPS, pH 7.0 and 50 mM NaCl) at 25 °C (Figure A5.1).

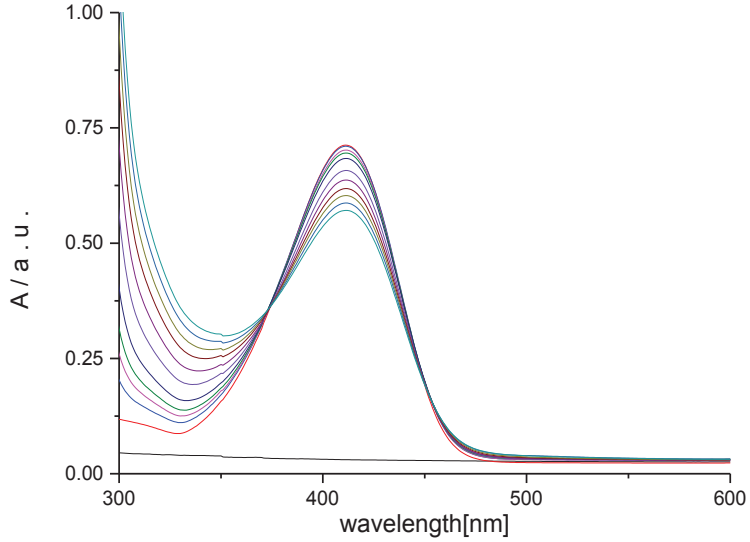



**Figure A5.1**: UV-visible spectra for 0.026 mM **3.10** upon addition of 0 - 0.27 mM SA, at 25 °C in buffer (25 mM MOPS, pH 7.0, 50 mM NaCl).

Figure A5.1 shows a hypochromic with a maximum change at 411 nm for **3.10** upon addition of SA. This decrease in UV-visible absorption may have occurred as a result of geometrical distortion of **3.10** when it interacts with SA, but it may also be as a result of local medium effect.

To quantify the affinity of **3.10** for SA, the absorbance at 411 nm was plotted as a function of concentration of SA (Figure A5.2, for data in tabular format see appendix, Tables A55.24).

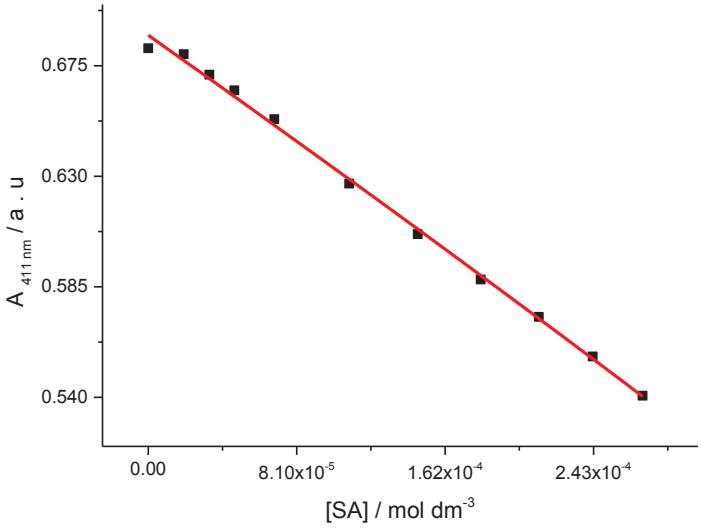



**Figure A5.2**: Absorbance at 411 nm for 0.026 mM **3.10** as a function of SA concentration, at 25 °C in buffer (25 mM MOPS, pH 7.0, 50 mM NaCl). The solid line represents the best fit to the data in terms of a multiple independent binding sites model.

Figure A5.2 shows an obvious decrease in the absorbance of **3.10** upon addition of SA. The binding affinity $K_{binding}$ and binding site $1/n$ were determined by fitting a multiple independent binding sites model, which also takes ligand dilution into account to the data. The fit gives giving small an equilibrium constant $K_{binding}$ of $(0.084 \pm 5.9) \times 10^6$ $M^{-1}$ for a binding site of $(1.9 \times 10^4 \pm 5.2 \times 10^8)$. The fit corresponded to simple dilution and thus suggests that **3.10** does not interact with SA and the decrease in absorbance is the result of simple dilution only.

### *A6. Compound 3.11 binding with SA*

We wanted to study the binding of **3.11** to SA The changes in absorption of **3.11** upon addition of SA were measured in buffer (25 mM MOPS, pH 7.0 and 50 mM NaCl) at 25 °C (Figure A6.1).

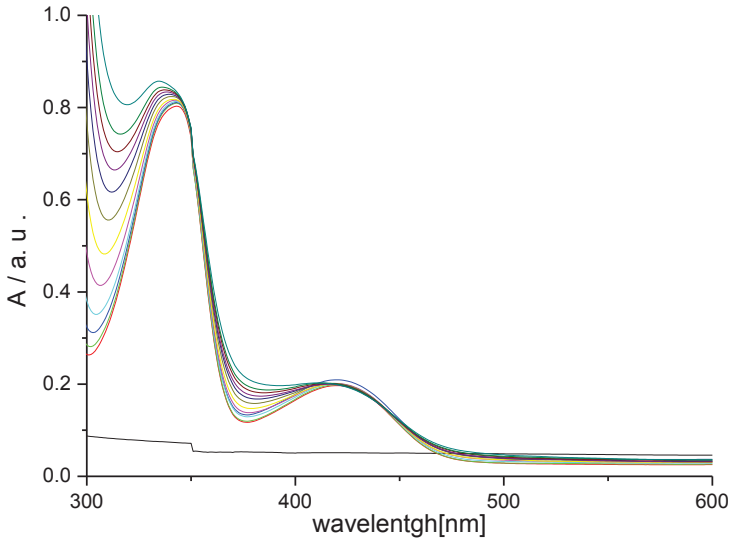



**Figure A6.1:** UV-visible spectra for 0.025 mM **3.11** upon addition of 0 - 0.29 mM SA, at 25 °C in buffer (25 mM MOPS, pH 7.0, 50 mM NaCl).

Figure A6.1 shows a hypochromic with a maximum change at 343 nm for **3.11** upon addition of SA. This decrease in UV-visible absorption may have occurred as a result of geometrical distortion of **3.11** when it interacts with SA, but it may also be as a result of local medium effect.

To quantify the affinity of **3.11** for SA, the corrected absorbance at 343 nm was plotted as a function of concentration of SA (Figure A6.2, for data in tabular format see appendix, Tables A55.25).

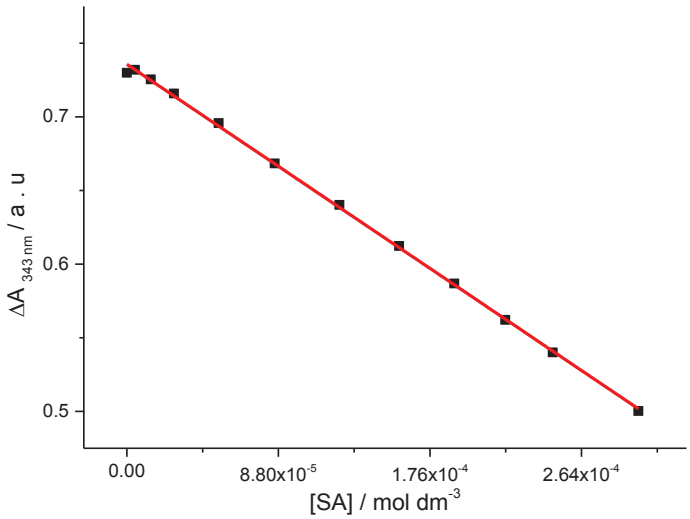



**Figure A6.2**: Corrected absorbance at 343 nm of a solution of 0.025 mM **3.11** as a function of SA concentration, at 25 °C in buffer (25 mM MOPS, pH 7.0, 50 mM NaCl). The solid line represents the best fit to the data in terms of a multiple independent binding sites model.

Figure A6.2 shows an obvious decrease in the corrected absorbance of **3.11** upon addition of SA. The binding affinity $K_{binding}$ and binding site $1/n$ were determined by fitting a multiple independent binding sites model which also takes ligand dilution into account, to the data. The fit gives giving small an equilibrium constant $K_{binding}$ of $(1.3 \times 10^{20})$ $M^{-1}$ for a binding site of (285± 0.0) mole of SA per mole of ligand. The fit corresponded to simple dilution and thus suggests that **3.11** does not interact with SA and the decrease in absorbance is the result of simple dilution only.

### *A7. Compound 3.12 binding with SA.*

To evaluate the binding of **3.12** to SA, the changes in absorption of **3.12** upon addition of SA were measured in buffer (25 mM MOPS, pH 7.0 and 50 mM NaCl) at 25 °C (Figure A7.1).

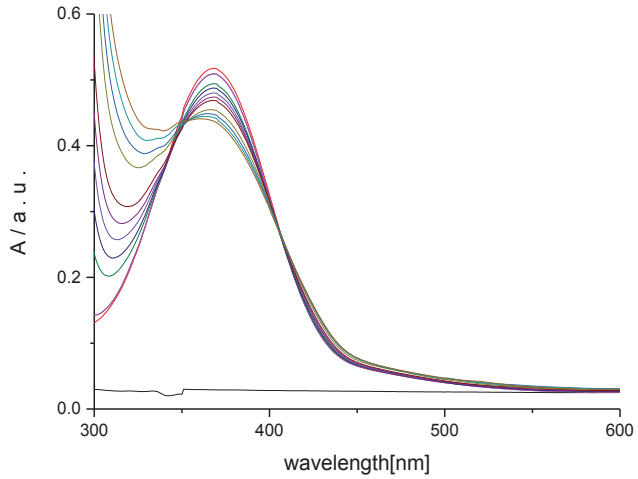



**Figure A7.1**: UV-visible spectra for 0.036 mM **3.12** upon addition of 0- 0.24 mM SA, at 25 °C in buffer (25 mM MOPS, pH 7.0, 50 mM NaCl).

Figure A7.1 shows a hypochromic with a maximum change at 368 nm for **3.12** upon addition of SA. This decrease in UV-visible absorption may have occurred as a result of geometrical distortion of **3.12** when it interacts with SA, but it may also be as a result of local medium effect.

To quantify the affinity of **3.12** for SA, the corrected absorbance at 368 nm was plotted as a function of concentration of SA (Figure A7.2, for data in tabular format see appendix, Tables A55.26).

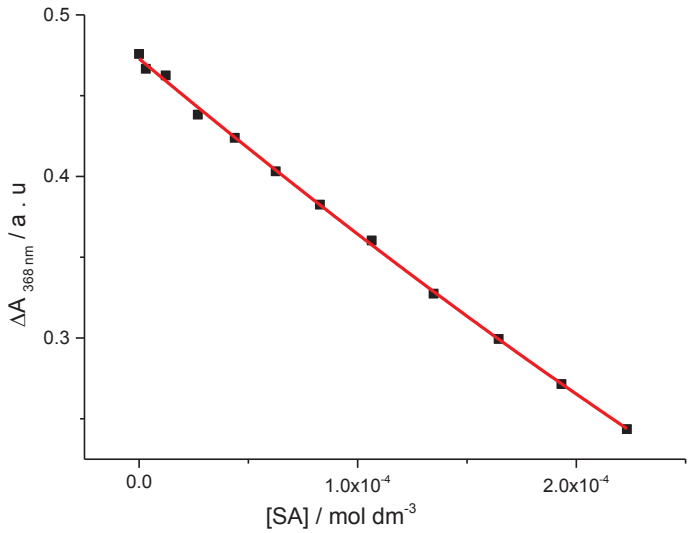



**Figure A7.2**: Corrected absorbance at 368 nm of a solution of 0.036 mM **3.12** as a function of SA concentration, at 25 °C in buffer (25 mM MOPS, pH 7.0, 50 mM NaCl). The solid line represents the best fit to the data in terms of a multiple independent binding sites model.

Figure A7.2 shows a decrease in the corrected absorbance of **3.12** upon addition of SA. The binding affinity $K_{binding}$ and binding site *n* were determined by fitting a multiple independent binding sites model which also takes ligand dilution into account to the data. The fit gives giving small an equilibrium constant $K_{binding}$ of $(0.19 \pm 5.5) \times 10^5$ $M^{-1}$ for a binding site $(0.0174 \pm 3.3) \times 10^4$. The fit corresponded to simple dilution and thus suggests that **3.12** does not interact with SA and the decrease in absorbance is the result of simple dilution only.

### *A8. Compound 3.2 binding with TF*

We wanted to know whether **3.2** and TF. The changes in absorption of **3.2** upon addition of TF were measured in buffer (25 mM MOPS pH 7.0, 50 mM NaCl) at 25 °C (Figure A8.1).

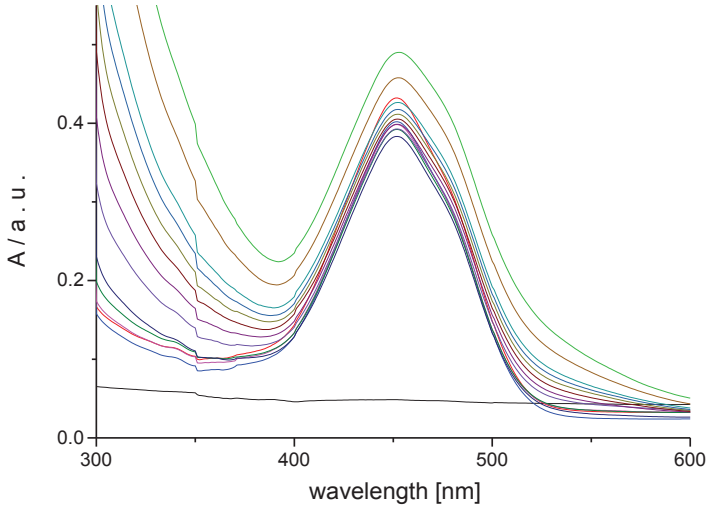



**Figure A8.1**: UV-visible spectra for 0.02 mM **3.2** upon addition of 0 – 0.07 mM TF, at 25 °C in buffer (25 mM MOPS pH 7.0, 50 mM NaCl).

Figure A8.1 illustrates that **3.2** displays a hypochromic shift in the absorbance with 0 - 0.014 mM and hyperchromic 0.014 - 0.072 mM with a maximum change in absorbance at 444 nm upon addition of TF. The decrease and increase in UV-visible absorption may have occurred as a result of geometrical distortion of **3.2** when it interacts with TF, but it may also be as a result of a local medium effect with a scattering of TF.

To quantify the affinity of **3.2** for TF, the corrected absorbances at 444 nm were plotted as a function of the concentration of TF (Figure A8.2, for data in tabular format see appendix, Tables A55.29).

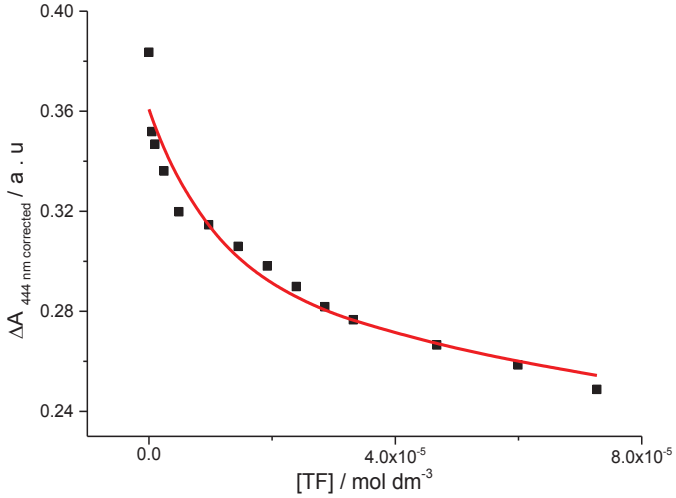



**Figure A8.2**: Corrected Absorbance at 444 nm for 0.02 mM **3.2** upon addition of 0 – 0.07 mM TF at 25 °C in buffer (25 mM MOPS, pH 7.0, 50 mM NaCl). The solid lines represent the best fit to the data fit in terms of a multiple independent binding sites model.

Figure A8.2 shows a decrease in the absorbance at 444 nm upon addition of TF. The binding affinity $K_{binding}$ and the binding site per protein $1/n$ were determined by fitting a multiple independent binding sites model which also takes ligand dilution into account data, giving an equilibrium constant $K_{binding}$ of $(2.9 \pm 1.4) \times 10^4$ $M^{-1}$ for a binding site restricted to 0.25. The fit suggests that **3.2** interacts and that TF has a binding site accessible to **3.2**.

### *A9. Compound 3.3 binding with TF*

We wanted to know whether the binding **3.3** and TF. The changes in absorption of **3.3** upon addition of TF were measured in buffer (25 mM MOPS, pH 7.0, 50 mM NaCl) at 25 °C (Figure A9.1).

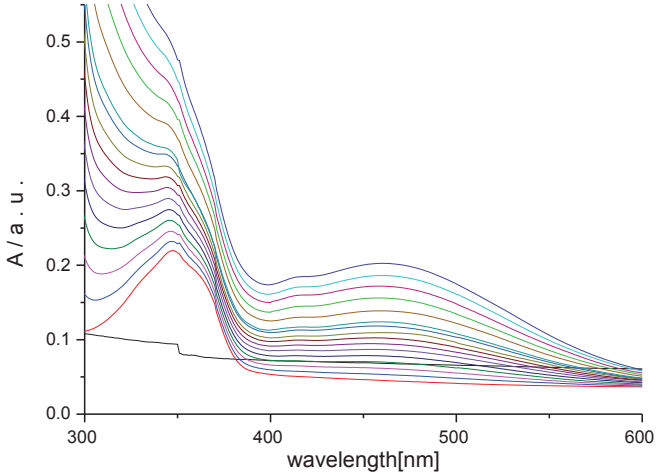



**Figure A9.1**: UV-visible spectra for 0.021 mM **3.3** upon addition of 0 – 0.042 mM TF, at 25 °C in buffer (25 mM MOPS, pH 7.0, 50 mM NaCl).

Figure A9.1 illustrates that **3.3** displays a hyperchromic shift, in the absorbance with a maximum change in absorbance at 347 nm upon addition of TF. The decrease in UV-visible absorption may have occurred as a result of geometrical distortion of **3.3** when it interacts with TF, but it may also be as a result of a local medium effect with a scattering of TF.

To quantify the affinity of **3.3** for TF, the corrected absorbances at 347 nm were plotted as a function of the concentration of TF (Figure A9.2, for data in tabular format see appendix, Tables A55.30).

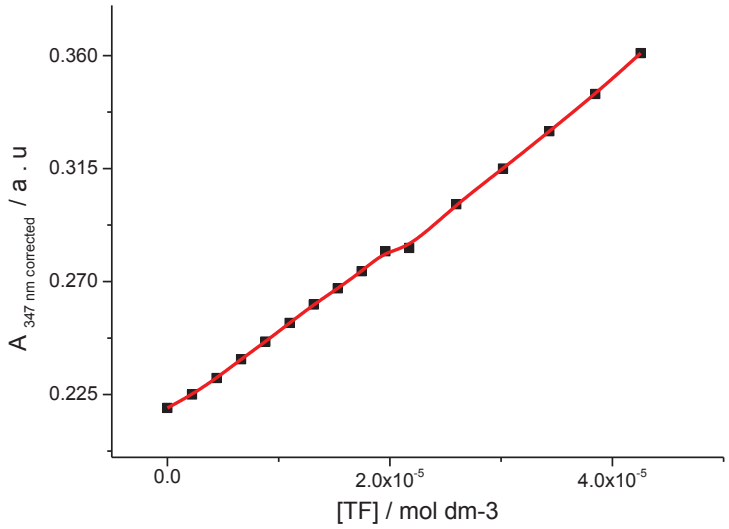



**Figure A9.2:** Corrected absorbance at 347 nm for 0.021 mM **3.3** upon addition of 0 – 0.045 mM TF concentration, at 25 °C (25 mM MOPS, pH 7.0, 50 mM NaCl). The solid line represents the best fit to the data fit in terms of a multiple independent binding sites model.

Figure A9.2 shows a noticeable increase in the absorbance at 347 nm for **3.3** upon addition of TF. The binding affinity $K_{binding}$ and binding site per protein were determined by fitting a multiple independent binding sites model, which also takes ligand dilution into account data. The fit gives giving small an equilibrium constant $K_{binding}$ of $(8.4 \times 10^{41} \pm 3.9 \times 10^{41})$ $M^{-1}$ for a binding site of $(114 \pm 0.00) \times 10^4$ mole of TF per mole of ligand. The fit corresponded to simple dilution and scattering upon addition TF and thus suggests that **3.3** does not interact with TF and the increase in absorbance is the result of scattering only.

### *A10. Compound 3.4 binding with TF*

We wanted to know whether the binding **3.4** and TF. The changes in absorption of **3.4** upon addition of TF were measured in buffer (25 mM MOPS, pH 7.0, 50 mM NaCl) at 25 °C (Figure A10.1).

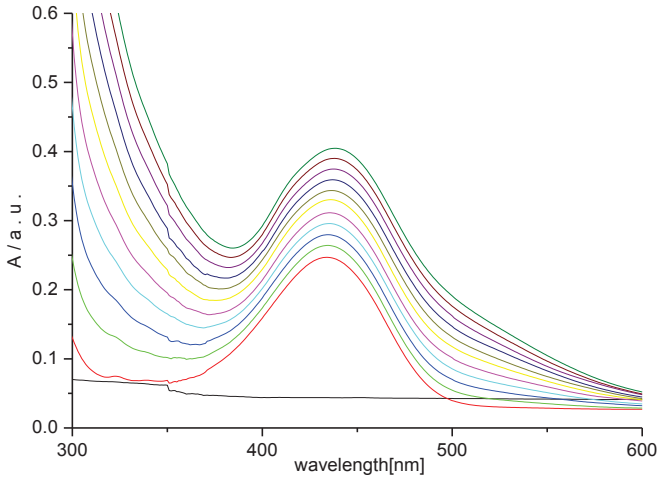



**Figure A10.1:** UV-visible spectra for 0.017 mM **3.4** upon addition of 0 – 0.045 mM TF, at 25 °C in buffer (25 mM MOPS, pH 7.0, 50 mM NaCl).

Figure A10.1 illustrates that **3.4** displays a hypochromic shift, in absorbance with a maximum change in absorbance at 434 nm upon addition of TF. The decrease in UV-visible absorption may have occurred as a result of geometrical distortion of **3.4** when it interacts with TF, but it may also be as a result of a local medium effect with a scattering of TF.

To quantify the affinity of **3.4** for TF, the corrected absorbances at 434 nm were plotted as a function of the concentration of TF (Figure A10.2, for data in tabular format see appendix, Tables A55.31).

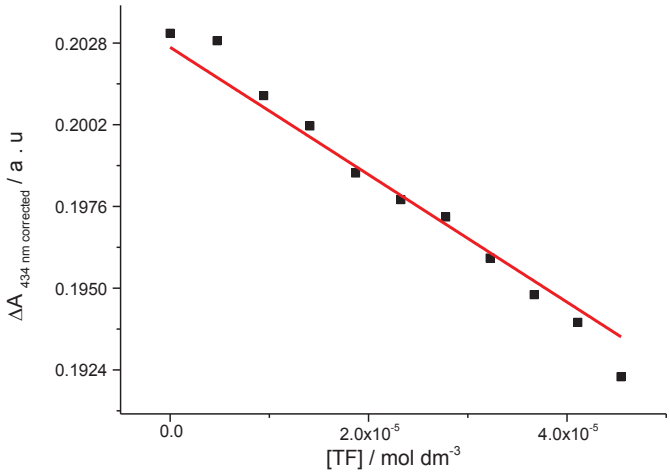



**Figure A10.2:** Corrected absorbance at 434 nm for 0.017 mM **3.4** upon addition of 0 – 0.045 mM TF concentration, at 25 °C in buffer (25 mM MOPS, pH 7.0, 50 mM NaCl). The solid line represents the best fit to the data fit in terms of a multiple independent binding sites model.

Figure A10.2 shows a decrease in absorbance at 434 nm for **3.4** upon addition of TF. The binding affinity $K_{binding}$ and binding site per protein were determined by fitting a multiple independent binding sites model, which also takes ligand dilution into account data. The fit gives giving small an equilibrium constant $K_{binding}$ of (0.001 ± 0.00) $M^{-1}$ for a binding site of (13.0 ± 0.00). The fit corresponded to simple dilution and thus suggests that **3.4** does not interact with TF and the decrease in absorbance is the result of simple dilution only.

### *A11. Compound 3.5 binding with TF*

We wanted to know whether the binding of **3.5** and TF. The changes in absorption of **3.5** upon addition of TF were measured in buffer (25 mM MOPS, pH 7.0, 50 mM NaCl) at 25 °C (Figure A11.1).

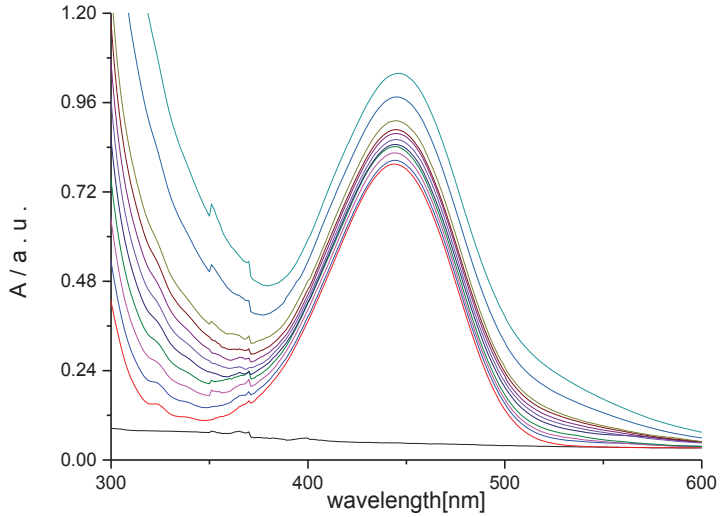



**Figure A11.1:** UV-visible spectra for 0.069 mM **3.5** upon addition of 0 – 0.058 mM TF, at 25 °C in buffer (25 mM MOPS pH 7.0, 50 mM NaCl).

Figure A11.1 shows that **3.5** displays a hyperchromic shift in the absorbance with a maximum change in absorbance at 444 nm upon addition of TF. The increase in UV-visible absorption may have occurred as a result of geometrical distortion of **3.5** when it interacts with TF, but it may also be as a result of a local medium effect with a scattering of TF.

To quantify the affinity of **3.5** for TF, the corrected absorbances at 444 nm were plotted as a function of the concentration of TF (Figure A11.2, for data in tabular format see appendix, Tables A55.32).

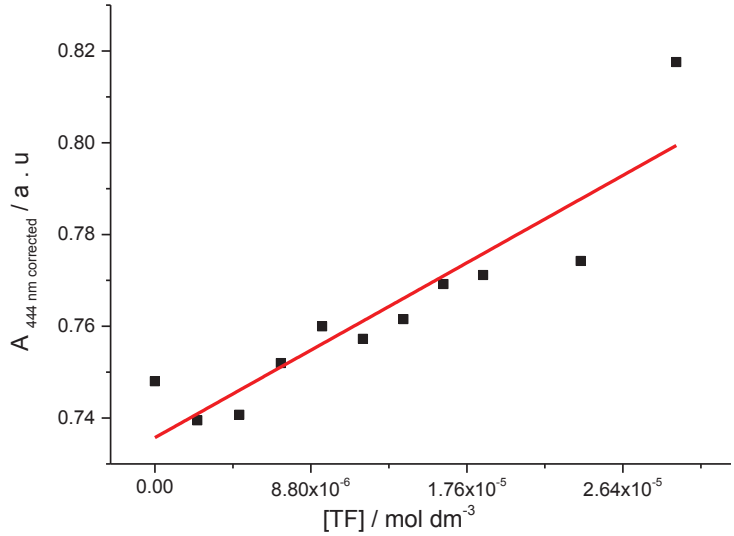



**Figure A11.2:** Corrected Absorbance at 444 nm for 0.069 mM **3.5** upon addition of 0 – 0.058 mM TF concentration, at 25 °C in buffer (25 mM MOPS, pH 7.0, 50 mM NaCl). The solid line represents the best fit to the data fit in terms of a multiple independent binding sites model.

Figure A11.2 shows an increase in absorbance at 444 nm for **3.5** upon addition of TF. The binding affinity $K_{binding}$ and binding site per protein were determined by fitting a multiple independent binding sites model which also takes ligand dilution into account data. The fit gives giving small an equilibrium constant $K_{binding}$ of $(5.4\times10^{42} \pm 1.1\times10^{44})$ $M^{-1}$ for a binding site of $(8.3\pm 3.6 \times10^{7})$. The fit corresponded to simple dilution and scattering upon addition TF and thus suggests that **3.5** does not interact with TF and the increase in absorbance is the result of scattering only.

### *A12. Compound 3.7 binding with TF*

We need to study the binding of **3.7** to TF. The changes in absorption of **3.7** upon addition of TF were measured in buffer (25 mM MOPS, pH 7.0 and 50 mM NaCl) at 25 °C (Figure A12.1).

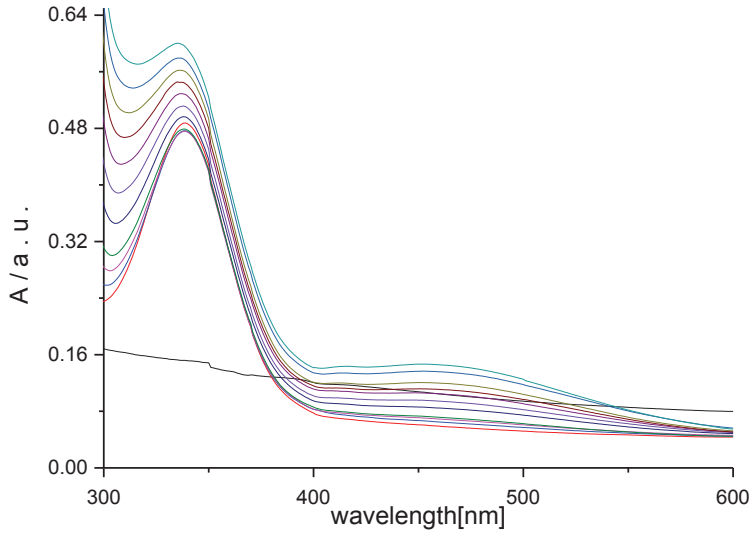



**Figure A12.1:** UV-visible spectra for 0.0099 mM **3.7** upon addition of 0 – 0.017 mM TF, at 25 °C in buffer (25 mM MOPS, pH 7.0, 50 mM NaCl).

Figure A12.1 shows that **3.7** displays a hypochromic shift, in absorbance with a maximum change in absorbance at 385 nm upon addition of TF. The decrease in UV-visible absorption may have occurred as a result of geometrical distortion of **3.7** when it interacts with TF, but it may also be as a result of a local medium effect with a scattering of TF.

To quantify the affinity of **3.7** for TF, the corrected absorbances at 385 nm were plotted as a function of the concentration of TF (Figure A12.2, for data in tabular format see appendix, Tables A55.33).

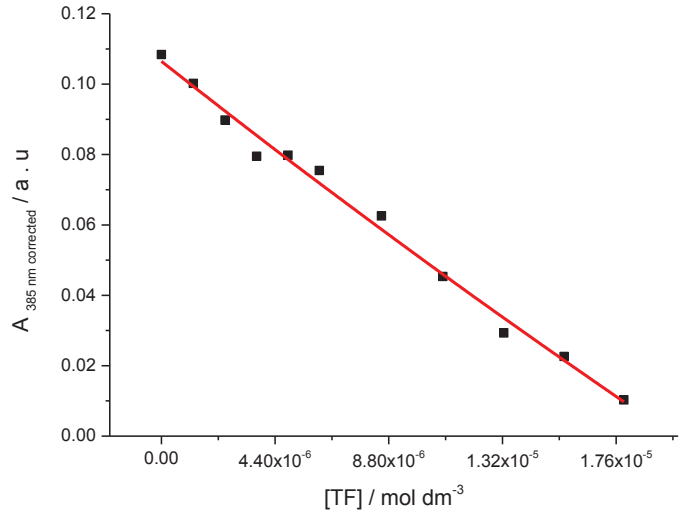



**Figure A12.2:** Corrected Absorbance at 385 nm for 0.0099 mM **3.7** upon addition of 0 – 0.017 mM TF concentration, at 25 °C in buffer (25 mM MOPS, pH 7.0, 50 mM NaCl). The solid line represents the best fit to the data fit in terms of a multiple independent binding sites model.

Figure A12.2 shows a decrease in the absorbance at 385 nm for **3.7** upon addition of TF. The binding affinity $K_{binding}$ and binding site per transferrin were determined by fitting a multiple independent binding sites model, which also takes ligand dilution into account data. This fit gives very small an equilibrium constant $K_{binding}$ of (563 ± 1892) $M^{-1}$ and for a binding site of (0.25 ± 0.0). The fit corresponded to simple dilution and thus suggests that **3.7** does not interact with TF and the decrease in absorbance is the result of simple dilution only.

## *A13.* Compound *3.11 with TF*

We need to study the binding of **3.11** to TF. The changes in absorption of **3.11** upon addition of TF were measured in buffer (25 mM MOPS, pH 7.0 and 50 mM NaCl) at 25 °C (Figure A13.1).

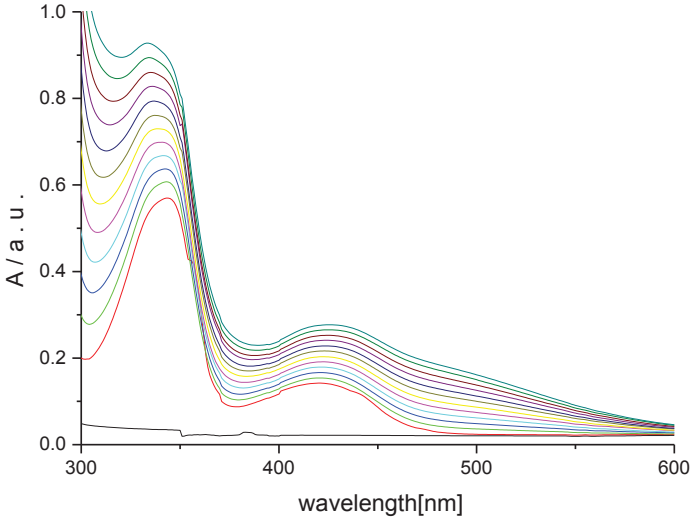



**Figure A13.1:** UV-visible spectra for 0.018 mM **3.11** upon addition of 0 – 0.049 mM TF, at 25 °C in buffer (25 mM MOPS, pH 7.0, 50 mM NaCl).

Figure A13.1 illustrates that **3.11** displays a hypochromic shift in the absorbance with a maximum change in absorbance at 344 nm upon addition of TF. The decrease in UV-visible absorption may have occurred as a result of geometrical distortion of **3.11** when it interacts with TF, but it may also be as a result of a local medium effect with a scattering of TF.

To quantify the affinity of **3.11** for TF, the corrected absorbances at 344 nm were plotted as a function of the concentration of TF (Figure A13.2, for data in tabular format see appendix, Tables A55.36).

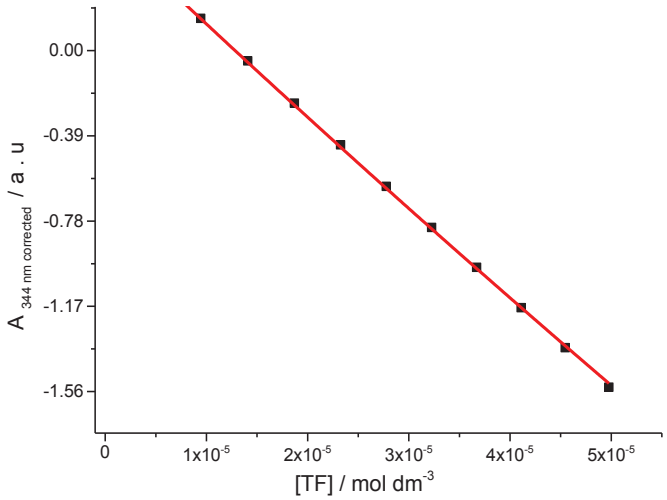



**Figure A13.2:** Corrected absorbance at 344 nm for 0.018 mM **3.11** upon addition of 0 – 0.049 mM TF concentration, at 25 °C in buffer (25 mM MOPS, pH 7.0, 50 mM NaCl). The solid line represents the best fit to the data fit in terms of a multiple independent binding sites model.

Figure A13.2 shows a decrease in the absorbance at 344 nm for **3.11** upon addition of TF. The binding affinity $K_{binding}$ and binding site per transferrin $1/n$ were determined by fitting a multiple independent binding sites model, which also takes ligand dilution into account data. This fit gives an equilibrium constant $K_{binding}$ of (0.3 ± 51) $M^{-1}$ and for a binding site of (0.05 ± 10.9). The fit corresponded to simple dilution and thus suggests that **3.11** does not interact with TF and the decrease in absorbance is the result of simple dilution only.

### *A14. Compound 3.12 binding with TF*

We need to study the binding of **3.12** to TF. The changes in absorption of **3.12** upon addition of TF were measured in buffer (25 mM MOPS, pH 7.0 and 50 mM NaCl) at 25 °C (Figure A14.1).

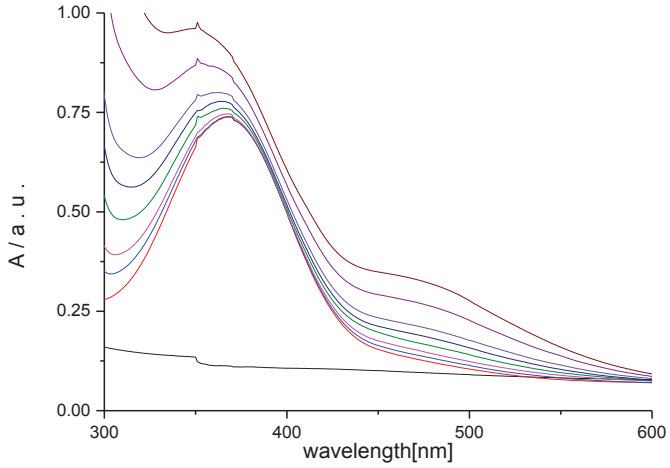
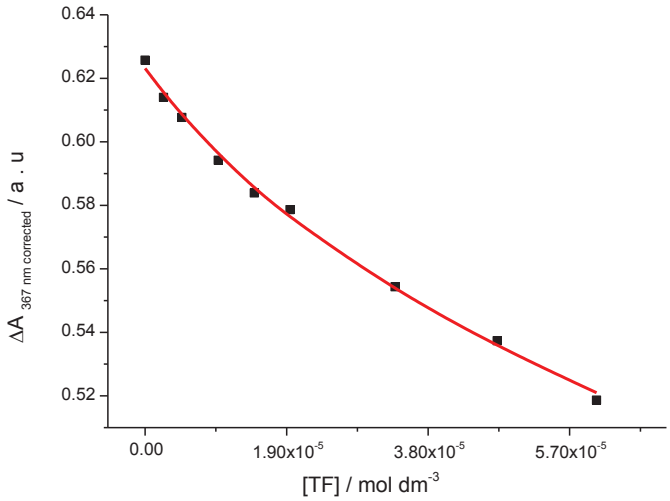



**Figure A14.1:** UV-visible spectra for 0.05 mM **3.12** upon addition of 0 – 0.060 mM TF, at 25 °C in buffer (25 mM MOPS, pH 7.0, 50 mM NaCl).

Figure A14.1 illustrates that **3.12** displays a hypochromic shift, in absorbance with a maximum change in absorbance at 367 nm upon addition of TF. The decrease in UV-visible absorption may have occurred as a result of geometrical distortion of **3.12** when it interacts with TF, but it may also be as a result of a local medium effect with a scattering of TF.

To quantify the affinity of **3.12** for TF, the corrected absorbances at 367 nm were plotted as a function of the concentration of TF (Figure A14.2, for data in tabular format see appendix, Tables A55.37).




**A14.2:** Corrected absorbance at 367 nm for 0.023 mM **3.12** upon addition of 0 – 0.060 mM TF concentration, at 25 °C in buffer (25 mM MOPS, pH 7.0, 50 mM NaCl). The solid line represents the best fit to the data fit in terms of a multiple independent binding sites model.

Figure A14.2 shows a decrease in the absorbance at 367 nm for **3.12** upon addition of TF. The binding affinity $K_{binding}$ and binding site per transferrin were determined by fitting a multiple independent binding sites model which also takes ligand dilution into account data. This fit gives an equilibrium constant $K_{binding}$ of (178 ± 5.5 × $10^5$) $M^{-1}$ and a binding site of (0.0082 ± 25) The fit corresponded to simple dilution and thus suggests that **3.12** does not interact with TF and the decrease in absorbance is the result of simple dilution only.

### *A15. Compound 3.2 binding with DNA in the presence of 0.1 mM SA*

We need to study the binding of **3.2** with DNA in the presence of 0.1 mM SA. The changes in absorption of **3.2** upon addition of DNA were measured in buffer (25 mM MOPS, pH 7.0, 50 mM NaCl) at 25 °C (Figure A15.1).

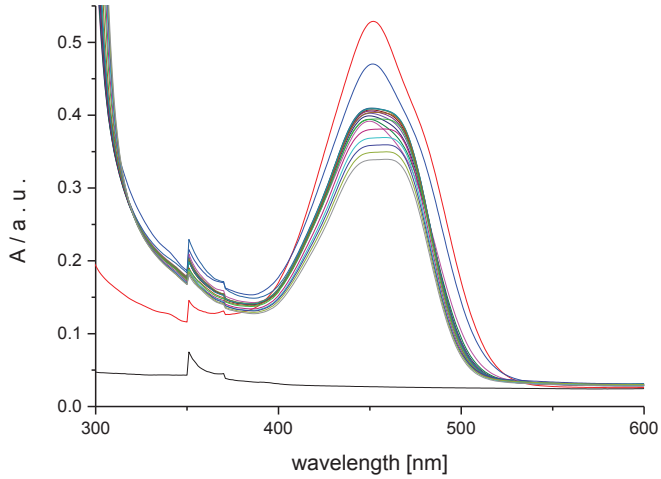



**Figure A15.1:** UV-visible spectra for 0.034 mM **3.2 (**red line**)** in buffer (25 mM MOPS, pH 7.0, 50 mM NaCl) in the absence of SA and subsequent spectra for **3.2** in the presence of 0.1 mM SA upon addition of 0 – 4.2 mM DNA, at 25 °C.

Figure A15.1 shows two events, the first event involves a hypochromic shift at 452 nm upon addition DNA in presence of SA. The second event shows a hyperchromic shift at 452 nm of **3.2** upon addition of DNA. This increase in UV-visible absorption occurs because of the interaction of **3.2** molecules with DNA in presence of SA.

To quantify the affinity of **3.2** for DNA in presence of SA, the absorbances at 452 nm were plotted as a function of the concentration of DNA (Figure A15.2, for data in tabular format see appendix, Tables A55.39).

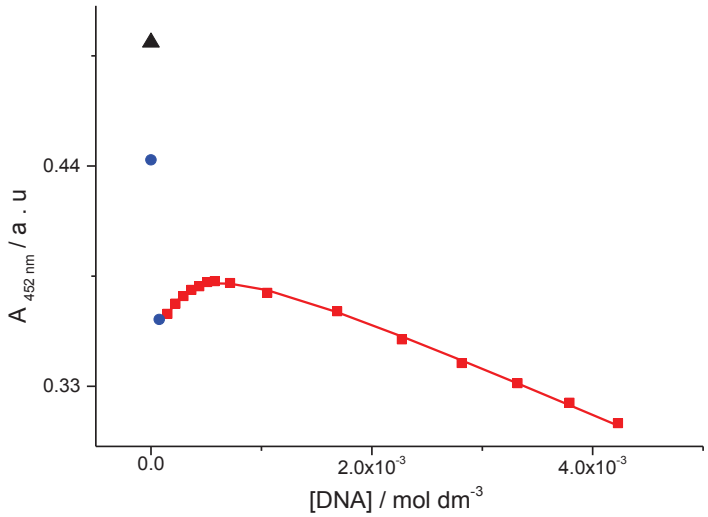



**Figure A15.2:** Absorbance at 452 nm of a solution of 0.030 mM **3.2** in the presence of 0.1 mM SA (▲) as a function of DNA concentration of 0 – 0.074 mM (●) and of 0.014 – 4.2 mM (■) both in presence of SA, at 25 °C in buffer (25 mM MOPS, pH 7, 50 mM NaCl). The solid line represents a fit of a multiple independent sites model to the data in the (0.014 – 4.2 mM) range (■).

Figure A15.2 shows two binding events. The first binding event shows a fast decrease in the absorbance upon addition 0.1 mM SA (▲) as also observed previously in the absence of SA[172] with a subsequent continued decrease in absorbance up to a concentration of 0.014 mM DNA (● first two data points in Figure A15.2). We attribute this decline in absorbance to strong binding of **3.2** to DNA, leading to precipitation as a result of charge neutralisation of the **3.2**- DNA complex. The second binding event shows a clear increase in the absorbance of **3.2** upon addition of (0.014 – 4.2 mM) DNA. The binding affinity $K_{binding}$ and binding site size *n* were determined by fitting a multiple independent binding sites model to the data. The ligand strongly interacts with DNA, giving an apparent equilibrium constant $K_{binding}$ of (1.5 ± 0.1) × $10^4$ $M^{-1}$ for the binding site size restricted to (3.0) base pairs. A $K_{binding}$ (6.437 ± 1.61) ×$10^4$ $M^{-1}$ for the binding site size restricted to (3.0) base pairs was observed for **3.2** and DNA in absence of SA[172]. This is also the case for the binding event leading to precipitation. The absence of this competition is beneficial if **3.2** were to be used in a biosensor because it can be used to provide signals to detect DNA hybridization. Decreasing in affinity of **3.2** in the presence of serum albumin which means the sensitisers bind to DNA and make precipitation with SA and leads to decrease $K_{binding}$ this could cause a false negative.

### *A16. Compounds 3.2 interacting with DNA in the presence of 0.1 mM TF*

We need to know whether the binding of **3.2** to DNA in the presence 0.053 mM TF. The changes in absorption of **3.2** upon addition of DNA in presence of TF were measured in buffer (25 mM MOPS pH 7.0, 50 mM NaCl) at 25 °C (Figure A16.1).

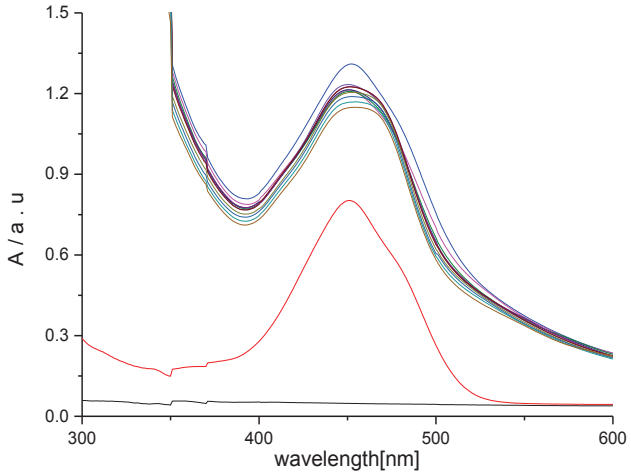



**Figure A16.1:** UV-visible spectra for 0.045 mM **3.2 (**red line**)** in buffer (25 mM MOPS, pH 7.0, 50 mM NaCl) in the absence of TF and subsequent spectra for **3.2** in the presence of 0.1 mM TF and upon addition of 0 – 1.4 mM DNA, at 25 °C.

Figure A16.1 shows a hypochromic shift in absorbance at 451 nm followed by a hyperchromic shift at 451 nm upon addition of DNA in the presence of 0.05 mM TF. This change in UV-visible absorption may occur because of geometrical distortion of **3.2** when it interacts with DNA in presence of TF, but it may also be a local medium effect. ***The*** absorbance in the range of 400-600 nm increases upon addition TF because of the high scattering of TF. This observation suggests precipitation and subsequent dissolution of a DNA ligand complex in presence of TF like data in absence of TF.

To quantify the affinity of **3.2** for DNA in the presence of TF, the absorbances at 451 nm were plotted as a function of the concentration of DNA in presence TF. (Figure A16.2, for data in tabular format see appendix, Tables A55.50).

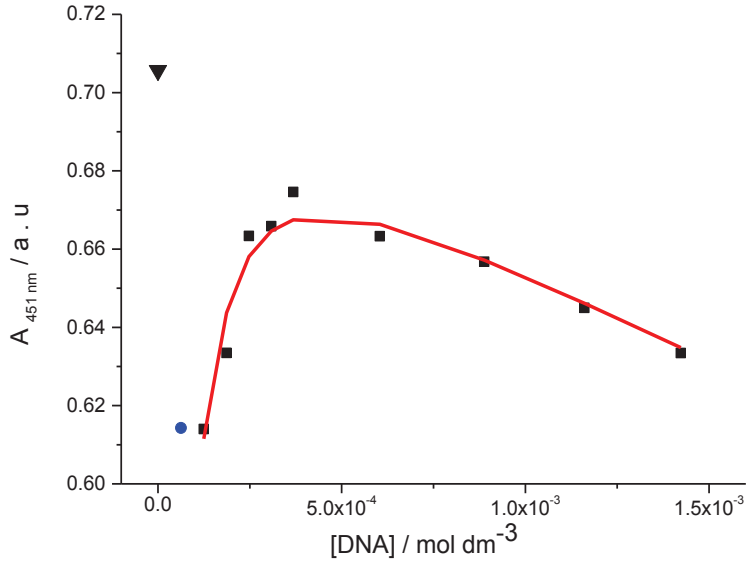



**Figure A16.2:** Absorbance at 451 nm for 0.045 mM **3.2** in the presence of 0.053 mM TF (▼). as a function of DNA concentration of 0 – 0.062 Mm (●) and 0.12 – 1.4 mM (■) of DNA both in presence of TF, at 25 °C in buffer (25 mM MOPS pH 7, 50 mM NaCl). The solid line represents a fit of a multiple independent sites model to the data in the 0.12 – 1.4 mM range (■).

Figure A16.2 shows two events. The first event shows a fast decrease in the absorbance upon addition 0.053 (▼) mM TF with a subsequent continued decrease in absorbance up to a concentration of 0.062 mM DNA (● first two-data points in Figure A16.2). We attribute this decline in absorbance to strong binding of **3.2** to the sugar-phosphate backbone of DNA in the presence of 0.053 mM TF at low concentration of DNA with high concentration of ligand ***DNA / ligand*** ratios. Therefore, leading to precipitation because of charge neutralisation of the **3.2** - DNA complex in presence of TF as also observed previously in the absence of TF. The second event shows a clear increase in the absorbance of **3.2** upon addition 0.12– 1.4 mM of DNA in the presence of 0.053 mM of TF. The ligand strongly interacts with DNA and the titration data in Figure A16.2 (with the first event not included) were analysed in terms of a multiple independent binding sites models, which also takes ligand dilution into account. The equilibrium constant $K_{binding}$ of (7.5 ± 8.5) ×105 $M^{-1}$ for a binding site size of (6.7 ± 1.3) base pairs. The obtained binding parameters were unreasonably for both stoichiometry and binding constant. Therefore, the data were reanalyzed with the stoichiometry restricted to 3.0 base pairs, giving an apparent equilibrium constant $K_{binding}$ of (1.1 ± 0.49) ×105 $M^{-1}$ A $K_{binding}$ of (6.4 ± 1.6) ×$10^4$ $M^{-1}$ for the binding site size restricted to (3.0) base pairs was observed for **3.2** to DNA in absence of TF[172]. From the difference in the apparent binding constant in absence

TF and in presence of TF[172], it appears that TF does not significantly compete with DNA for **3.2**. TF does not help to avoid precipitation. The absence of this competition is beneficial if the compound **3.2** were to be used in a biosensor because it can be used to provide signals to detect DNA hybridization.

### *A17. Compound 4.2 binding to HA*

We need to study the binding of **4.2** to HA; the changes in absorption of **4.2** upon addition of HA were measured in buffer (25 mM MOPS, pH, 7.0 and 50 mM NaCl) at 25 °C (Figure A17.1).

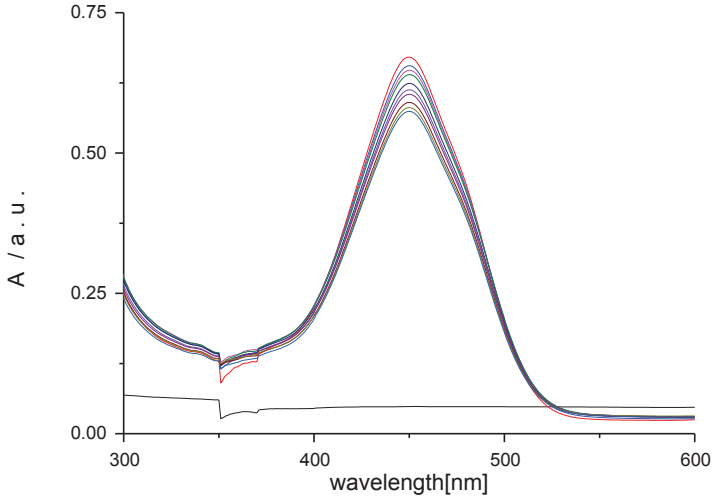



**Figure A17.1:** UV-visible spectra for 0.038 mM **4.2** upon addition of 0 – 0.71 mM HA, at 25 °C in buffer (25 mM MOPS, pH 7.0, 50 mM NaCl).

Figure A17.1 shows that **4.2** displays a hypochromic shift in absorbance upon addition of HA with a maximum change in absorbance at 450 nm. This decrease in UV-visible absorption may have occurred as a result of geometrical distortion of **4.2** when it interacts with HA, but it may also be as a result of a local medium effect.

To quantify the affinity of **4.2** for HA, the absorbances at 450 nm were plotted as a function of concentration of HA. (Figure A17.2, for data in tabular format see appendix, Tables A55.52).

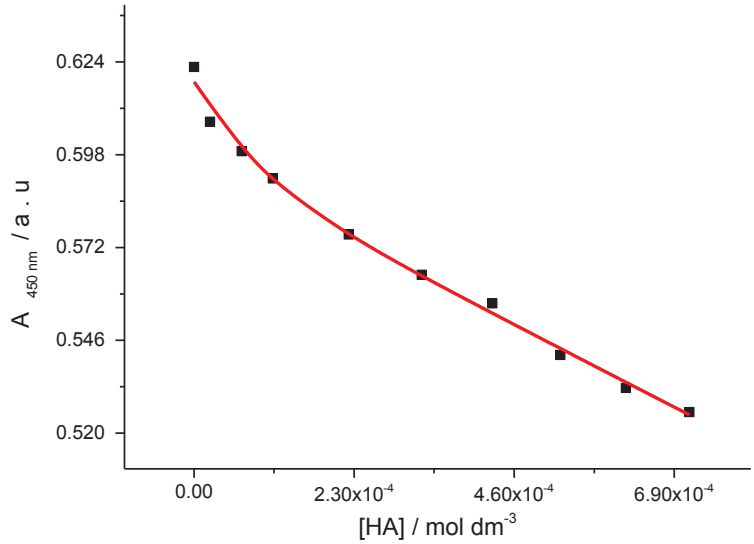



**Figure A17.2:** Absorbance at 450 nm for 0.038 mM **4.2** as a function of HA, at 25 °C in buffer (25 mM MOPS, pH 7.0, 50 mM NaCl). The solid line represents the best fit to the data in terms of a multiple independent binding sites model.

Figure A17.2 shows a decrease in the absorbance at 450 nm for **4.2** upon addition of HA. The binding affinity $K_{binding}$ and the binding site size $n$ were determined by fitting a multiple independent binding sites model which also takes ligand dilution into account data, giving an equilibrium constant $K_{binding}$ of $(2.5 \pm 3.2) \times 10^5$ $M^{-1}$ for a binding site size restricted to 3.0. The fit corresponded to simple dilution and thus suggests that **4.2** does not interact with HA and the decrease in absorbance is the result of simple dilution only.

### *A18. Compound 4.4 binding with HA*

We need to know the binding of **4.4** to HA. The changes in absorption of **4.4** upon addition of HA were measured in buffer (25 mM MOPS, pH 7.0, 50 mM NaCl) at 25 °C (Figure A18.1).

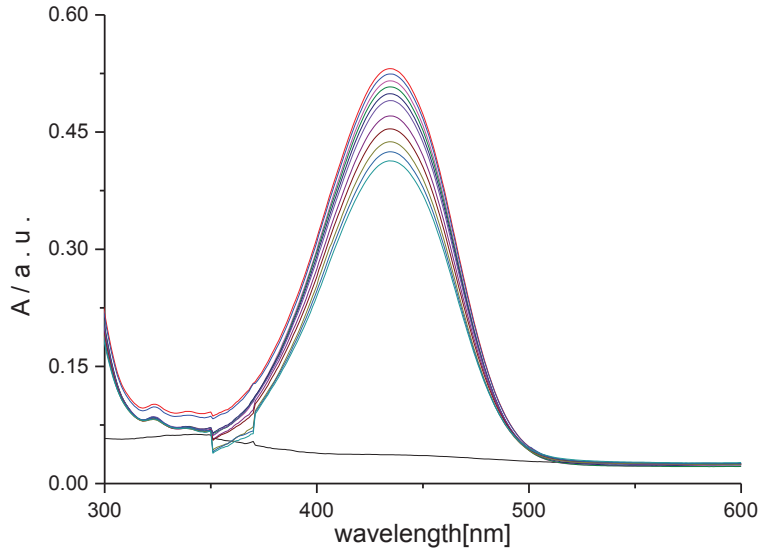



**Figure A18.1:** UV-visible spectra for 0.045 mM **4.4** upon addition of 0 – 1.4 mM HA, at 25 °C in buffer (25 mM MOPS, pH 7.0, 50 mM NaCl).

Figure A18.1 illustrates that **4.4** displays a hypochromic shift in absorbance with a maximum change in absorbance at 434 nm upon addition of HA. The decrease in UV-visible absorption may have occurred as a result of geometrical distortion of **4.4** when it interacts with HA, but it may also be as a result of a local medium effect with a scattering of HA.

To quantify the affinity of **4.4** for HA, the absorbances at 434 nm were plotted as a function of the concentration of HA (Figure A18.2, for data in tabular format see appendix, Tables A55.53).

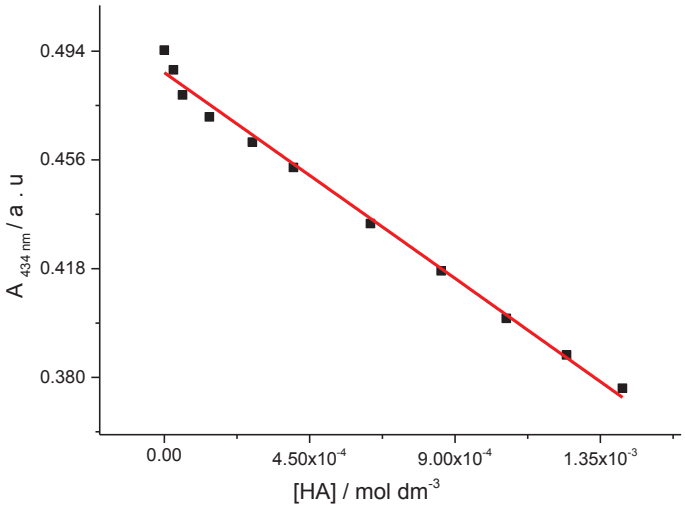



**Figure A18.2:** Absorbance at 434 nm for 0.045 mM **4.4** upon addition of 0 – 1.4 mM HA concentration, at 25 °C (25 mM MOPS, pH 7.0, 50 mM NaCl). The solid lines represent the best fit to the data fit in terms of a multiple independent binding sites model.

Figure A18.2 shows a decrease in absorbance at 434 nm for **4.4** upon addition of HA. The binding affinity $K_{binding}$ and the binding site size $n$ were determined by fitting a multiple independent binding sites model which, also takes ligand dilution into account data, giving an equilibrium constant $K_{binding}$ of (1.00 ± 0.00) $M^{-1}$ for a binding site size restricted to 1.0. The fit corresponded to simple dilution and thus suggests that **4.4** does not interact with HA and the decrease in absorbance is the result of simple dilution only.

### *A19. Compound 4.5 binding with HA*

We need to know the binding of **4.5** to HA. The changes in absorption of **4.5** upon addition of HA were measured in buffer (25 mM MOPS, pH 7.0, 50 mM NaCl) at 25 °C (Figure A19.1).

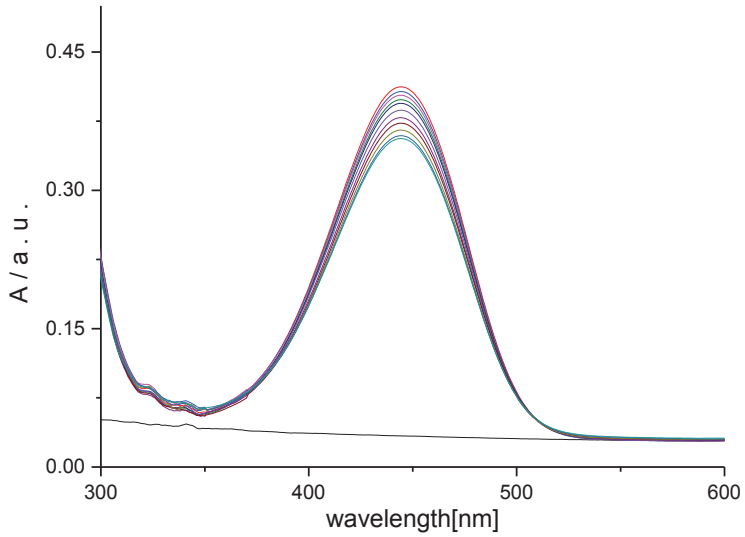



**Figure 19.1:** UV-visible spectra for 0.035 mM **4.5** upon addition of 0 – 1.6 mM HA, at 25 °C in buffer (25 mM MOPS, pH 7.0, 50 mM NaCl).

Figure A19.1 illustrates that **4.5** displays a hypochromic shift in the absorbance with a maximum change in absorbance at 444 nm upon addition of HA. The decrease in UV-visible absorption may have occurred as a result of geometrical distortion of **4.5** when it interacts with HA, but it may also be as a result of a local medium effect with a scattering of HA.

To quantify the affinity of **4.5** for HA, the absorbances at 444 nm were plotted as a function of the concentration of HA (Figure A19.2, for data in tabular format see appendix, Tables A55.54).

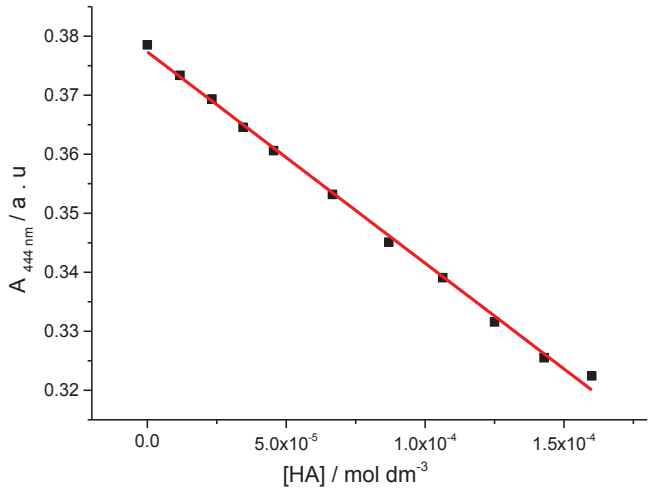



**Figure A19.2:** Absorbance at 444 nm for 0.035 Mm **4.5** upon addition of 0 – 1.6 mM HA, at 25 °C (25 mM MOPS, pH 7.0, 50 mM NaCl). The solid line represents the best fit to the data fit in terms of a multiple independent binding sites model.

Figure A19.2 shows decrease in the absorbance at 444 nm for **4.5** upon addition of HA. The binding affinity $K_{binding}$ and binding site size $n$ were determined by fitting a multiple independent binding sites model which also takes ligand dilution into account data. The fit gives giving small an equilibrium constant $K_{binding}$ of $(2.1 \times 10^{42} \pm 5.5 \times 10^{43})$ $M^{-1}$ for binding site size of $(884 \pm 1.4 \times 10^{10})$. The fit corresponded to simple dilution and thus suggests that **4.5** does not interact with HA and the decrease in absorbance is the result of simple dilution only.

### *A20. Compound 4.8 binding with HA*

We need to know whether the binding of **4.8** to HA. The changes in absorption of **4.8** upon addition of HA were measured in buffer (25 mM MOPS, pH 7.0, 50 mM NaCl) at 25 °C (Figure A20.1).

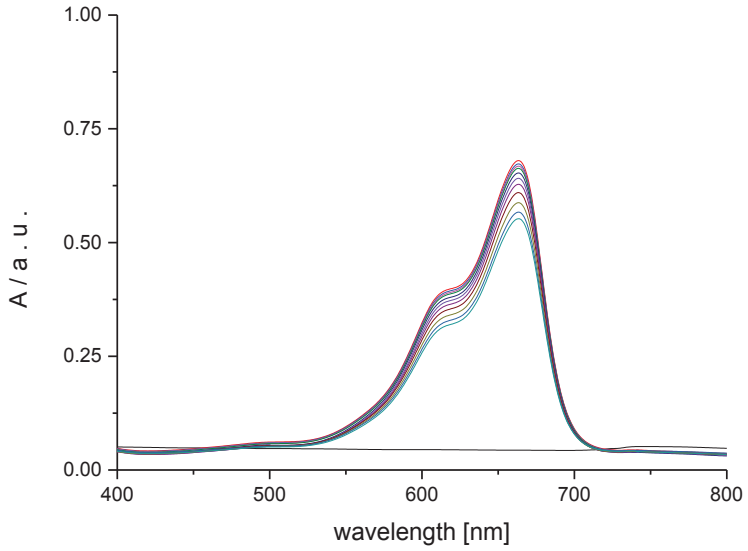



**Figure A20.1:** UV-visible spectra for 0.0094 mM **4.8** upon addition of 0 – 2.7 mM HA, at 25 °C in buffer (25 mM MOPS, pH 7.0, 50 mM NaCl).

Figure A20.1 illustrates that **4.8** displays a hypochromic shift in the absorbance with a maximum change in absorbance at 663 nm upon addition of HA. The decrease in UV-visible absorption may have occurred as a result of geometrical distortion of **4.8** when it interacts with HA, but it may also be as a result of a local medium effect with a scattering of HA.

To quantify the affinity of **4.8** for HA, the absorbances at 663 nm were plotted as a function of the concentration of HA (Figure A20.2, for data in tabular format see appendix, Tables A55.56).

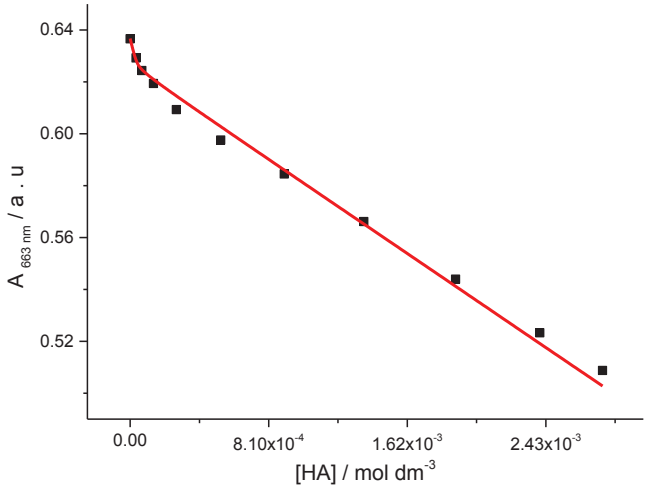



**Figure A20.2:** Absorbance at 663 nm for 0.0094 Mm **4.8** upon addition of 0 – 2.7 mM HA concentration, at 25 °C in buffer (25 mM MOPS, pH 7.0, 50 mM NaCl). The solid line represents the best fit to the data fit in terms of a multiple independent binding sites model.

Figure A20.2 shows a decrease in the absorbance at 663 nm for **4.8** upon addition of HA. The binding affinity $K_{binding}$ and binding site size $n$ were determined by fitting a multiple independent binding sites model, which also takes ligand dilution into account data. The fit gives giving small an equilibrium constant $K_{binding}$ of $(1.4 \times 10^7 \pm 2.2\times 10^8)$ $M^{-1}$ for a binding site of (6.7 ± 6.5). The fit corresponded to simple dilution and thus suggests that **4.8** does not interact with HA and the decrease in absorbance is the result of simple dilution only.

### *A21. Compound 4.10 binding with HA*

We wanted to know the binding of **4.10** to HA. The changes in absorption of **4.10** upon addition of HA were measured in buffer (25 mM MOPS, pH 7.0, 50 mM NaCl) at 25 °C (Figure A21.1).

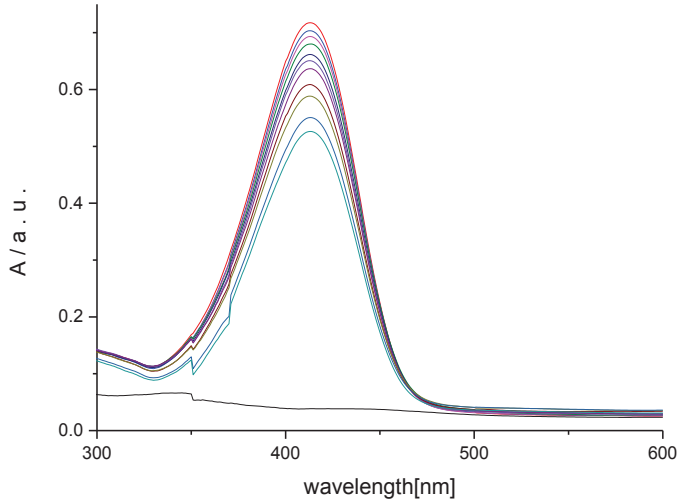



**Figure A21.1:** UV-visible spectra for 0.026 mM **4.10** upon addition of 0 – 1.5 mM HA, at 25 °C in buffer (25 mM MOPS, pH 7.0, 50 mM NaCl).

Figure A21.1 illustrates that **4.10** displays a hypochromic shift, in absorbance with a maximum change in absorbance at 413 nm upon addition of HA. The decrease in UV-visible absorption may have occurred as a result of geometrical distortion of **4.10** when it interacts with HA, but it may also be as a result of a local medium effect with a scattering of HA.

To quantify the affinity of **4.10** for HA, the absorbances at 413 nm were plotted as a function of the concentration of HA. (Figure A21.2, for data in tabular format see appendix, Tables A55.57).

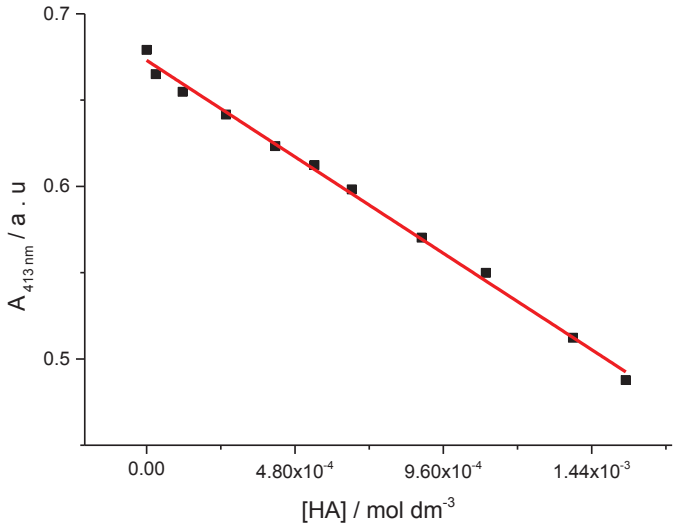



**Figure A21.2:** Absorbance at 413 nm for 0.026 mM **4.10** upon addition of 0 – 1.5 mM HA concentration, at 25 °C in buffer (25 mM MOPS, pH 7.0, 50 mM NaCl). The solid line represents the best fit to the data in terms of a multiple independent binding sites model.

Figure A21.2 shows a decrease in absorbance at 413 nm for **4.10** upon addition of HA. The binding affinity $K_{binding}$ and binding site size $n$ were determined by fitting a multiple independent binding sites model, which also takes ligand dilution into account data. The fit gives giving small an equilibrium constant $K_{binding}$ of $(2.3 \times 10^{22} \pm 0.00)$ $M^{-1}$ for a binding site size of $(1.1 \times 10^{4})$. The fit corresponded to simple dilution and thus suggests that **4.10** does not interact with HA and the decrease in absorbance is the result of simple dilution only.

### *A22. Compound 4.11 binding with HA*

We wanted to study the binding of **4.11** to HA. The changes in absorption of **4.11** upon addition of HA were measured in buffer (25 mM MOPS, pH 7.0, 50 mM NaCl) at 25 °C (Figure A22.1).

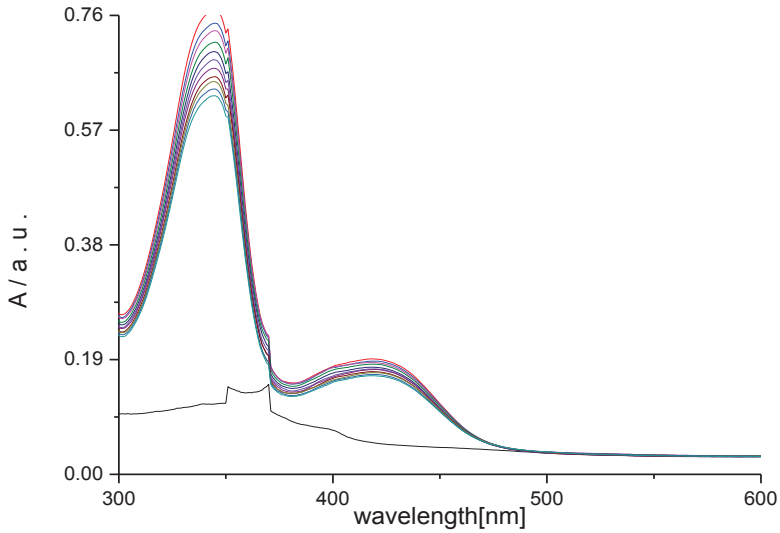



**Figure A22.**1: UV-visible spectra for 0.024 mM **4.11** upon addition of 0 – 1.1 mM HA, at 25 °C in buffer (25 mM MOPS, pH 7.0, 50 mM NaCl).

Figure A22.1 illustrates that **4.11** displays a hypochromic shift in the absorbance with a maximum change in absorbance at 345 nm upon addition of HA. The decrease in UV-visible absorption may have occurred as a result of geometrical distortion of **4.11** when it interacts with HA, but it may also be as a result of a local medium effect with a scattering of HA.

To quantify the affinity of **4.11** for HA, the absorbances at 345 nm were plotted as a function of the concentration of HA (Figure A22.2, for data in tabular format see appendix, Tables A55.58).

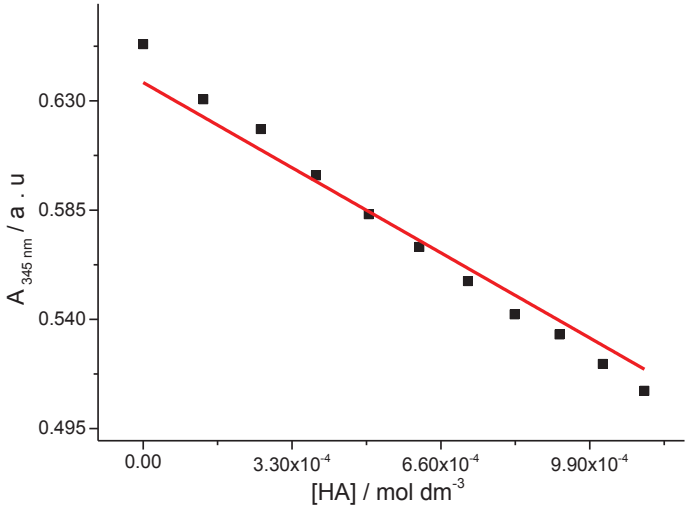



**Figure A22.2:** Absorbance at 345 nm for 0.024 mM **4.11** upon addition of 0 – 1.1 mM HA, at 25 °C in buffer (25 mM MOPS, pH 7.0, 50 mM NaCl). The solid lines represent the best fit to the data fit in terms of a multiple independent binding sites model.

Figure A22.2 shows decrease in the absorbance at 345 nm for **4.11** upon addition of HA. The binding affinity $K_{binding}$ and binding site size $n$ were determined by fitting a multiple independent binding sites model, which also takes ligand dilution into account data. The fit gives giving small an equilibrium constant $K_{binding}$ of (0.025 ± 0.00) $M^{-1}$ for a binding site size of ($9.3\times10^5$ ± 0.00). The fit corresponded to simple dilution and thus suggests that **4.11** does not interact with HA and the decrease in absorbance is the result of simple dilution only.

### *A23. Compound 4.12 binding with HA*

We need to study the binding of **4.12** to HA. The changes in absorption of **4.12** upon addition of HA were measured in buffer (25 mM MOPS, pH 7.0, 50 mM NaCl) at 25 °C (Figure A23.1).

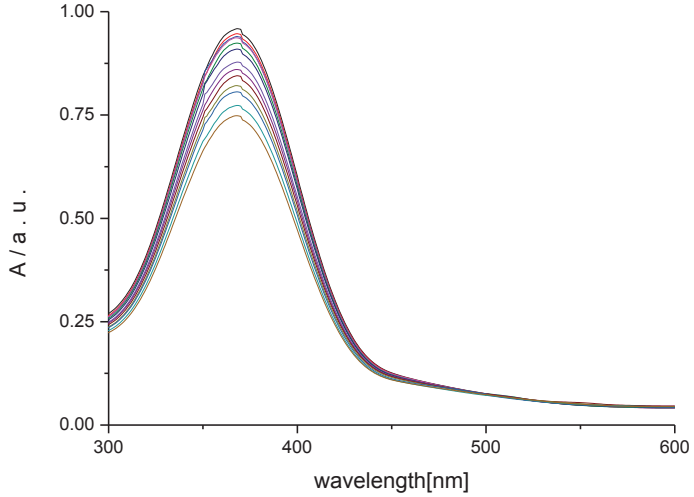



**Figure A23.1:** UV-visible spectra for 0.071 mM **4.12** upon addition of 0 – 0.94 mM HA, at 25 °C in buffer (25 mM MOPS, pH 7.0, 50 mM NaCl).

Figure A23.1 illustrates that **4.12** displays a hypochromic shift in absorbance with a maximum change in absorbance at 367 nm upon addition of HA. The decrease in UV-visible absorption may have occurred as a result of geometrical distortion of **4.12** when it interacts with HA, but it may also be as a result of a local medium effect with a scattering of HA.

To quantify the affinity of **4.12** for HA, the absorbances at 367 nm were plotted as a function of the concentration of HA (Figure A23.2, for data in tabular format see appendix, Tables A55.59).

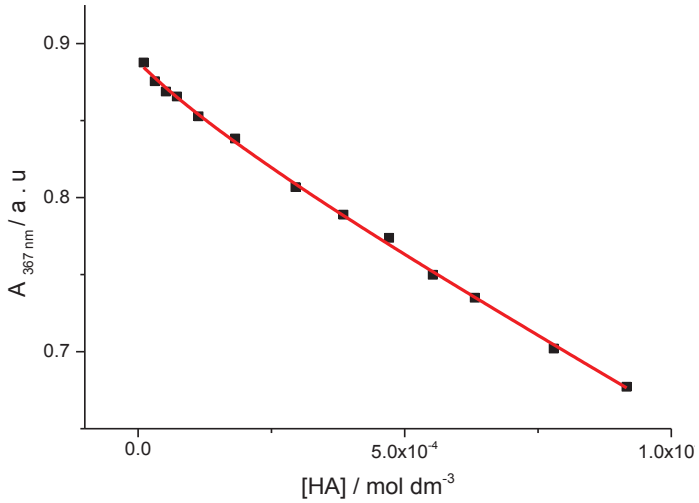



**Figure A23.2:** Absorbance at 367 nm for 0.071 mM **4.12** upon addition of 0 – 0.94 mM HA, at 25 °C (25 mM MOPS, pH 7.0, 50 mM NaCl). The solid lines represent the best fit to the data fit in terms of a multiple independent binding sites model.

Figure A23.2 shows decrease in the absorbance at 367 nm for **4.12** upon addition of HA. The binding affinity $K_{binding}$ and binding site size $n$ were determined by fitting a multiple independent binding sites model, which also takes ligand dilution into account data. The fit gives giving small an equilibrium constant $K_{binding}$ of $(6.7 \pm 3.0 \times 10^4)$ $M^{-1}$ for a binding site size of (0.018 ± 8.5). The fit corresponded to simple dilution and thus suggests that **4.12** does not interact with HA and the decrease in absorbance is the result of simple dilution only.

### *A24. Compound 4.2 with DNA in the presence of 0.3 mM HA*

To study the binding of **4.2** with DNA in the presence of 0.3 mM HA. The changes in absorption of **4.2** upon addition of DNA were measured in buffer (25 mM MOPS, pH 7.0, 50 mM NaCl) at 25 °C (Figure A24.1).

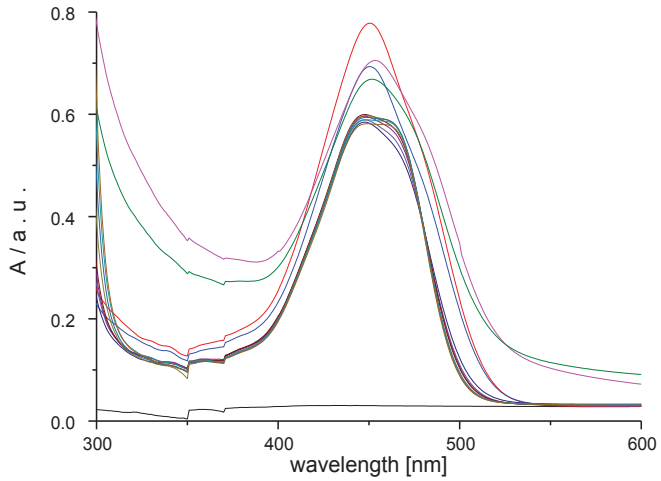



**Figure A24.1**: UV-visible spectra for 0.045 mM **4.2** (red line**)** in buffer (25 mM MOPS, pH 7.0, 50 mM NaCl).in the absence of HA and subsequent spectra for **4.2** in the presence of 0.3 mM HA and upon addition of 0 – 1.23 mM DNA, at 25 °C.

Figure A24.1 shows two events. In the first event shows a hypochromic shift at 452 nm occurred upon addition DNA in the presence of 0.3 mM HA. The second event shows a hyperchromic shift at 452 nm of **4.2** upon addition of DNA in the presence of 0.3 mM HA. This increase in UV-visible absorption occurs because of the interaction of **4.2** molecules with DNA in the presence of 0.3 mM HA.

To quantify the affinity of **4.2** for DNA in the presence of 0.3 mM HA, the absorbances at 452 nm were plotted as a function of DNA in the presence of 0.3 mM HA (Figure A24.2, for data in tabular format see appendix, Tables A55.61).

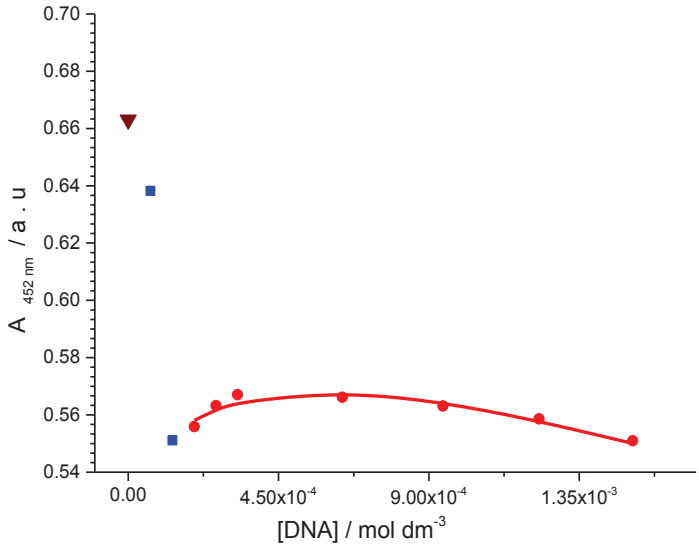



**Figure A24.2**: Absorbance at 452 nm for 0.045 mM **4.2** in the presence of 0.3 mM HA (▼) and upon addition of DNA concentration of 0 – 0.132 mM (■) and of 0.19 – 1.5 mM (●) both in presence of HA, at 25 °C in buffer (25 mM MOPS, pH 7, 50 mM NaCl). The solid line represents a fit of a multiple independent sites model to the data in the 0.19 – 1.5 mM range (●).

Figure A24.2 shows two binding events. The first binding event shows a decrease in the absorbance upon addition 0.3 mM HA (▼) as also observed previously in the absence of HA with a subsequent continued decrease in absorbance up to a concentration of 0.132 mM DNA (■ first two data points in Figure A24.2). We attribute this decrease in absorbance to strong binding of **4.2** to HA, leading to precipitation as a result of charge neutralisation of the **4.2**−DNA complex. The second binding event shows a clear increase in the absorbance of **4.2** upon addition of DNA. The binding affinity $K_{binding}$ and binding site size *n* were determined by fitting a multiple independent binding sites model to the data. The ligand strongly interacts with DNA, giving an apparent equilibrium constant $K_{binding}$ of (8.8 ± 4.4) $\times 10^3 M^{-1}$ for the binding site size restricted to (3.0) base pairs. A $K_{binding}$ of (6.437 ± 1.61) $\times 10^4 M^{-1}$ for the binding site size restricted to (3.0) base pairs was observed for **4.2** with DNA in absence of HA[172]

### *A25. Compound 4.2 binding to AA*

We wanted to study the binding of **4.2** to AA; the changes in absorption of **4.2** upon addition of AA were measured in buffer (25 mM MOPS, pH 7.0, 50 mM NaCl and 10 vol-% DMSO) at 25 °C (Figure A25.1).

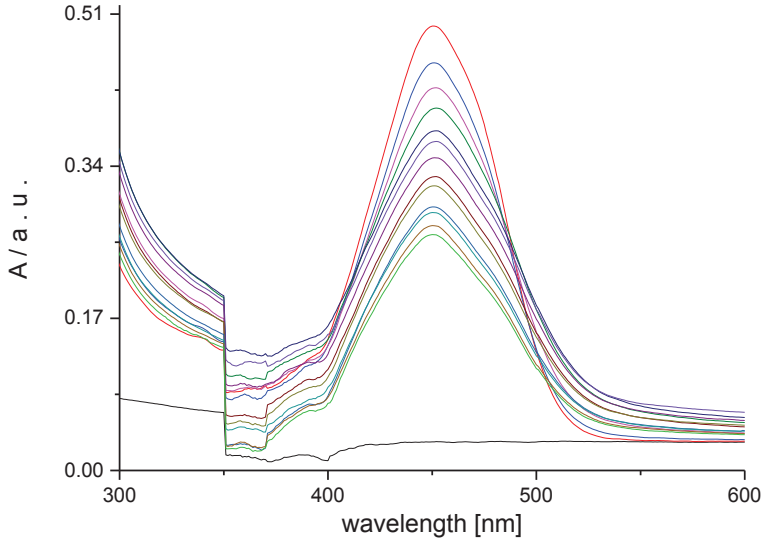



**Figure A25.1:** UV-visible spectra for 0.028 mM **4.2** upon addition of 0 - 1.25 mM AA, at 25 °C in buffer (25 mM MOPS pH 7.0, 50 mM NaCl 10 vol-% DMSO).

Figure A25.1 shows that **4.2** displays a hypochromic shift in the absorbance with a maximum change in absorbance 447 nm upon addition of AA. This decrease in UV-visible absorption may have occurred as a result of geometrical distortion of **4.2** when it interacts with AA, but it may also be as a result of a local medium effect.

To quantify the affinity of **4.2** for AA, the absorbances 450 nm were plotted as a function of the concentration of AA (Figure A25.2, for data in tabular format see appendix, Tables A55.70).

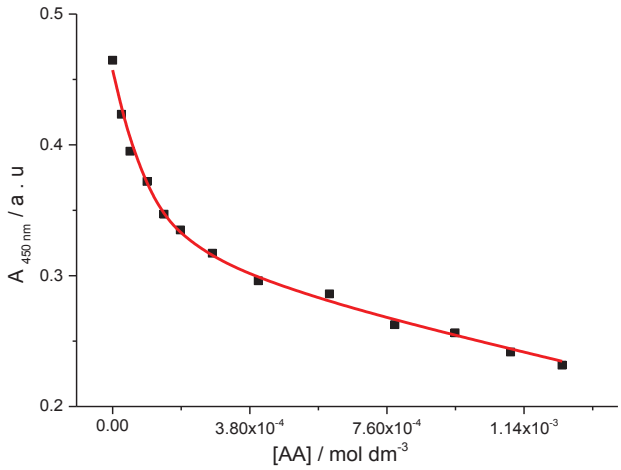



**Figure A25.2**: Absorbance at 450 nm for 0.028 mM **4.2** upon addition of 0 – 1.25 mM AA at 25 °C (25 mM MOPS, pH 7.0, 50 mM NaCl 10 vol-% DMSO). The solid lines represent the best fit to the data fit in terms of multiple independent binding sites.

Figure A25.2 shows a distinct decrease in the absorbances at 450 nm for **4.2** upon addition AA. The binding affinity $K_{binding}$ and binding site size *n* were determined by fitting a multiple independent binding sites model, which also takes ligand dilution into account, the data, with a binding constant $K_{binding}$ of $(6.9 \pm 1.5) \times 10^4 M^{-1}$. The binding site size was restricted to 3. The fit suggests that **4.2** interacts and that AA has a binding site size reachable to **4.2**.

### *A26. Compound 4.4 binding with AA*

We wanted to know the binding of **4.4** to AA. The changes in absorption of **4.4** upon addition of AA were measured in buffer (25 mM MOPS, pH 7.0, 50 mM NaCl) at 25 °C (Figure A26.1).

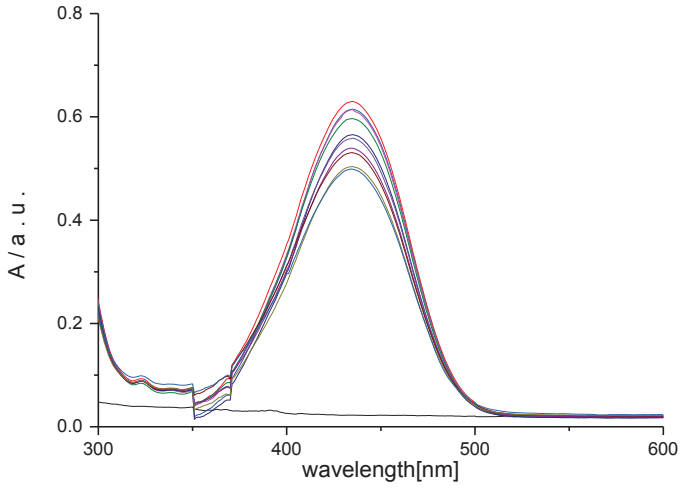



**Figure A26.1**: UV-visible spectra for 0.056 mM **4.4** upon addition of 0 – 1.2 mM AA, at 25 °C in buffer (25 mM MOPS, pH 7.0, 50 mM NaCl).

Figure A26.1 illustrates that **4.4** displays a hypochromic shift in the absorbance with a maximum change in absorbance at 435 nm upon addition of AA. The decrease in UV-visible absorption may have occurred as a result of geometrical distortion of **4.4** when it interacts with AA, but it may also be as a result of a local medium.

To quantify the affinity of **4.4** for AA, the absorbances at 435 nm were plotted as a function of the concentration of AA (Figure A26.2, for data in tabular format see appendix, Tables A55.71).

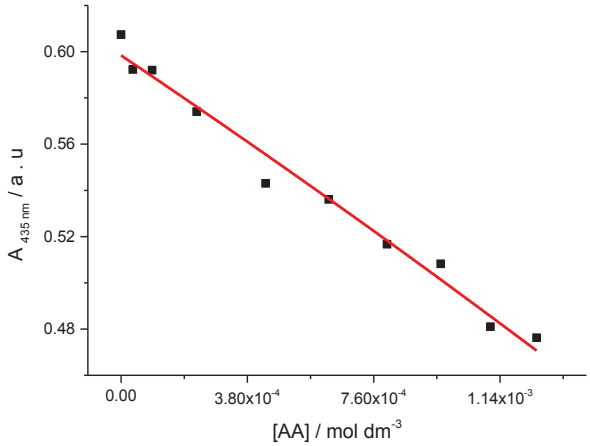



**Figure A26.2:** Absorbance at 435 nm for 0.056 mM **4.4** upon addition of 0 – 1.2 mM AA concentration, at 25 °C in buffer (25 mM MOPS, pH 7.0, 50 mM NaCl). The solid line represents the best fit to the data fit in terms of a multiple independent binding sites model.

Figure A26.2 shows decrease in the absorbance at 435 nm for **4.4** upon addition of AA. The binding affinity $K_{binding}$ and the binding site size $n$ were determined by fitting a multiple independent binding sites model, which also takes ligand dilution into account data. The fit gives giving small an equilibrium constant $K_{binding}$ of (1.0 ± 0.00) $M^{-1}$ for a binding site size of (1.0 ± 0.00). The fit corresponded to simple dilution and thus suggests that **4.4** does not interact with AA and the decrease in absorbance is the result of simple dilution only.

### *A27. Compound 4.5 binding with AA*

We need to study the binding of **4.5** to AA. The changes in absorption of **4.5** upon addition of AA were measured in buffer (25 mM MOPS, pH 7.0, 50 mM NaCl) at 25 °C (Figure A27.1).

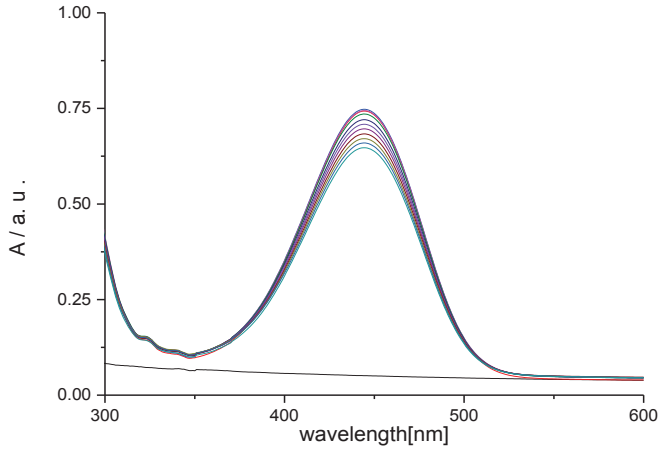



**Figure A27.1:** UV-visible spectra for 0.064 mM **4.5** upon addition of 0 – 0.15 mM AA, at 25 °C in buffer (25 mM MOPS, pH 7.0, 50 mM NaCl).

Figure A27.1 illustrates that **4.5** displays a hypochromic shift in the absorbance with a maximum change in absorbance at 444 nm upon addition of AA. The decrease in UV-visible absorption may have occurred as a result of geometrical distortion of **4.5** when it interacts with AA, but it may also be as a result of a local medium.

To quantify the affinity of **4.5** for AA, the absorbances at 444 nm were plotted as a function of the concentration of AA (Figure A27.2, for data in tabular format see appendix, Tables A55.72).

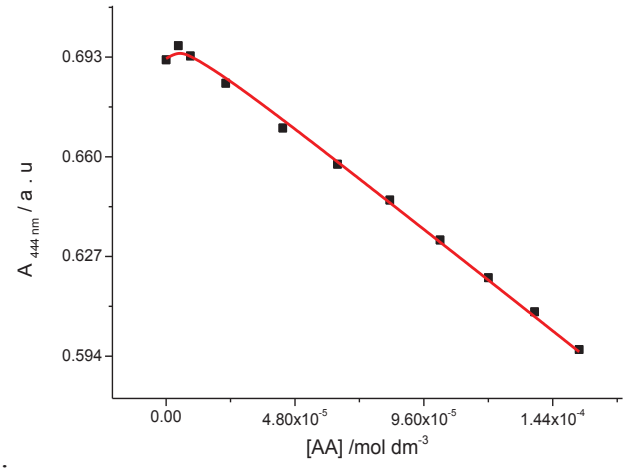



**Figure A27.2**: Absorbance at 444 nm for 0.064 Mm **4.5** upon addition of 0 – 0.15 mM AA concentration, at 25 °C in buffer (25 mM MOPS, pH 7.0, 50 mM NaCl). The solid line represents the best fit to the data fit in terms of a multiple independent binding sites model.

Figure A27.2 shows decrease in the absorbance at 444 nm for **4.5** upon addition of AA. The binding affinity $K_{binding}$ and the binding site size $n$ were determined by fitting a multiple independent binding sites model, which also takes ligand dilution into account data. The fit gives giving small an equilibrium constant $K_{binding}$ of $(6.8 \pm 4.6 \times 10^4)$ $M^{-1}$ for binding site size $(3.5 \times 10^{-4} \pm 0.27)$. The fit corresponded to simple dilution and thus suggests that **4.5** does not interact with AA and the decrease in absorbance is the result of simple dilution only.

### *A28. Compound 4.7 binding with AA*

We wanted to study the binding of **4.7** to AA. The changes in absorption of **4.7** upon addition of AA were measured in buffer (25 mM MOPS, pH 7.0, 50 mM NaCl) at 25 °C (Figure A28.1).

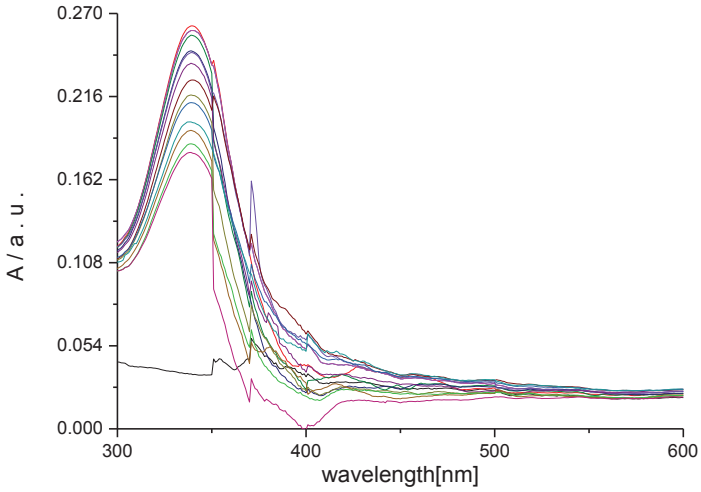



**Figure A28.1:** UV-visible spectra for 0.0066 mM **4.7** upon addition of 0 – 1.2 mM AA, at 25 °C in buffer (25 mM MOPS, pH 7.0, 50 mM NaCl).

Figure A28.1 illustrates that **4.7** displays a hypochromic shift in the absorbance with a maximum change in absorbance at 339 nm upon addition of AA. The decrease in UV-visible absorption may have occurred as a result of geometrical distortion of **4.7** when it interacts with AA, but it may also be as a result of a local medium effect with a scattering of AA.

To quantify the affinity of **4.7** for AA, the absorbances at 339 nm were plotted as a function of the concentration of AA (Figure A28.2, for data in tabular format see appendix, Tables A55.73).

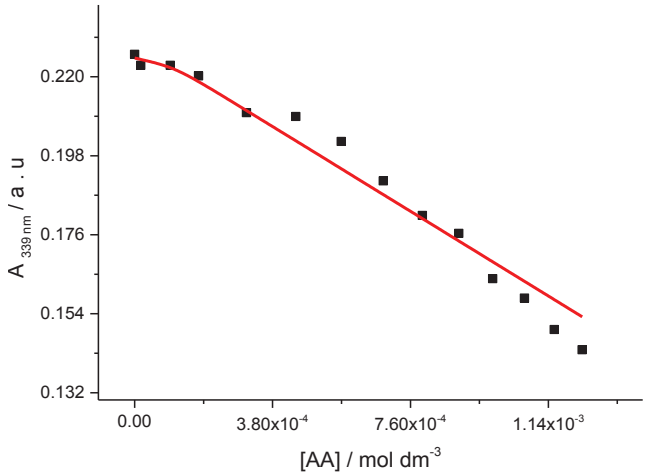



**Figure A28.2:** Absorbance at 339 nm for 0.0066 mM **4.7** upon addition of 0 – 1.2 mM AA concentration, at 25 °C in buffer (25 mM MOPS, pH 7.0, 50 mM NaCl). The solid line represents the best fit to the data fit in terms of a multiple independent binding sites model.

Figure A28.2 shows decrease in the absorbance at 339 nm for **4.7** upon addition of AA. The binding affinity $K_{binding}$ and the binding site size $n$ were determined by fitting a multiple independent binding sites model, which also takes ligand dilution into account data. The fit gives giving small an equilibrium constant $K_{binding}$ of $(4.2 \times 10^{33} \pm 7.9 \times 10^{45})$ $M^{-1}$ for a binding site size (18 ± 221.8). The fit corresponded to simple dilution and thus suggests that **4.7** does not interact with AA and the decrease in absorbance is the result of simple dilution only.

### *A29. Compound 4.8 binding with AA*

We wanted to study the binding of **4.8** to AA. The changes in absorption of **4.8** upon addition of AA were measured in buffer (25 mM MOPS, pH 7.0, 50 mM NaCl) at 25 °C (Figure A29.1).

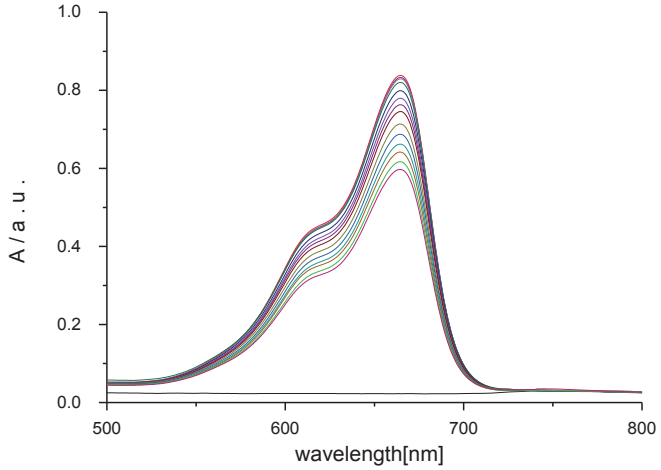



**Figure A29.1:** UV-visible spectra for 0.012 mM **4.8** upon addition of 0 – 1.5 mM AA, at 25 °C in buffer (25 mM MOPS, pH 7.0, 50 mM NaCl).

Figure A29.1 illustrates that **4.8** displays a hypochromic shift in the absorbance with a maximum change in absorbance at 665 nm upon addition of AA. The decrease in UV-visible absorption may have occurred as a result of geometrical distortion of **4.8** when it interacts with AA, but it may also be as a result of a local medium effect.

To quantify the affinity of **4.8** for AA, the absorbances at 665 nm were plotted as a function of the concentration of AA (Figure A29.2, for data in tabular format see appendix, Tables A55.72).

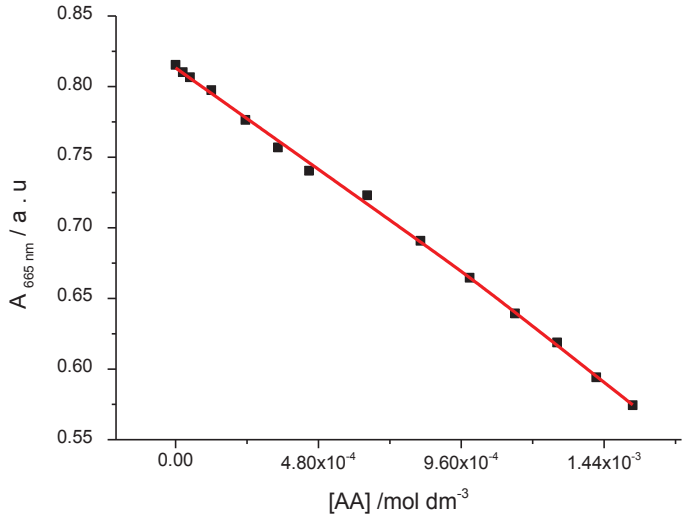



**Figure A29.2:** Absorbance at 665 nm for 0.012 Mm **4.8** upon addition of 0 – 1.5 mM AA, at 25 °C (25 mM MOPS, pH 7.0, 50 mM NaCl). The solid line represents the best fit to the data fit in terms of a multiple independent binding sites model.

Figure A29.2 shows decrease in the absorbance at 665 nm for **4.8** upon addition of AA. The binding affinity $K_{binding}$ and the binding site size $n$ were determined by fitting a multiple independent binding sites model, which also takes ligand dilution into account data. The fit gives giving small an equilibrium constant $K_{binding}$ of $(7.5\times10^{7} \pm 4.6 \times10^{9})$ $M^{-1}$ for a binding site size of (102 ± 29.51). The fit corresponded to simple dilution and thus suggests that **4.8** does not interact with AA and the decrease in absorbance is the result of simple dilution only.

### *A30. Compound 4.10 binding with AA*

We wanted to study the binding of **4.10** to AA. The changes in absorption of **4.10** upon addition of AA were measured in buffer (25 mM MOPS, pH 7.0, 50 mM NaCl) at 25 °C (Figure A30.1).

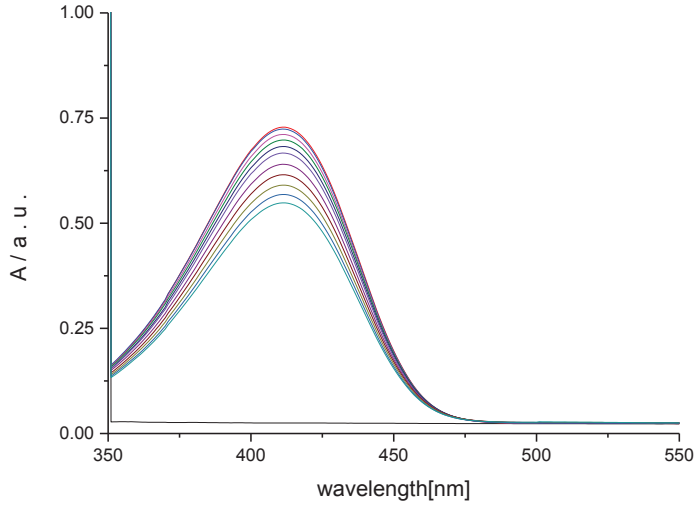



**Figure A30.1:** UV-visible spectra for 0.027 mM **4.10** upon addition of 0 – 0.96 mM AA, at 25 °C in buffer (25 mM MOPS, pH 7.0, 50 mM NaCl).

Figure A30.1 illustrates that **4.10** displays a hypochromic shift in absorbance with a maximum change in absorbance at 411 nm upon addition of AA. The decrease in UV-visible absorption may have occurred as a result of geometrical distortion of **4.10** when it interacts with AA, but it may also be as a result of a local medium effect.

To quantify the affinity of **4.10** for AA, the absorbances at 411 nm were plotted as a function of the concentration of AA (Figure A30.2, for data in tabular format see appendix, Tables A55.75).

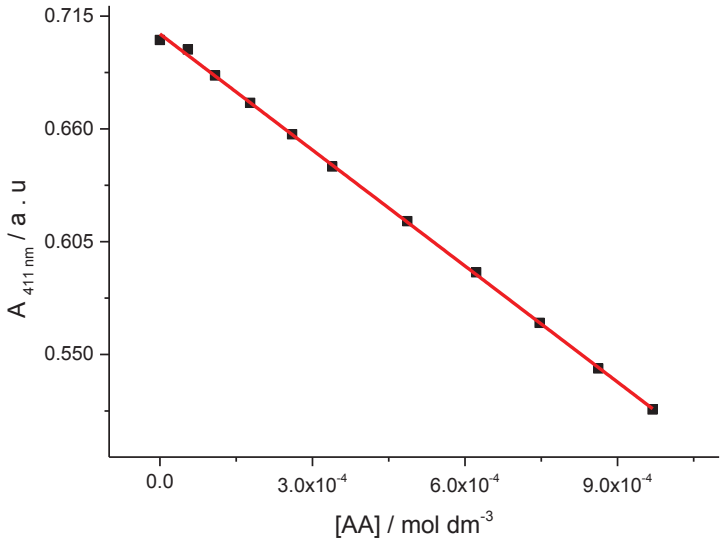



**Figure A30.2:** Absorbance at 411 nm for 0.027 mM **4.10** upon addition of 0 – 0.96 mM AA concentration, at 25 °C in buffer (25 mM MOPS, pH 7.0, 50 mM NaCl). The solid line represents the best fit to the data fit in terms of a multiple independent binding sites model.

Figure A30.2 shows decrease in the absorbance at 411 nm for **4.10** upon addition of AA. The binding affinity $K_{binding}$ and the binding site size $n$ were determined by fitting a multiple independent binding sites model, which also takes ligand dilution into account data. The fit gives giving small an equilibrium constant $K_{binding}$ of $(7.5\times10^{7} \pm 4.6 \times10^{9})$ $M^{-1}$ for a binding site size of (102 ± 29.51). The fit corresponded to simple dilution and thus suggests that **4.10** does not interact with AA and the decrease in absorbance is the result of simple dilution only.

### *A31. Compound 4.11 binding with AA*

We wanted to know the binding of **4.11** to AA. The changes in absorption of **4.11** upon addition of AA were measured in buffer (25 mM MOPS, pH 7.0, 50 mM NaCl) at 25 °C (Figure A31.1).

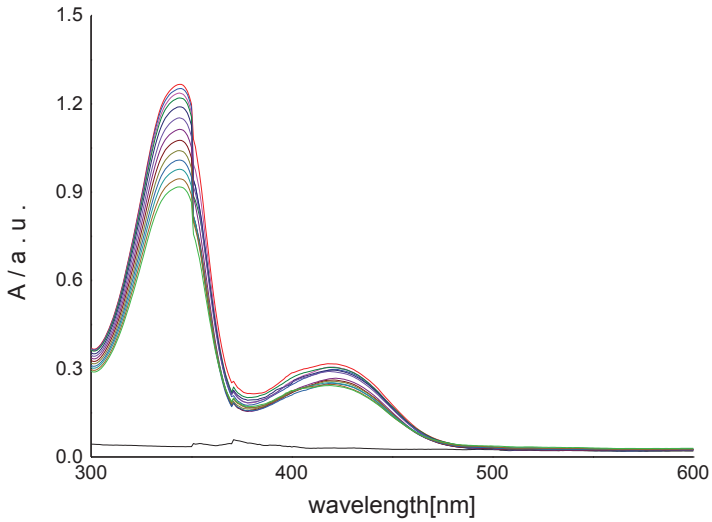



**Figure A31.1:** UV-visible spectra for 0.046 mM **4.11** upon addition of 0 – 1.03 mM AA, at 25 °C in buffer (25 mM MOPS, pH 7.0, 50 mM NaCl).

Figure A31.1 explains that **4.11** displays a hypochromic shift in the absorbance with a maximum change in absorbance at 344 nm upon addition of AA. The decrease in UV-visible absorption may have occurred as a result of geometrical distortion of **4.11** when it interacts with AA, but it may also be as a result of a local medium effect.

To quantify the affinity of **4.11** for AA, the absorbances at 344 nm were plotted as a function of the concentration of AA (Figure A31.2, for data in tabular format see appendix, Tables A55.76).

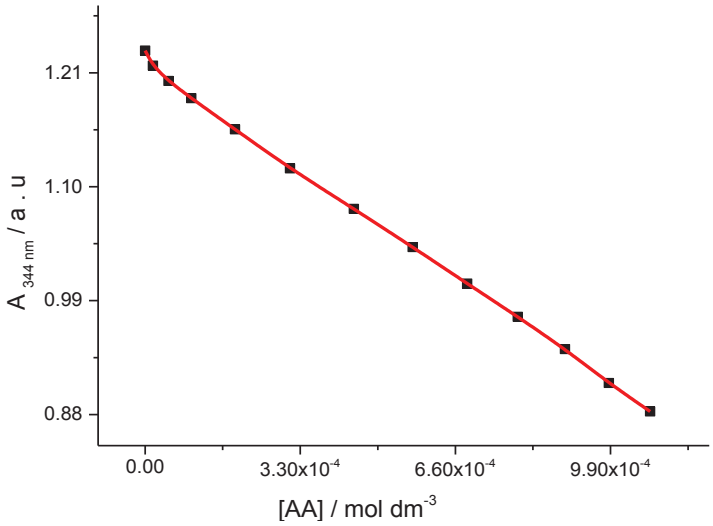



**Figure A31.2:** Absorbance at 344 nm for 0.046 mM **4.11** upon addition of 0 – 1.03 mM AA concentration, at 25 °C in buffer (25 mM MOPS, pH 7.0, 50 mM NaCl). The solid line represents the best fit to the data fit in terms of a multiple independent binding sites model.

Figure A31.2 shows decrease in the absorbance at 344 nm for **4.11** upon addition of AA. The binding affinity $K_{binding}$ and the binding site size $n$ were determined by fitting a multiple independent binding sites model, which also takes ligand dilution into account data. The fit gives giving small an equilibrium constant $K_{binding}$ of $(1.4\times10^{41} \pm 4.6\times10^{44})$ $M^{-1}$ for a binding site size of $(347 \pm 3.8\times10^{9})$. The fit corresponded to simple dilution and thus suggests that **4.11** does not interact with AA and the decrease in absorbance is the result of simple dilution only.

### *A32. Compound 4.12 binding with AA*

We wanted to study the binding of **4.12** to AA. The changes in absorption of **4.12** upon addition of AA were measured in buffer (25 mM MOPS, pH 7.0, 50 mM NaCl) at 25 °C (Figure A32.1).

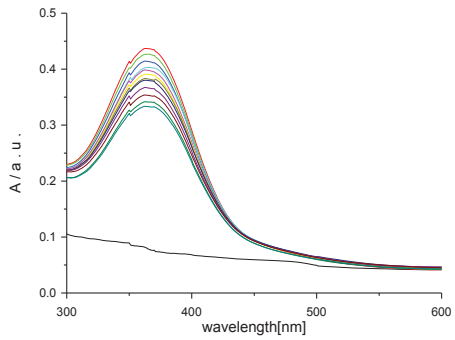



**Figure A32.1:** UV-visible spectra for 0.013 mM **4.12** upon addition of 0 – 1.6 mM AA, at 25 °C in buffer (25 mM MOPS, pH 7.0, 50 mM NaCl).

Figure A32.1 illustrates that **4.12** displays a hypochromic shift in the absorbance with a maximum change in absorbance at 369 nm upon addition of AA. The decrease in UV-visible absorption may have occurred as a result of geometrical distortion of **4.12** when it interacts with AA, but it may also be as a result of a local medium effect.

To quantify the affinity of **4.12** for AA, the absorbances at 369 nm were plotted as a function of the concentration of AA (Figure A32.2, for data in tabular format see appendix, Tables A55.77).

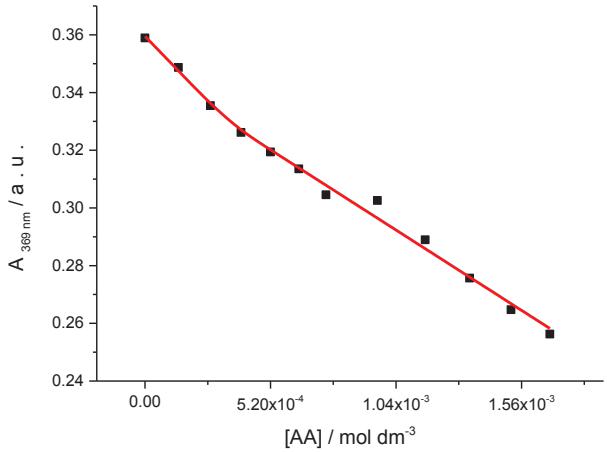



**Figure A32.2:** Absorbance at 369 nm for 0.013 mM **4.12** upon addition of 0 – 1.6 mM AA concentration, at 25 °C in buffer (25 mM MOPS, pH 7.0, 50 mM NaCl). The solid line represents the best fit to the data fit in terms of a multiple independent binding sites model.

Figure A32.2 shows decrease in the absorbance at 369 nm for **4.12** upon addition of AA. The binding affinity $K_{binding}$ and the binding site size $n$ were determined by fitting a multiple independent binding sites model which also takes ligand dilution into account data. The fit gives giving small an equilibrium constant $K_{binding}$ of $(1.7 \times 10^{20} \pm 4.1 \times 10^{31})$ $M^{-1}$ for a binding site size of (27 ± 9.7). The fit corresponded to simple dilution and thus suggests that **4.12** does not interact with AA and the decrease in absorbance is the result of simple dilution only.

### *A33. Compound 4.2 binding with DNA in presence of AA*

We wanted to know the binding of **4.2** to DNA in presence of AA. The changes in absorption of **4.2** upon addition of DNA in presence of AA were measured in buffer (25 mM MOPS, pH 7.0, 50 mM NaCl) at 25 °C (Figure A33.1).

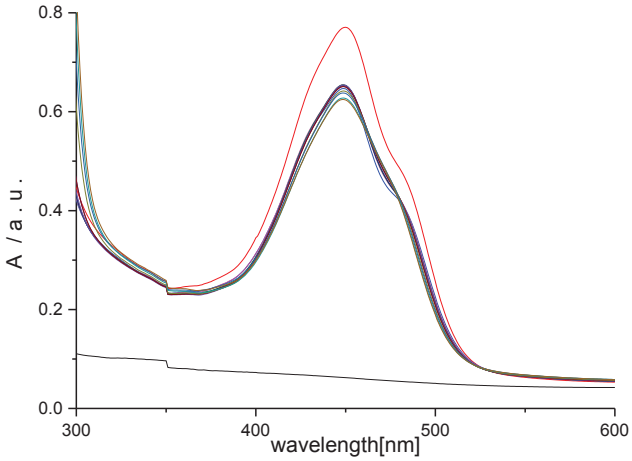



**Figure A33.1:** UV-visible spectra for 0.042 mM **4.2** (red line) upon addition of 0 – 1.5 mM DNA in the presence of 0.1 mM AA, at 25 °in buffer (25 mM MOPS, pH 7.0, 50 mM NaCl).

Figure A33.1 illustrates that **4.2** displays a hypochromic shift in the absorbance with a maximum change in absorbance at 450 nm upon addition of DNA in presence of AA. The decrease in UV-visible absorption may have occurred as a result of geometrical distortion of **4.2** when it interacts with AA, but it may also be as a result of a local medium effect.

To quantify the affinity of **4.2** for DNA in ptresence of AA, the absorbances at 450 nm were plotted as a function of the concentration of AA (Figure A33.2, for data in tabular format see appendix, Tables A55.79).

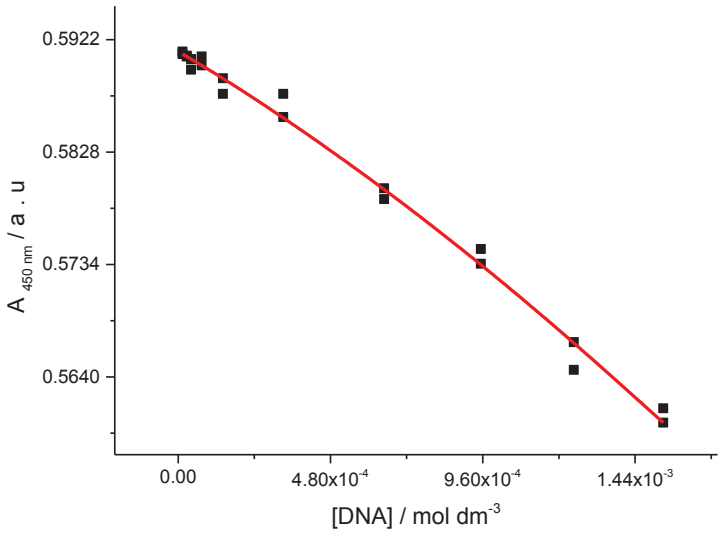



**Figure A33.2:** Absorbance at 450 nm for 0.042 mM **4.2** upon addition of 0 – 1.5 mM DNA concentration in presence of 0.1 mM AA, at 25 °C in buffer (25 mM MOPS, pH 7.0, 50 mM NaCl). The solid line represents the best fit to the data fit in terms of a multiple independent binding sites model.

Figure A33.2 shows decrease in the absorbance at 450 nm for **4.2** upon addition of DNA in presence of AA. The binding affinity $K_{binding}$ and the binding site size $n$ were determined by fitting a multiple independent binding sites model, which also takes ligand dilution into account data. The fit gives giving small an equilibrium constant $K_{binding}$ of $(147 \pm 6.8 \times 10^6)$ $M^{-1}$ for a binding site size of $(1.3 \pm 6.0 \times 10^4)$. The fit corresponded to simple dilution and thus suggests that **4.2** does not interact with DNA in presence of AA and the decrease in absorbance is the result of simple dilution and because of strong binding between AA and **4.2** lead strong effect of AA on DNA biosensors.

### *A34. Compound 5.2 binding to POSA*

We wanted to know whether the binding **5.2** and POSA. The changes in absorption of **5.2** upon addition of POSA were measured in buffer (25 mM MOPS, pH 7.0, 50 mM NaCl and 10 vol.% DMSO) at 25 °C (Figure A34.1).

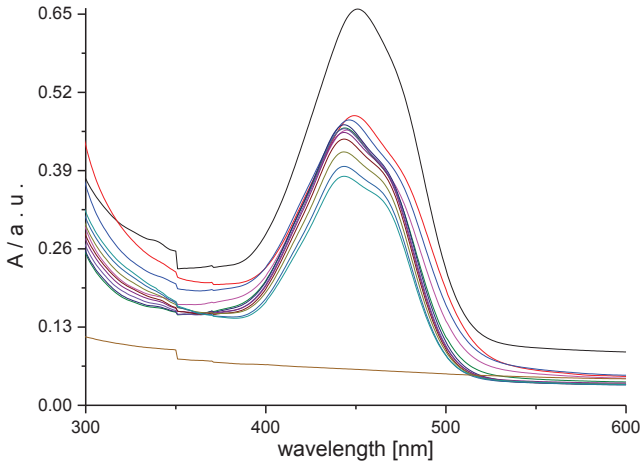



**Figure A34.1:** UV-visible spectra for 0.036 mM **5.2** at 450 nm upon addition of 0 – 3.3 mM POSA, at 25 °C in buffer (25 mM MOPS, pH 7.0, 50 mM NaCl and 10 vol-% DMSO).

Figure A34.1 shows a hypochromic shift in absorbance at 450 nm followed by a hyperchromic shift at 450 nm of **5.2** upon addition of POSA. This change in UV-visible absorption may occur as a result of geometrical distortion of **5.2** when it interacts with POSA, but it may also be a local medium effect. This observation suggests precipitation and following dissolution of a POSA-ligand complex.

To quantify the affinity of **5.2** for POSA, the absorbances at 450 nm were plotted as a function of the concentration of POSA (Figure A34.2, for data in tabular format see appendix, Tables A55.88.

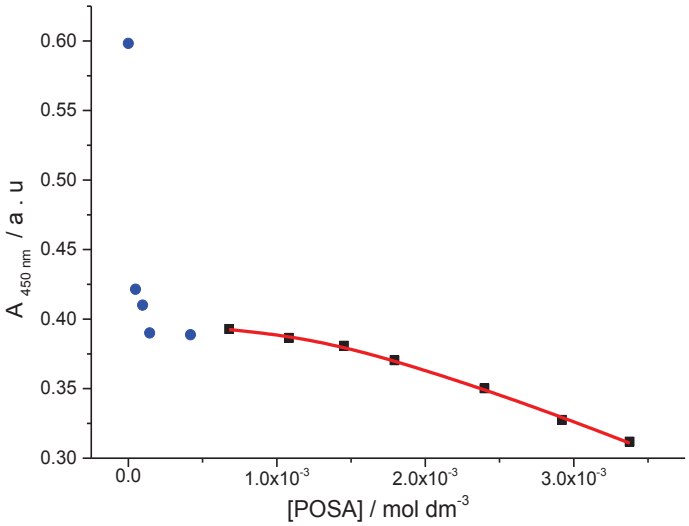



**Figure A34.2:** Absorbance at 450 nm for 0.036 mM **5.2** as a function of POSA concentration of 0 – 0.41 mM (●) and of 0.67 – 3.3 mM (■), at 25 °C in buffer (25 mM MOPS, pH 7.0, 50 mM NaCl and 10 vol-% DMSO). The solid line represents a global fit of a multiple independent sites model to the data in the 0.67 – 3.3 mM range (■).

Figure A34.2 shows two events. In the first event shows a decrease in absorbance. We attribute this fast decrease in absorption to strong binding of **5.2** to the POSA at low POSA/ligand ratios, leading to charge neutralisation of **5.2**-POSA complexes and eventually precipitation. The titration data in Figure A34.2 (with the first event not involved) were analysed in terms of a multiple independent binding sites models, which also takes ligand dilution into account, giving an apparent equilibrium constant $K_{binding}$ of (2.2 ± 0.8) $\times 10^3$ $M^{-1}$ for a binding site restricted at (3).

### *A35. Compound 5.9 binding with POSA*

We need to know the binding of **5.9** to POSA. The changes in absorption of **5.9** upon addition of POSA were measured in buffer (25 mM MOPS, pH 7.0, 50 mM NaCl) at 25 °C (Figure A35.1).

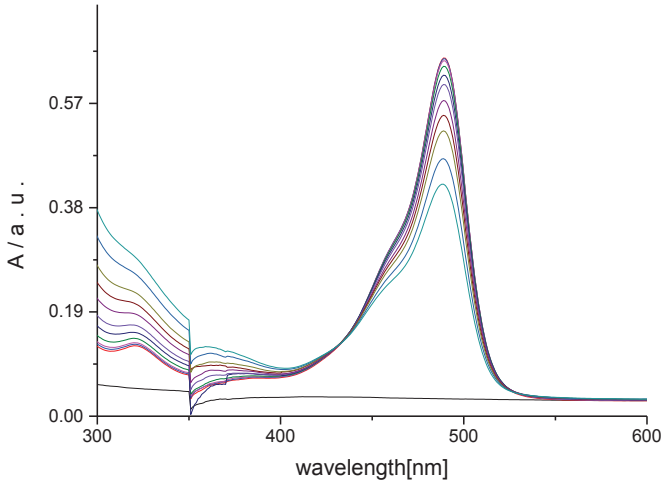



**Figure A35.1:** UV-visible spectra for 0.011 mM **5.9** at 489 nm upon addition of 0 – 1.2 mM POSA, at 25 °C in buffer (25 mM MOPS, pH 7.0, 50 mM NaCl).

Figure A35.1 illustrates that **5.9** displays a hypochromic shift in the absorbance with a maximum change in absorbance at 489 nm upon addition of POSA. The decrease in UV-visible absorption may have occurred as a result of geometrical distortion of **5.9** when it interacts with POSA, but it may also be as a result of a local medium effect.

To quantify the affinity of **5.9** for POSA, the absorbances at 489 nm were plotted as a function of the concentration of POSA (Figure A35.2, for data in tabular format see appendix, Tables A55.95).

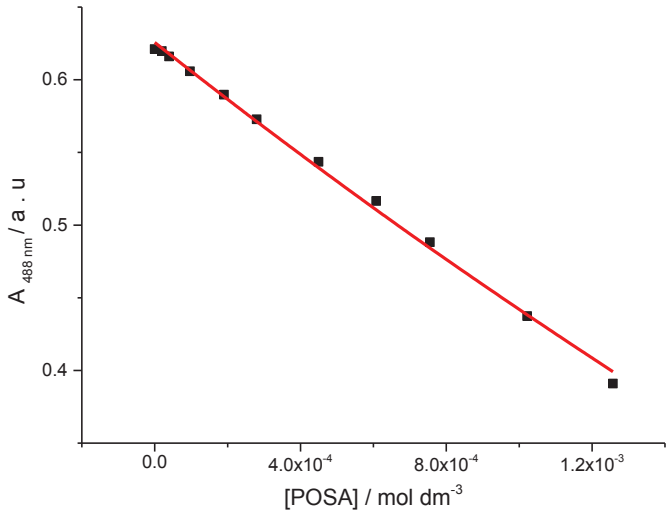



**Figure A35.2:** Absorbance at 489 nm for 0.011 mM **5.9** upon addition of 0 – 1.2 mM POSA concentration, at 25 °C in buffer (25 mM MOPS, pH 7.0, 50 mM NaCl). The solid line represents the best fit to the data fit in terms of a multiple independent binding sites model.

Figure A35.2 shows decrease in the absorbance at 489 nm for **5.9** upon addition of POSA. The binding affinity $K_{binding}$ and the binding site size $n$ were determined by fitting a multiple independent binding sites model, which also takes ligand dilution into account data. The fit gives giving small an equilibrium constant $K_{binding}$ of $(22 \pm 2.6\times10^{5})$ $M^{-1}$ for a binding site size of $(1051 \pm 1.9\times10^{7})$. The fit corresponded to simple dilution and thus suggests that **5.9** does not interact with POSA and the decrease in absorbance is the result of simple dilution only.

### *A36. Compound 5.11 with POSA*

We wanted to study the binding of **5.11** to POSA. The changes in absorption of **5.11** upon addition of POSA were measured in buffer (25 mM MOPS, pH 7.0, 50 mM NaCl) at 25 °C (Figure A36.1).

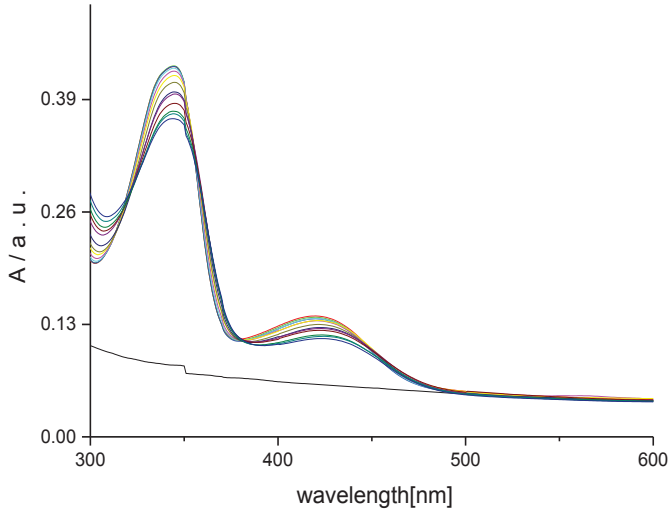



**Figure A36.1:** UV-visible spectra for 0.012 mM **5.11** at 344 nm upon addition of 0 – 2.3 mM POSA, at 25 °C in buffer (25 mM MOPS, pH 7.0, 50 mM NaCl).

Figure A36.1 illustrates that **5.11** displays a hypochromic shift in the absorbance with a maximum change in absorbance at 344 nm upon addition of POSA. The decrease in UV-visible absorption may have occurred as a result of geometrical distortion of **5.11** when it interacts with POSA, but it may also be as a result of a local medium effect.

To quantify the affinity of **5.11** for POSA, the absorbances at 344 nm were plotted as a function of the concentration of POSA (Figure A36.2, for data in tabular format see appendix, Tables A55.96).

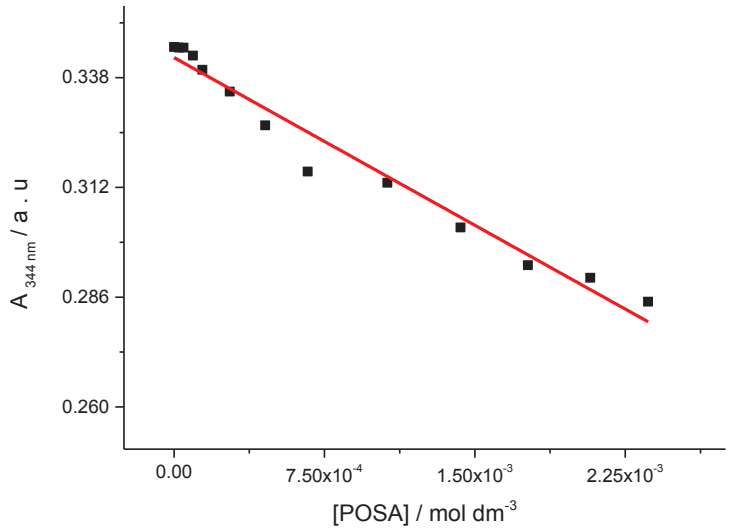



**Figure A36.2:** Absorbance at 344 nm for 0.012 mM **5.11** upon addition of 0 – 2.3 mM POSA concentration, at 25 °C in buffer (25 mM MOPS, pH 7.0, 50 mM NaCl). The solid line represents the best fit to the data fit in terms of a multiple independent binding sites model.

Figure A36.2 shows decrease in the absorbance at 344 nm for **5.11** upon addition of POSA. The binding affinity $K_{binding}$ and the binding site size $n$ were determined by fitting a multiple independent binding sites model, which also takes ligand dilution into account data. The fit gives giving small an equilibrium constant $K_{binding}$ of $(1.00\times10^{43} \pm 4.5\times10^{43})$ $M^{-1}$ for a binding site size of $(4.0\times10^{4})$. The fit corresponded to simple dilution and thus suggests that **5.11** does not interact with POSA and the decrease in absorbance is the result of simple dilution only.

### *A37 Compounds 5.2 with DNA in the presence of 0.1 mM POSA*

To evaluate the binding of **5.2** with DNA in the presence of 0.1 mM POSA. The changes in absorption of **5.2** upon addition of DNA were measured in buffer (25 mM MOPS, pH 7.0, 50 mM NaCl) at 25° C in the presence of 0.1 mM POSA (Figure A37.1).

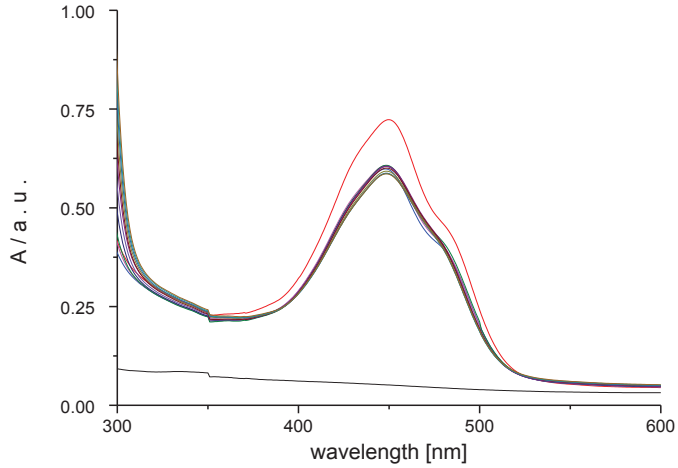



**Figure A37.1:** UV-visible spectra for 0.040 mM **5.2** (red line) in presence of 0.1 mM POSA and upon addition of 0 – 1.9 mM DNA, at 25 °C in buffer (25 mM MOPS, pH 7.0, 50 mM NaCl).

Figure A37.1 illustrates that **5.2** displays a hypochromic shift in the absorbance with a maximum change in absorbance at 450 nm upon addition of DNA in presence of POSA. The decrease in UV-visible absorption may have occurred as a result of geometrical distortion of **5.2** when it interacts with DNA in presence of POSA, but it may also be as a result of a local medium effect.

To quantify the affinity of **5.2** for DNA in presence of POSA, the absorbances at 450 nm were plotted as a function of the concentration of DNA in presence of POSA (Figure A37.2, for data in tabular format see appendix, Tables A55.98).

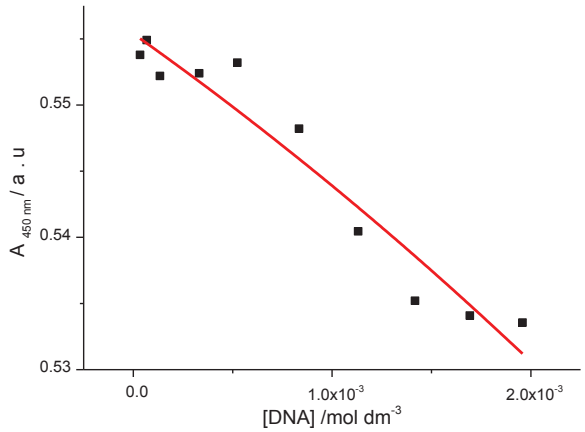



**Figure A37.2:** Absorbance at 450 nm for 0.040 mM **5.2** upon addition of 0 – 1.9 mM DNA concentration in presence of 0.1 mM POSA, at 25 °C in buffer (25 mM MOPS, pH 7.0, 50 mM NaCl). The solid line represents the best fit to the data fit in terms of a multiple independent binding sites model.

Figure A37.2 shows decrease in the absorbance at 450 nm for **5.2** upon addition of DNA in presence of POSA. The binding affinity $K_{binding}$ and the binding site size *n* were determined by fitting a multiple independent binding sites model, which also takes ligand dilution into account data. The fit gives giving small an equilibrium constant $K_{binding}$ of $(2.2\times10^4 \pm 1.0\times10^7)$ $M^{-1}$ for a binding site size of $(3.4\times10^4 \pm 1.1\times10^9)$. The fit corresponded to simple dilution and thus suggests that **5.2** does not interact with DNA in presence of POSA and the decrease in absorbance is the result of simple dilution only.

### *A38 Compounds 5.12 binding with DNA in the presence of 0.1 mM POSA*

To evaluate the binding of **5.12** with DNA in the presence of 0.1 mM POSA. The changes in absorption of **5.12** upon addition of DNA were measured in buffer (25 mM MOPS, pH 7.0, 50 mM NaCl) at 25° C in the presence of 0.1 mM POSA (Figure A38.1).

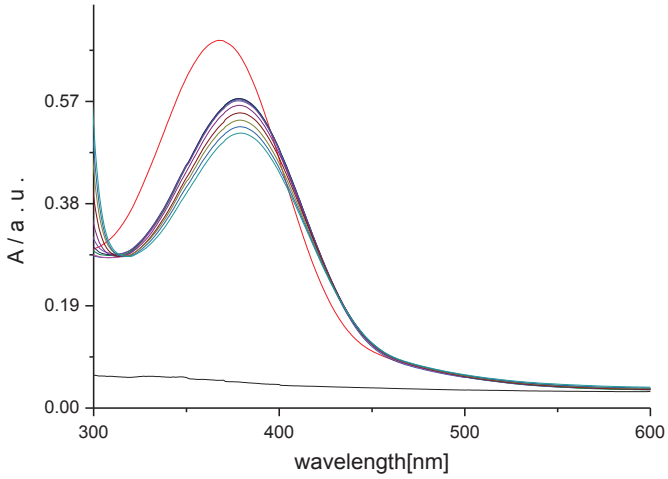



**Figure A38.1**: UV-visible spectra for 0.023 mM **5.12** (red line) upon addition of 0 – 0.7 mM DNA in presence of 0.1 mM POSA, at 25 °C in buffer (25 mM MOPS, pH 7.0, 50 mM NaCl).

Figure A38.1 illustrates that **5.12** displays a hypochromic shift in the absorbance with a maximum change in absorbance at 367 nm upon addition of DNA in presence of POSA. The decrease in UV-visible absorption may have occurred as a result of geometrical distortion of **5.12** when it interacts with DNA in presence of POSA, but it may also be as a result of a local medium effect.

To quantify the affinity of **5.12** for DNA in presence of POSA, the absorbances at 367 nm were plotted as a function of the concentration of DNA in presence of POSA (Figure A38.2), for data in tabular format see appendix, Tables A55.105).

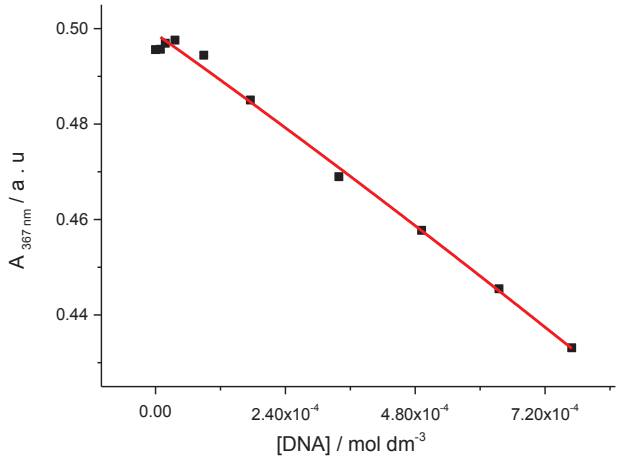



**Figure A38.2:** Absorbance at 450 nm for 0.023 mM **5.12** in presence of 0.1 mM POSA and upon addition of 0 –0.7 mM DNA, at 25 °C in buffer (25 mM MOPS, pH 7.0, 50 mM NaCl). The solid line represents the best fit to the data fit in terms of a multiple independent binding sites model.

Figure A38.2 shows decrease in the absorbance at 367 nm for **5.12** upon addition of DNA in presence of POSA. The binding affinity $K_{binding}$ and the binding site size $n$ were determined by fitting a multiple independent binding sites model, which also takes ligand dilution into account data. The fit gives giving small an equilibrium constant $K_{binding}$ of $(2.2 \times 10^{17} \pm 5.5 \times 10^{29})$ $M^{-1}$ for a binding site size of (3.0). The fit corresponded to simple dilution and thus suggests that **5.12** does not interact with DNA in presence of POSA and the decrease in absorbance is the result of simple dilution only and because of **5.12** binds strongly with POSA.

### *A39. Compound 5.2 binding to PAA*

We wanted to know whether **5.2** and PAA. The changes in absorption of **5.2** upon addition of PAA were measured in buffer (25 mM MOPS, pH 7.0, 50 mM NaCl and 10 vol-% DMSO) at 25 °C (Figure A39.1).

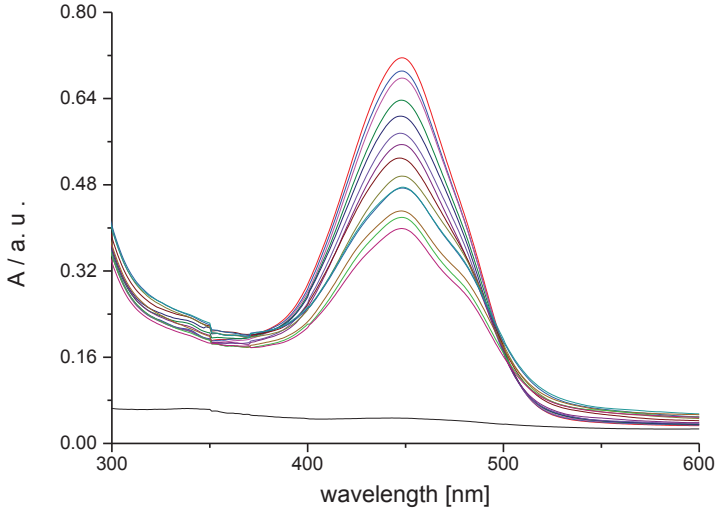



**Figure A39.1:** UV-visible spectra for 0.040 mM **5.2** upon addition of 0 – 0.28 mM PAA, at 25 °C in buffer (25 mM MOPS pH 7.0, 50 mM NaCl and 10 vol-% DMSO).

Figure A39.1 shows that **5.2** displays a hypochromic shift in the absorbance upon addition of PAA with a maximum change in absorbance at 448 nm. This decrease in UV-visible absorption may have occurred as a result of geometrical distortion of **5.2** when it interacts with PAA, but it may also be as a result of a local medium effect.

To quantify the affinity of **5.2** for PAA, the absorbances at 448 nm were plotted as a function of the concentration of PAA. (Figure A39.2, for data in tabular format see appendix, Tables A55.107).

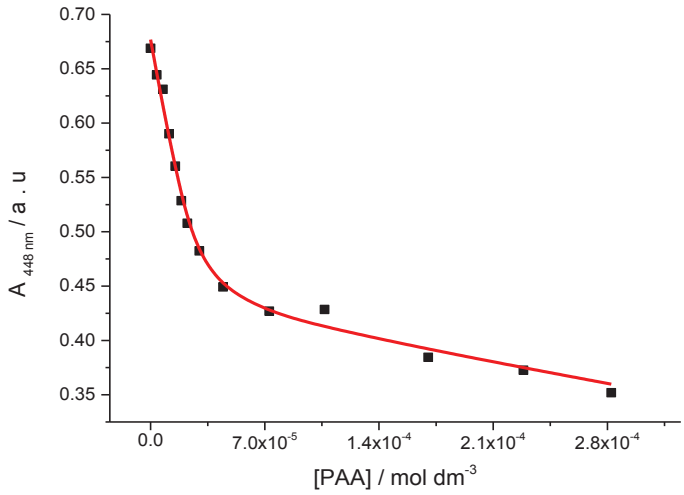



**Figure A39.2:** Absorbance at 448 nm for 0.040 mM **5.2** upon addition of 0 – 0.28 mM PAA concentration, at 25 °C in buffer (25 mM MOPS, pH 7.0, 50 mM NaCl and 10 vol-% DMSO). The solid line represents the best fit to the data fit in terms of a multiple independent binding sites model.

Figure A39.2 shows a clear decrease in the absorbances at 448 nm for **5.2** upon addition PAA. The binding affinity $K_{binding}$ and binding site size were determined by fitting a multiple independent binding sites model, which also takes ligand dilution into account the data, with a binding constant $K_{binding}$ of (2.9 ±1.9) $\times 10^5$ $M^{-1}$ for a binding site size of (0.7 ± 0.08). The fit suggests that **5.2** interacts and that PAA has a binding site size reachable to **5.2**.

### *A40. Compound 5.4 binding with PAA*

To study the binding of **5.4** to PAA. The changes in absorption of **5.4** upon addition of PAA were measured in buffer (25 mM MOPS, pH 7.0, 50 mM NaCl) at 25 °C (Figure A40.1).

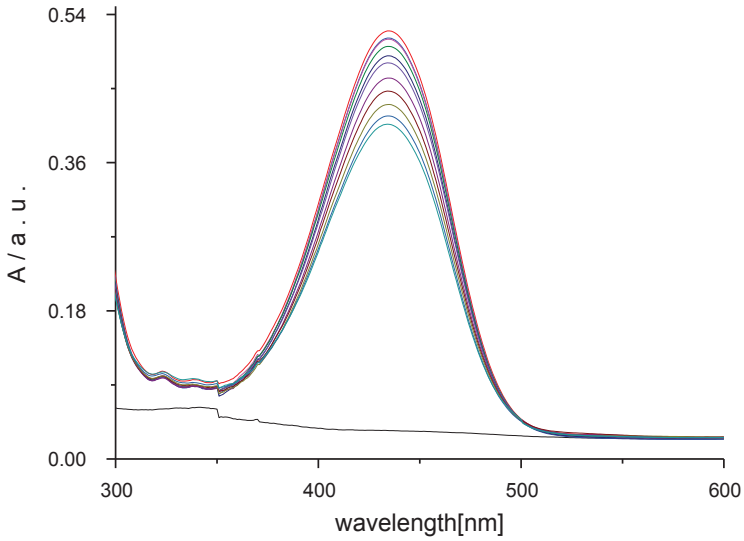



**Figure A40.1:** UV-visible spectra for 0.044 mM **5.4** at 434 nm upon addition of 0 – 0.37 mM PAA, at 25 °C in buffer (25 mM MOPS, pH 7.0, 50 mM NaCl).

Figure A40.1 illustrates that **5.4** displays a hypochromic shift in the absorbance with a maximum change in absorbance at 434 nm upon addition of PAA. The decrease in UV-visible absorption may have occurred as a result of geometrical distortion of **5.4** when it interacts with PAA, but it may also be as a result of a local medium effect.

To quantify the affinity of **5.4** for PAA, the absorbances at 434 nm were plotted as a function of the concentration of PAA (Figure A40.2, for data in tabular format see appendix, Tables A55.108).

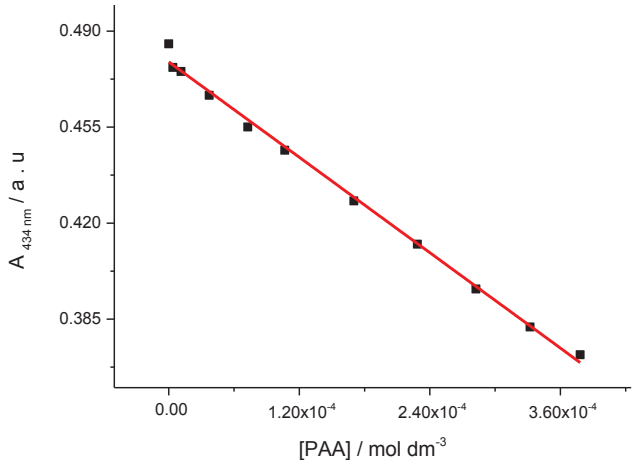



**Figure A40.2:** Absorbance at 434 nm for 0.044 mM **5.4** upon addition of 0 – 0.37 mM PAA concentration, at 25 °C in buffer (25 mM MOPS, pH 7.0, 50 mM NaCl). The solid line represents the best fit to the data fit in terms of a multiple independent binding sites model.

Figure A40.2 shows decrease in the absorbance at 434 nm for **5.4** upon addition of PAA. The binding affinity $K_{binding}$ and the binding site size $n$ were determined by fitting a multiple independent binding sites model, which also takes ligand dilution into account data, with a binding constant $K_{binding}$ of $(2.0\times10^{18} \pm 1.3\times10^{29})$ $M^{-1}$ for a binding site size of $(5.0 \pm 2.9\times10^{11})$. The fit corresponded to simple dilution and thus suggests that **5.4** does not interact with PAA and the decrease in absorbance is the result of simple dilution only.

### *A41. Compound 5.5 binding with PAA*

We wanted to know the binding of **5.5** to PAA. The changes in absorption of **5.5** upon addition of PAA were measured in buffer (25 mM MOPS, pH 7.0, 50 mM NaCl) at 25 °C (Figure A41.1).

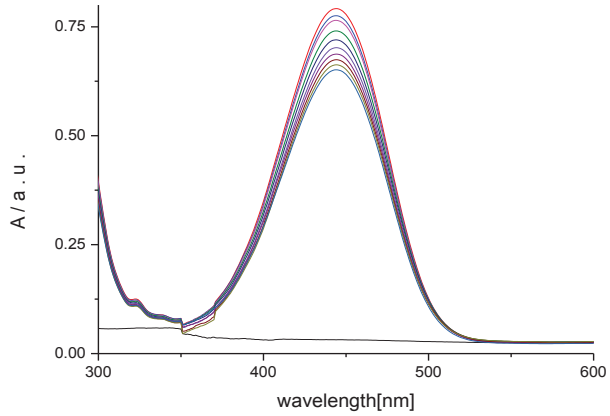



**Figure A41.1:** UV-visible spectra for 0.070 mM **5.5** at 444 nm upon addition of 0 – 1.3 mM PAA, at 25 °C in buffer (25 mM MOPS, pH 7.0, 50 mM NaCl).

Figure A41.1 illustrates that **5.5** displays a hypochromic shift in the absorbance with a maximum change in absorbance at 444 nm upon addition of PAA. The decrease in UV-visible absorption may have occurred as a result of geometrical distortion of **5.5** when it interacts with PAA, but it may also be as a result of a local medium effect.

To quantify the affinity of **5.5** for PAA, the absorbances at 444 nm were plotted as a function of the concentration of PAA (Figure A41.2, for data in tabular format see appendix, Tables A55.109).

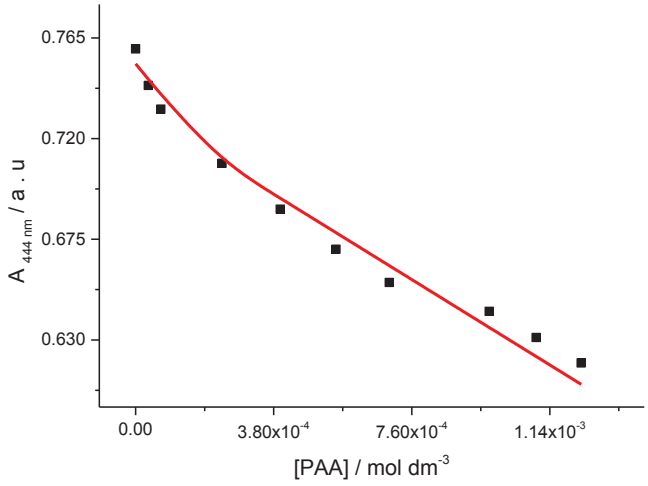



**Figure A41.2:** Absorbance at 444 nm for 0.070 mM **5.5** upon addition of 0 – 1.3 mM PAA concentration, at 25 °C in buffer (25 mM MOPS, pH 7.0, 50 mM NaCl). The solid line represents the best fit to the data fit in terms of a multiple independent binding sites model.

Figure A41.2 shows decrease in the absorbance at 444 nm for **5.5** upon addition of PAA. The binding affinity $K_{binding}$ and the binding site size $n$ were determined by fitting a multiple independent binding sites model, which also takes ligand dilution into account data, with a binding constant $K_{binding}$ of $(9.1\times10^{17} \pm 3.5\times10^{29})$ $M^{-1}$ for a binding site size of (3). The fit corresponded to simple dilution and thus suggests that **5.5** does not interact with PAA and the decrease in absorbance is the result of simple dilution only.

### *A42. Compound 5.10 binding with PAA*

We wanted to study the binding of **5.10** to PAA. The changes in absorption of **5.10** upon addition of PAA were measured in buffer (25 mM MOPS, pH 7.0, 50 mM NaCl) at 25 °C (Figure A42.1).

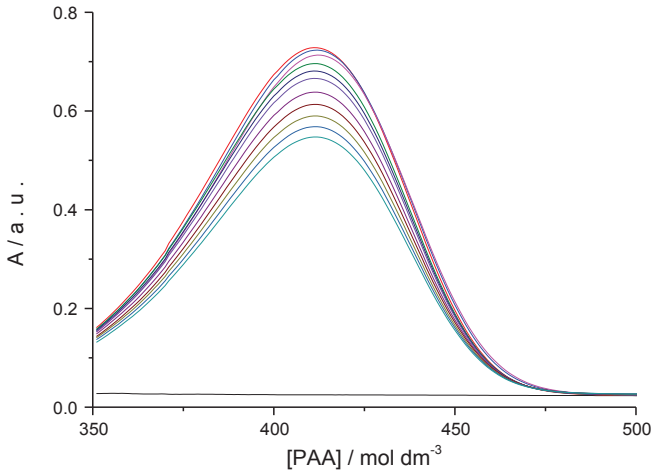



**Figure A42.1:** UV-visible spectra for 0.027 mM **5.10** at 411 nm upon addition of 0 – 0.25 mM PAA, at 25 °C in buffer (25 mM MOPS, pH 7.0, 50 mM NaCl).

Figure A42.1 shows that **5.10** displays a hypochromic shift in the absorbance with a maximum change in absorbance at 411 nm upon addition of PAA. The decrease in UV-visible absorption may have occurred as a result of geometrical distortion of **5.10** when it interacts with PAA, but it may also be as a result of a local medium effect.

To quantify the affinity of **5.10** for PAA, the absorbances at 411 nm were plotted as a function of the concentration of PAA (Figure A42.2, for data in tabular format see appendix, Tables A55.112).

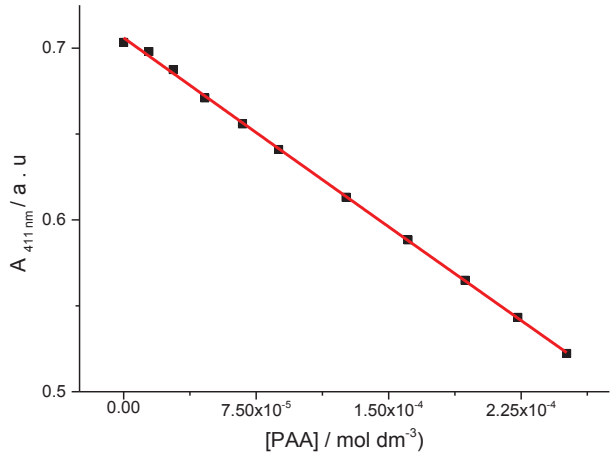



**Figure A42.2**: Absorbance at 411 nm for 0.027 mM **5.10** upon addition of 0 – 0.25 mM PAA, at 25 °C in buffer (25 mM MOPS, pH 7.0, 50 mM NaCl). The solid line represents the best fit to the data fit in terms of a multiple independent binding sites model.

Figure A42.2 shows decrease in the absorbance at 411 nm for **5.10** upon addition of PAA. The binding affinity $K_{binding}$ and the binding site size *n* were determined by fitting a multiple independent binding sites model, which also takes ligand dilution into account data, with a binding constant $K_{binding}$ of $(9.5\times10^4 \pm 4.4\times10^6)$ $M^{-1}$ for a binding site size of (9.0 ±45.4). The fit corresponded to simple dilution and thus suggests that **5.10** does not interact with PAA and the decrease in absorbance is the result of simple dilution only.

### *A43. Compound 5.11 binding with PAA*

We need to know the binding of **5.11** to PAA. The changes in absorption of **5.11** upon addition of PAA were measured in buffer (25 mM MOPS, pH 7.0, 50 mM NaCl) at 25 °C (Figure A43.1).

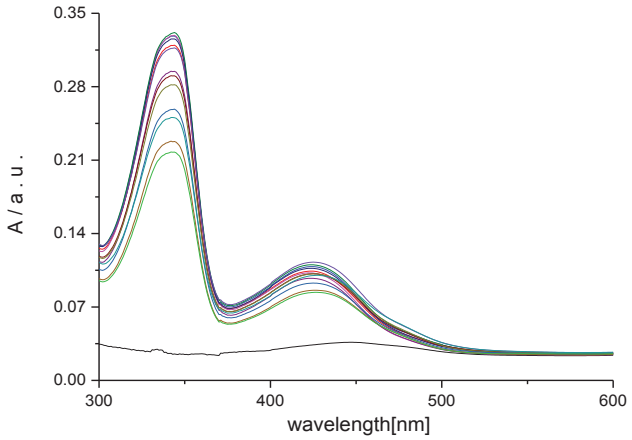



**Figure A43.1:** UV-visible spectra for 0.010 mM **5.11** at 343 nm upon addition of 0 – 3.6 mM PAA, at 25 °C in buffer (25 mM MOPS, pH 7.0, 50 mM NaCl).

Figure A43.1 explains that **5.11** displays a hypochromic shift in the absorbance with a maximum change in absorbance at 343 nm upon addition of PAA. The decrease in UV-visible absorption may have occurred as a result of geometrical distortion of **5.11** when it interacts with PAA, but it may also be as a result of a local medium effect.

To quantify the affinity of **5.11** for PAA, the absorbances at 343 nm were plotted as a function of the concentration of PAA (Figure A43.2, for data in tabular format see appendix, Tables A55.113).

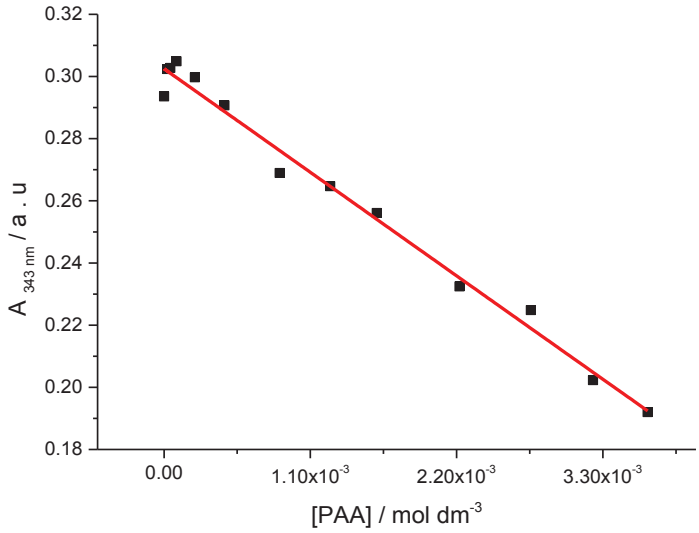



**Figure A43.2:** Absorbance at 343 nm for 0.010 mM **5.11** upon addition of 0 – 3.6 mM PAA concentration, at 25 °C in buffer (25 mM MOPS, pH 7.0, 50 mM NaCl). The solid lines represent the best fit to the data fit in terms of a multiple independent binding sites model.

Figure A43.2 shows decrease in the absorbance at 343 nm for **5.11** upon addition of PAA. The binding affinity $K_{binding}$ and binding site size $n$ were determined by fitting a multiple independent binding sites model which also takes ligand dilution into account data, with a binding constant $K_{binding}$ of $(1.6\times10^{5} \pm 9.0\times10^{8})$ $M^{-1}$ for binding site size $(7.9 \times10^{-8} \pm 0.0046)$. The fit corresponded to simple dilution and thus suggests that **5.11** does not interact with PAA and the decrease in absorbance is the result of simple dilution only.

### *A44. Compound 5.12 binding with PAA*

We wanted to know the binding of **5.12** to PAA. The changes in absorption of **5.12** upon addition of PAA were measured in buffer (25 mM MOPS, pH 7.0, 50 mM NaCl) at 25 °C (Figure A44.1).

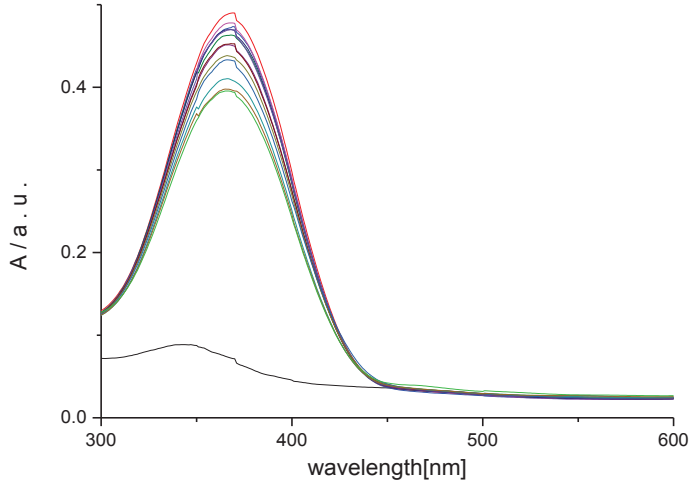



**Figure A44.1:** UV-visible spectra for 0.015 mM **5.12** upon addition of 0 – 0.28 mM PAA, at 25 °C in buffer (25 mM MOPS, pH 7.0, 50 mM NaCl).

Figure A44.1 shows that **5.12** displays a hypochromic shift in the absorbance with a maximum change in absorbance at 369 nm upon addition of PAA. The decrease in UV-visible absorption may have occurred as a result of geometrical distortion of **5.12** when it interacts with PAA, but it may also be as a result of a local medium effect.

To quantify the affinity of **5.12** for PAA, the absorbances at 369 nm were plotted as a function of the concentration of PAA (Figure A44.2, for data in tabular format see appendix, Tables A55.114).

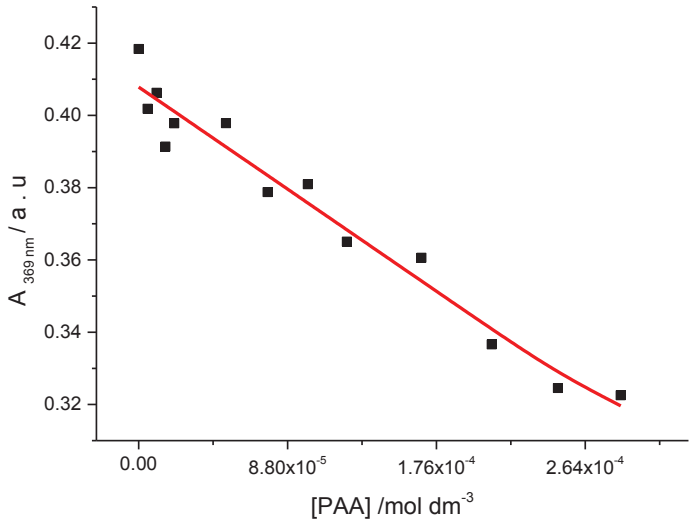



**Figure A44.2:** Absorbance at 369 nm for 0.015 mM **5.12** upon addition of 0 – 0.28 mM PAA, at 25 °C in buffer (25 mM MOPS, pH 7.0, 50 mM NaCl). The solid line represents the best fit to the data fit in terms of a multiple independent binding sites model.

Figure A44.2 shows decrease in the absorbance at 369 nm for **5.12** upon addition of PAA. The binding affinity $K_{binding}$ and the binding site size *n* were determined by fitting a multiple independent binding sites model, which also takes ligand dilution into account data, with a binding constant $K_{binding}$ of $(1.7\times10^{18} \pm 6.7\times10^{29})$ $M^{-1}$ for a binding site size for (18.45 ± 10.11) The fit corresponded to simple dilution and thus suggests that **5.12** does not interact with PAA and the decrease in absorbance is the result of simple dilution only.

### *A45. Compound 5.2 and DNA in the presence of 0.7 mM PAA*

We studied the interactions of **5.2** with DNA in the presence of 0.7 mM PAA. The changes in absorption of **5.2** upon addition of DNA in the presence of 0.7 mM PAA were measured in buffer (25 mM MOPS, pH 7.0, 50 mM NaCl) at 25 °C (Figure A45.1).

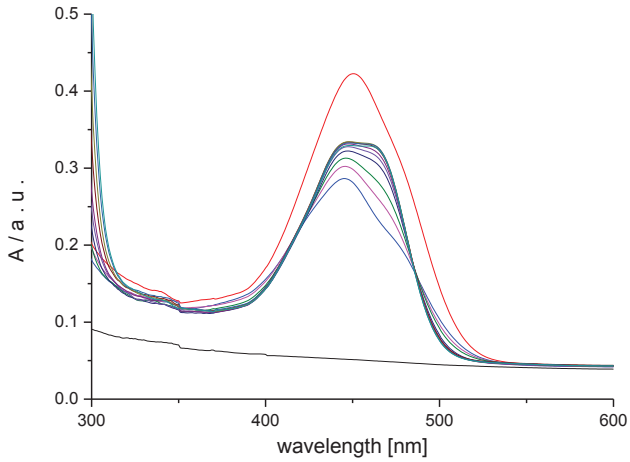



**Figure A45.1:** UV-visible spectra for 0.02 mM **5.2** (red line) in absence of PAA subsequent spectra for **5.2** in the presence of 0.7 mM PAA and upon addition of 0 – 1.5 mM DNA, at 25 °C in buffer (25 mM MOPS, pH 7.0, 50 mM NaCl).

Figure A45.1 shows a hypochromic shift in absorbance at 451 nm upon addition PAA after that hyperchromic shift at 451 nm of **5.2** upon addition of DNA in the presence of 0.7 mM PAA. This change in UV-visible absorption may occur as a result of geometrical distortion of **5.2** when it interacts with DNA, but it may also be a local medium effect. This observation suggests precipitation and subsequent dissolution of a DNA-ligand complex in the presence of 0.7 mM PAA.

To quantify the affinity of **5.2** for DNA in the presence of 0.7 mM PAA, the absorbances at 451 nm were plotted as a function of the concentration of DNA (Figure A45.2, for data in tabular format see appendix, Tables A55.116).

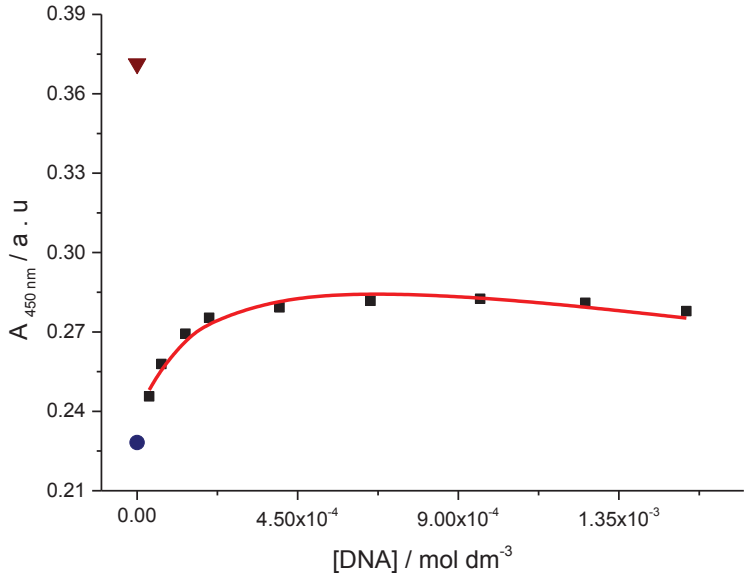



**Figure A45.2:** Absorbance at 451 nm of 0.020 mM **5.2** in absence of PAA (▼) subsequent spectra for **5.2** in the presence of 0.7 mM PAA (●) and upon addition of DNA concentration of 0 – 1.5 mM (■), at 25 °C in buffer (25 mM MOPS, pH 7, 50 mM NaCl). The solid line represents the best fit to the data fit in terms of a multiple independent binding sites model to the data in the 0 – 1.5 mM range (■).

Figure A45.2 shows two events. The first event shows a fast decrease in the absorbance upon addition 0.7 mM PAA (●). We attribute this decline in absorbance to strong binding of **5.2** to PAA, leading to precipitation as a result of charge neutralisation of the **5.2** – PAA complexes as also observed previously in the absence of PAA. The second binding shows a clear increase in the absorbance of **5.2** upon addition 0 – 1.5 mM (■) of DNA in the presence of 0.7 mM of PAA. The ligand strongly interacts with DNA in the presence of PAA, giving an apparent equilibrium constant $K_{binding}$ of (2.0 ± 0.5) $\times 10^4$ $M^{-1}$ for a binding site size (3). A $K_{binding}$ of (1.5 ± 0.1) $\times 10^4$ $M^-$ for the binding site size restricted to 3.0 base pairs was observed for **5.2** to DNA in absence PAA[172]. From the similarity in the apparent binding constant in absence PAA[172] and in the presence of PAA, it appears that PAA does not significantly compete with DNA for **5.2**. Unfortunately, PAA does not help to avoid precipitation. The presence of this competition is beneficial if the compound **5.2** were to be used in a biosensor because it can be used to stop nonspecific interaction that leads to the false positive signal. In addition, it may provide signals to detect DNA hybridization information when used in biosensors.

### *A46. Compound 6.10 binding with SDS*

We wanted to study the binding of **6.10** to SDS. The changes in absorption of **6.10** upon addition of SDS were measured in buffer (25 mM MOPS, pH 7.0, 50 mM NaCl) at 25 °C (Figure A46.1).

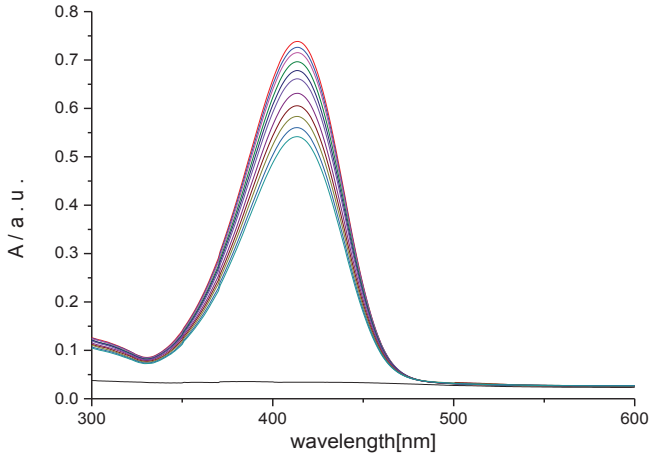



**Figure A46.1:** UV-visible spectra for 0.0036 mM **6.10** at 411 nm upon addition of 0 – 0.3 mM SDS, at 25 °C in buffer (25 mM MOPS, pH 7.0, 50 mM NaCl).

Figure A46.1 explains that **6.10** displays a hypochromic shift in the absorbance with a maximum change in absorbance at 411 nm upon addition of SDS. The decrease in UV-visible absorption may have occurred as a result of geometrical distortion of **6.10** when it interacts with SDS, but it may also be as a result of a local medium effect.

To quantify the affinity of **6.10** for SDS, the absorbances at 411 nm were plotted as a function of the concentration of SDS (Figure A46.2, for data in tabular format see appendix, Tables A55.130).

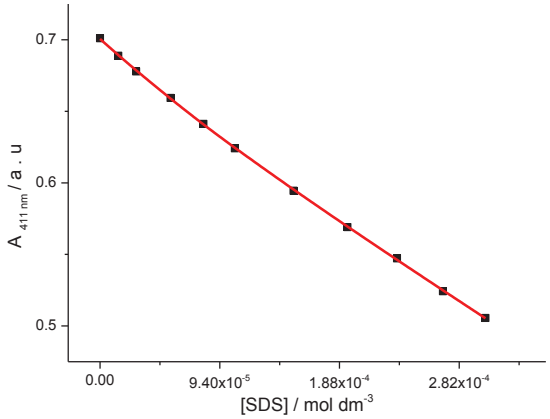



**Figure A46.2:** Absorbance at 411 nm for 0.0036 mM **6.10** upon addition of 0 – 0.3 mM SDS, at 25 °C in buffer (25 mM MOPS, pH 7.0, 50 mM NaCl). The solid line represents the best fit to the data fit in terms of a multiple independent binding sites model.

Figure A46.2 shows decrease in the absorbance at 411 nm for **6.10** upon addition of SDS. The binding affinity $K_{binding}$ and the binding site size $n$ were determined by fitting a multiple independent binding sites model which also takes ligand dilution into account data, giving an apparent equilibrium constant $K_{binding}$ of $(5.4\times10^5 \pm 6.3\times10^5)$ $M^{-1}$ for a binding site size of $(21 \pm 10)$. The fit corresponded to simple dilution and thus suggests that **6.10** does not interact with SDS and the decrease in absorbance is the result of simple dilution only.

### *A47. Compound 6.11 binding with SDS*

We wanted to study the binding of **6.11** to SDS. The changes in absorption of **6.11** upon addition of SDS were measured in buffer (25 mM MOPS, pH 7.0, 50 mM NaCl) at 25 °C (Figure A47.1).

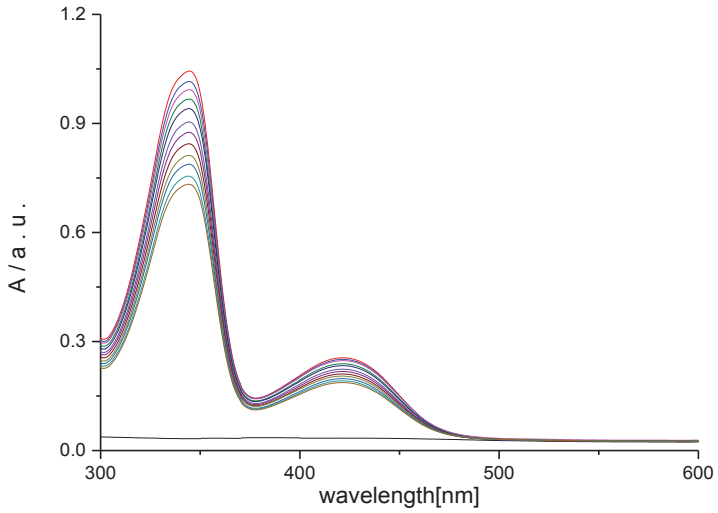



**Figure A47.1:** UV-visible spectra for 0.037 mM **6.11** at 343 nm upon addition of 0 – 0.34 mM SDS, at 25 °C in buffer (25 mM MOPS, pH 7.0, 50 mM NaCl).

Figure A47.1 illustrates that **6.11** displays a hypochromic shift in the absorbance with a maximum change in absorbance at 343 nm upon addition of SDS. The decrease in UV-visible absorption may have occurred as a result of geometrical distortion of **6.11** when it interacts with SDS, but it may also be as a result of a local medium effect.

To quantify the affinity of **6.11** for SDS, the absorbances at 343 nm were plotted as a function of the concentration of SDS (Figure A47.2, for data in tabular format see appendix, Tables A55.131).

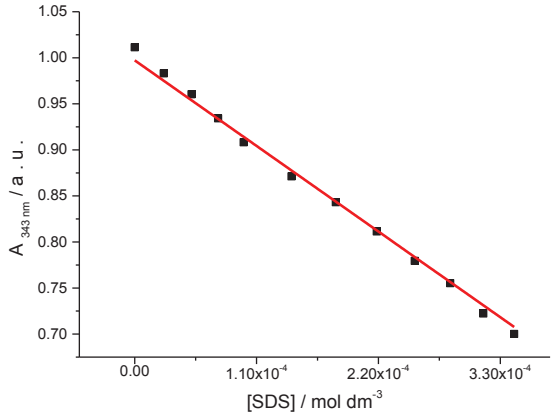



**Figure A47.2:** Absorbance at 343 nm for 0.037 mM **6.11** upon addition of 0 – 0.34 mM SDS, at 25 °C in buffer (25 mM MOPS, pH 7.0, 50 mM NaCl). The solid line represents the best fit to the data fit in terms of a multiple independent binding sites model.

Figure A47.2 shows decrease in the absorbance at 343 nm for **6.11** upon addition of SDS. The binding affinity $K_{binding}$ and the binding site size $n$ were determined by fitting a multiple independent binding sites model, which also takes ligand dilution into account data, giving an apparent equilibrium constant $K_{binding}$ of $(6.2\times10^{-6} \pm 0.00)$ $M^{-1}$ for a binding site size of $(0.17 \pm 0.00)$. The fit corresponded to simple dilution and thus suggests that **6.11** does not interact with SDS and the decrease in absorbance is the result of simple dilution only.

### *A48. Compound 6.1 binding with CTAB*

We wanted to study the binding of **6.1** to CTAB. The changes in absorption of **6.1** upon addition of CTAB were measured in buffer (25 mM MOPS, pH 7.0, 50 mM NaCl) at 25 °C (Figure A48.1).

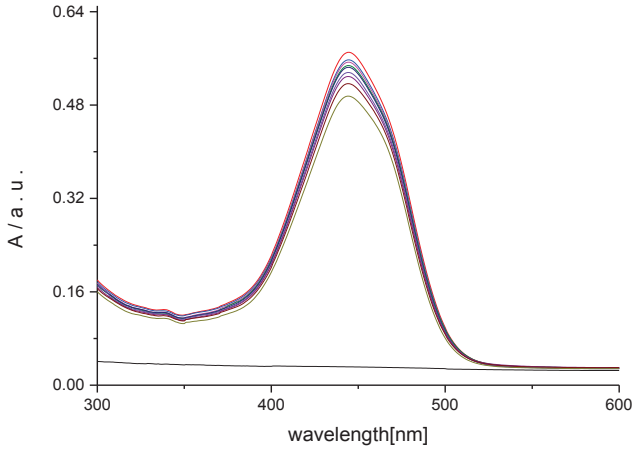



**Figure A48.1:** UV-visible spectra for 0.033 mM **6.1** at 443 nm upon addition of 0 – 0.265 mM CTAB, at 25 °C in buffer (25 mM MOPS, pH 7.0, 50 mM NaCl).

Figure A48.1 illustrates that **6.1** displays a hypochromic shift in the absorbance with a maximum change in absorbance at 443 nm upon addition of CTAB. The decrease in UV-visible absorption may have occurred as a result of geometrical distortion of **6.1** when it interacts with CTAB, but it may also be as a result of a local medium effect.

To quantify the affinity of **6.1** for CTAB the absorbances at 443 nm were plotted as a function of the concentration of CTAB (Figure A48.2, for data in tabular format see appendix, Tables A55.133).

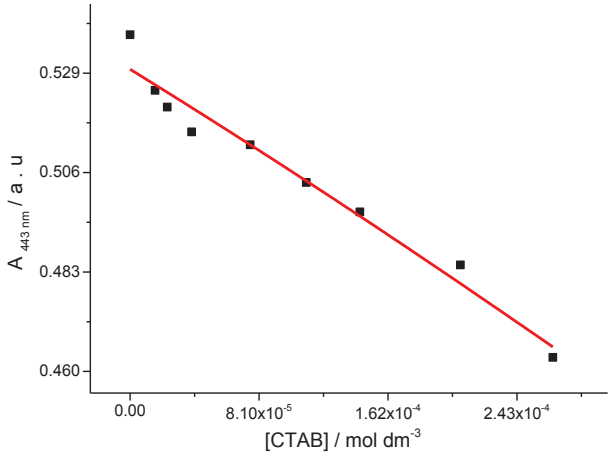



**Figure A48.2:** Absorbance at 443 nm for 0.033 mM **6.1** upon addition of 0 –0.265 mM CTAB, at 25 °C in buffer (25 mM MOPS, pH 7.0, 50 mM NaCl). The solid line represents the best fit to the data fit in terms of a multiple independent binding sites model.

Figure A48.2 shows decrease in the absorbance at 443 nm for **6.1** upon addition of CTAB. The binding affinity $K_{binding}$ and the binding site size $n$ were determined by fitting a multiple independent binding sites model which also takes ligand dilution into account data, giving an apparent equilibrium constant $K_{binding}$ of (52.69 ± 3.8 $\times 10^4$) $M^{-1}$ for a binding site size (3.8 $\times 10^5 \pm$ 2.6$\times 10^8$). The fit corresponded to simple dilution and thus suggests that **6.1** does not interact with CTAB and the decrease in absorbance is the result of simple dilution only.

### *A49. Compound 6.2 binding with CTAB*

We wanted to study the binding of **6.2** to CTAB. The changes in absorption of **6.2** upon addition of CTAB were measured in buffer (25 mM MOPS, pH 7.0, 50 mM NaCl) at 25 °C (Figure A49.1).

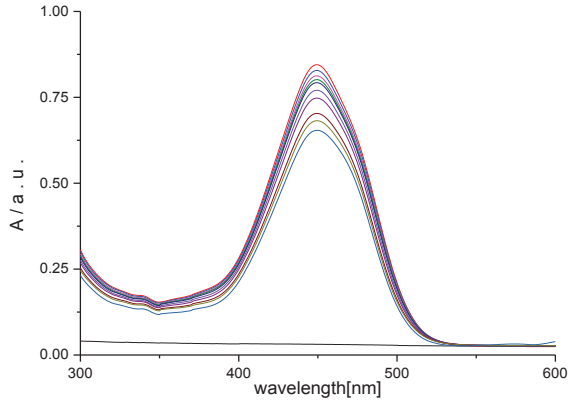



**Figure A49.1:** UV-visible spectra for 0.049 mM 6.2 at 449 nm upon addition of 0 – 0.45 mM CTAB, at 25 °C in buffer (25 mM MOPS, pH 7.0, 50 mM NaCl).

Figure A49.1 reveals that 6.2 displays a hypochromic shift in the absorbance with a maximum change in absorbance at 449 nm upon addition of CTAB. The decrease in UV-visible absorption may have occurred as a result of geometrical distortion of **6.2** when it interacts with CTAB, but it may also be as a result of a local medium effect.

To quantify the affinity of **6.2** for CTAB the absorbances at 449 nm were plotted as a function of the concentration of CTAB (Figure A49.2, for data in tabular format see appendix, Tables A55.134).

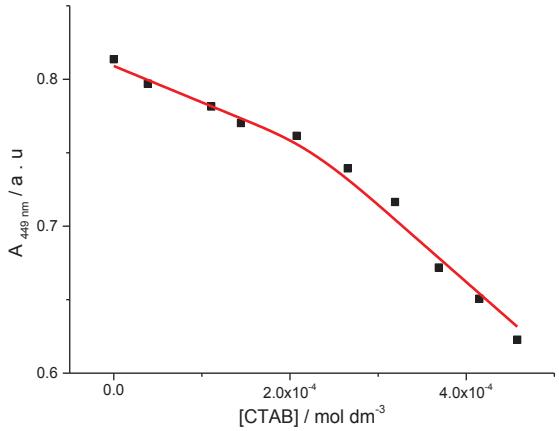



**Figure A49.2:** Absorbance at 449 nm for 0.049 mM **6.2** upon addition of 0 –0.45 mM CTAB, at 25 °C in buffer (25 mM MOPS, pH 7.0, 50 mM NaCl). The solid line represents the best fit to the data fit in terms of a multiple independent binding sites model.

Figure A49.2 shows decrease in the absorbance at 449 nm for **6.2** upon addition of CTAB. The binding affinity $K_{\text{binding}}$ and the binding site size $n$ were determined by fitting a multiple independent binding sites model, which also takes ligand dilution into account data, giving an

apparent equilibrium constant $K_{binding}$ of ($5.2 \times 10^{20} \pm 1.7 \times 10^{32}$) $M^{-1}$ for a binding site size ($5.3 \pm 1.04$). The fit corresponded to simple dilution and thus suggests that **6.2** does not interact with CTAB and the decrease in absorbance is the result of simple dilution only.

### *A50. Compound 6.5 binding with CTAB*

We wanted to know the binding of **6.5** to CTAB. The changes in absorption of **6.5** upon addition of CTAB were measured in buffer (25 mM MOPS, pH 7.0, 50 mM NaCl) at 25 °C (Figure A50.1).

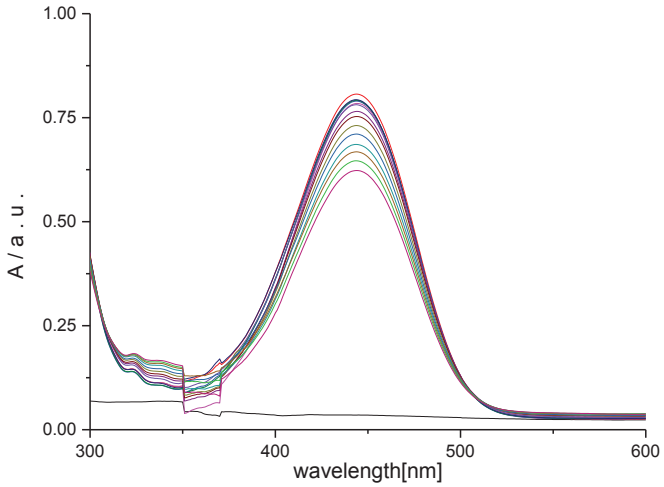



**Figure A50.1:** UV-visible spectra for 0.048 mM **6.5** at 444 nm upon addition of 0 – 0.36 mM CTAB, at 25 °C in buffer (25 mM MOPS, pH 7.0, 50 mM NaCl).

Figure A50.1 shows that **6.5** displays a hypochromic shift in the absorbance with a maximum change in absorbance at 444 nm upon addition of CTAB. The decrease in UV-visible absorption may have occurred as a result of geometrical distortion of **6.5** when it interacts with CTAB, but it may also be as a result of a local medium effect.

To quantify the affinity of **6.5** for CTAB the absorbances at 444 nm were plotted as a function of the concentration of CTAB (Figure A50.2, for data in tabular format see appendix, Tables A55.136).

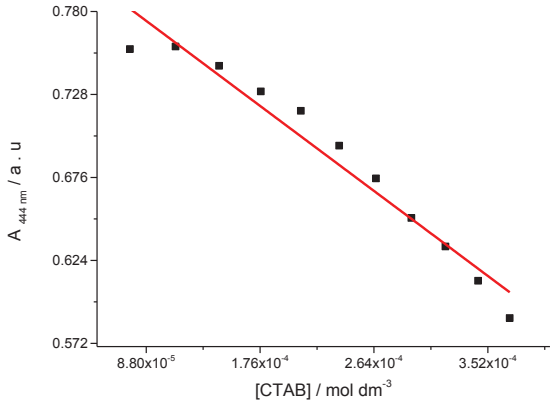



**Figure A50.2:** Absorbance at 449 nm for 0.048 mM **6.5** upon addition of 0 –0.36 mM CTAB, at 25 °C in buffer (25 mM MOPS, pH 7.0, 50 mM NaCl). The solid line represents the best fit to the data fit in terms of a multiple independent binding sites model.

Figure A50.2 shows decrease in the absorbance at 444 nm for **6.5** upon addition of CTAB. The binding affinity $K_{binding}$ and the binding site size $n$ were determined by fitting a multiple independent binding sites model, which also takes ligand dilution into account data, giving an apparent equilibrium constant $K_{binding}$ of $(1.5 \pm 1.5 \times 10^4)$ $M^{-1}$ for a binding site size (3.0). The fit corresponded to simple dilution and thus suggests that **6.5** does not interact with CTAB and the decrease in absorbance is the result of simple dilution only.

### *A51. Compound 6.8 binding with CTAB*

We wanted to know the binding of **6.8** to CTAB. The changes in absorption of **6.8** upon addition of CTAB were measured in buffer (25 mM MOPS, pH 7.0, 50 mM NaCl) at 25 °C (Figure A51.1).

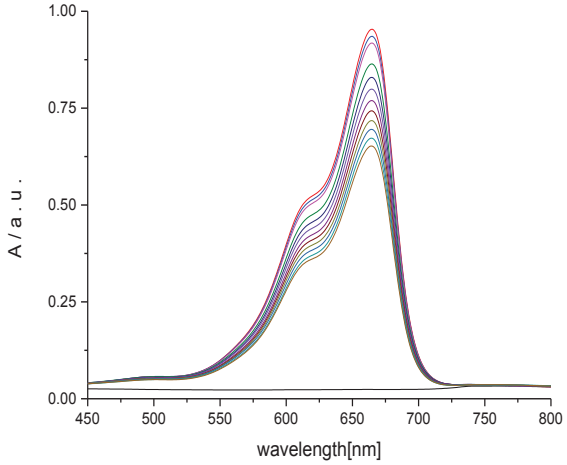



**Figure A51.1:** UV-visible spectra for 0.013 mM **6.8** at 665 nm upon addition of 0 – 0.51 mM CTAB, at 25 °C in buffer (25 mM MOPS, pH 7.0, 50 mM NaCl).

Figure A51.1 shows that **6.8** displays a hypochromic shift in the absorbance with a maximum change in absorbance at 665 nm upon addition of CTAB. The decrease in UV-visible absorption may have occurred as a result of geometrical distortion of **6.8** when it interacts with CTAB, but it may also be as a result of a local medium effect.

To quantify the affinity of **6.8** for CTAB the absorbances at 665 nm were plotted as a function of the concentration of CTAB (Figure A51.2, for data in tabular format see appendix, Tables A55.137).

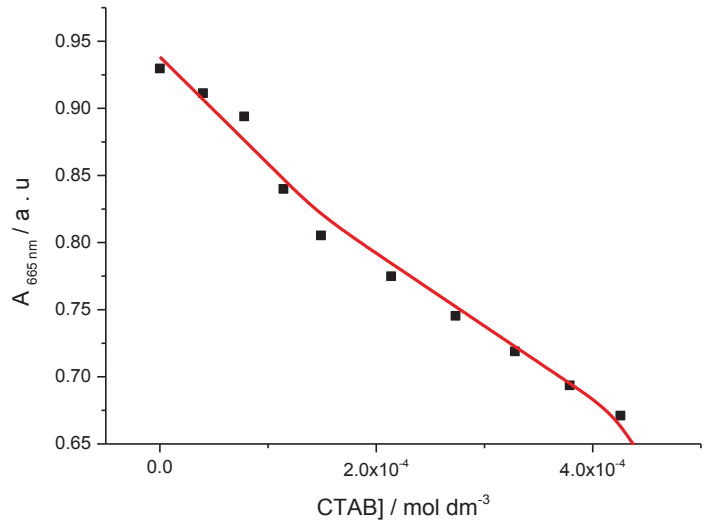



**Figure A51.2:** Absorbance at 665 nm for 0.013 mM **6.8** upon addition of 0 –0.51 mM CTAB, at 25 °C in buffer (25 mM MOPS, pH 7.0, 50 mM NaCl). The solid line represents the best fit to the data fit in terms of a multiple independent binding sites model.

Figure A51.2 shows decrease in the absorbance at 665 nm for **6.8** upon addition of CTAB. The binding affinity $K_{binding}$ and the binding site size $n$ were determined by fitting a multiple independent binding sites model which also takes ligand dilution into account data, giving an apparent equilibrium constant $K_{binding}$ of $(2.1\times10^{43} \pm 7.5 \times10^{42})$ $M^{-1}$ for a binding site size of $(11.7 \pm 5.8)$. The fit corresponded to simple dilution and thus suggests that **6.8** does not interact with CTAB and the decrease in absorbance is the result of simple dilution only.

### *A52. Compound 6.10 binding with CTAB*

We wanted to study the binding of **6.10** to CTAB. The changes in absorption of **6.10** upon addition of CTAB were measured in buffer (25 mM MOPS, pH 7.0, 50 mM NaCl) at 25 °C (Figure A52.1).

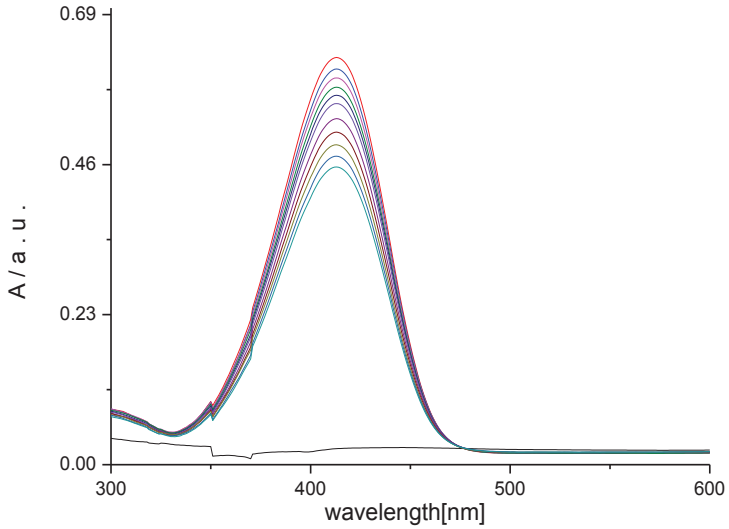



**Figure A52.1**: UV-visible spectra for 0.015 mM **6.10** at 411 nm upon addition of 0 – 0.48 mM CTAB, at 25 °C in buffer (25 mM MOPS, pH 7.0, 50 mM NaCl).

Figure A52.1 illustrates that **6.10** displays a hypochromic shift in the absorbance with a maximum change in absorbance at 411 nm upon addition of CTAB. The decrease in UV-visible absorption may have occurred as a result of geometrical distortion of **6.10** when it interacts with CTAB, but it may also be as a result of a local medium effect.

To quantify the affinity of **6.10** for CTAB the absorbances at 411 nm were plotted as a function of the concentration of CTAB (Figure A52.2, for data in tabular format see appendix, Tables A55.139).

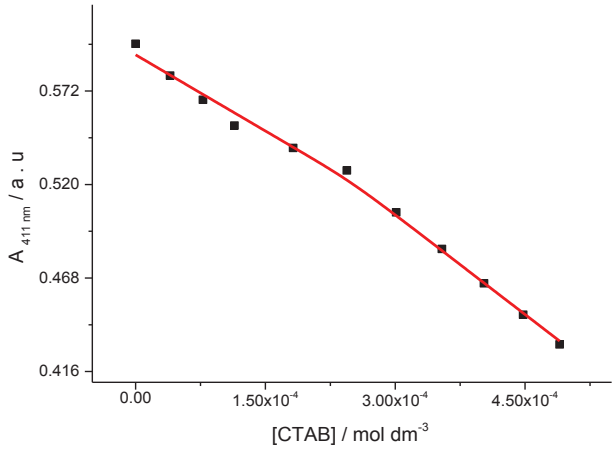



**Figure A52.2:** Absorbance at 411 nm for 0.015 mM **6.10** upon addition of 0 –0.48 mM CTAB, at 25 °C in buffer (25 mM MOPS, pH 7.0, 50 mM NaCl). The solid line represents the best fit to the data fit in terms of a multiple independent binding sites model.

Figure A52.2 shows decrease in the absorbance at 411 nm for **6.10** upon addition of CTAB. The binding affinity $K_{binding}$ and the binding site size *n* were determined by fitting a multiple independent binding sites model, which also takes ligand dilution into account data, giving an apparent equilibrium constant $K_{binding}$ of $(3.3\times10^{43} \pm 1.7 \times10^{44})$ $M^{-1}$ for a binding site size of (19.49 ± 4.5). The fit corresponded to simple dilution and thus suggests that **6.10** does not interact with CTAB and the decrease in absorbance is the result of simple dilution only.

### *A53. Compound 6.11 binding with CTAB*

We wanted to know the binding of **6.11** to CTAB. The changes in absorption of **6.11** upon addition of CTAB were measured in buffer (25 mM MOPS, pH 7.0, 50 mM NaCl) at 25 °C (Figure A53.1).

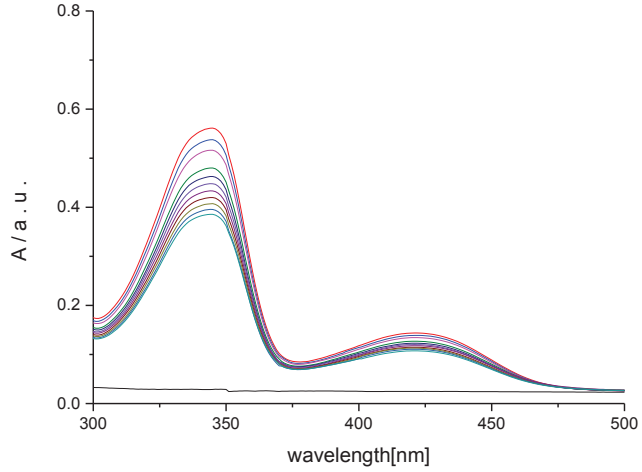



**Figure A53.1:** UV-visible spectra for 0.019 mM **6.11** at 345 nm upon addition of 0 – 0.53 mM CTAB, at 25 °C in buffer (25 mM MOPS, pH 7.0, 50 mM NaCl).

Figure A53.1 illustrates that **6.11** displays a hypochromic shift in the absorbance with a maximum change in absorbance at 345 nm upon addition of CTAB. The decrease in UV-visible absorption may have occurred as a result of geometrical distortion of **6.11** when it interacts with CTAB, but it may also be as a result of a local medium effect.

To quantify the affinity of **6.11** for CTAB the absorbances at 345 nm were plotted as a function of the concentration of CTAB (Figure A53.2, for data in tabular format see appendix, Tables A55.140).

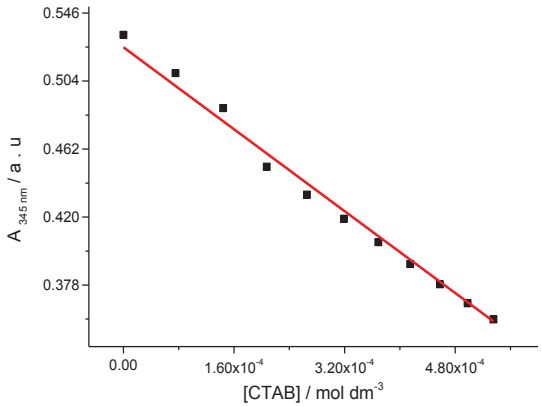



**Figure A53.2:** Absorbance at 345 nm for 0.019 mM **6.11** upon addition of 0 –0.53 mM CTAB, at 25 °C in buffer (25 mM MOPS, pH 7.0, 50 mM NaCl). The solid line represents the best fit to the data fit in terms of a multiple independent binding sites model.

Figure A53.2 shows decrease in the absorbance at 345 nm for **6.11** upon addition of CTAB. The binding affinity $K_{binding}$ and the binding site size *n* were determined by fitting a multiple independent binding sites model, which also takes ligand dilution into account data, giving an apparent equilibrium constant $K_{binding}$ of $(3.3\times10^{-4} \pm 0.00)$ $M^{-1}$ for a binding site size of (141 ±0.00). The fit corresponded to simple dilution and thus suggests that **6.11** does not interact with CTAB and the decrease in absorbance is the result of simple dilution only.

### *A54. Compound 6.12 binding with CTAB*

We wanted to study the binding of **6.12** to CTAB. The changes in absorption of **6.12** upon addition of CTAB were measured in buffer (25 mM MOPS, pH 7.0, 50 mM NaCl) at 25 °C (Figure A54.1).

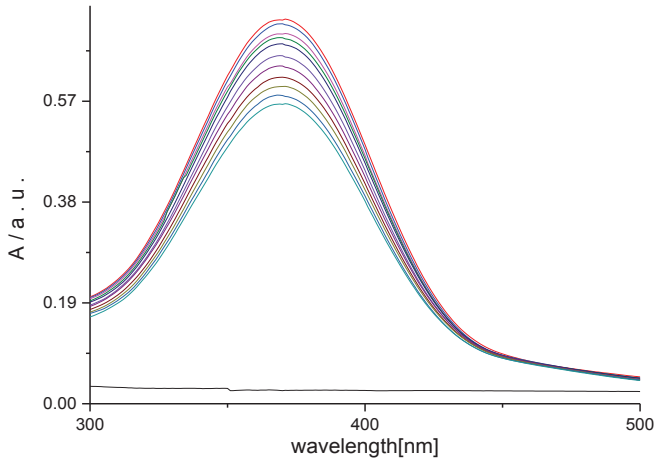



**Figure A54.1:** UV-visible spectra for 0.020 mM **6.12** at 367 nm upon addition of 0 – 0.40 mM CTAB, at 25 °C in buffer (25 mM MOPS, pH 7.0, 50 mM NaCl).

Figure A54.1 illustrates that **6.12** displays a hypochromic shift in the absorbance with a maximum change in absorbance at 367 nm upon addition of CTAB. The decrease in UV-visible absorption may have occurred as a result of geometrical distortion of **6.12** when it interacts with CTAB, but it may also be as a result of a local medium effect.

To quantify the affinity of **6.12** for CTAB the absorbances at 367 nm were plotted as a function of the concentration of CTAB (Figure A54.2, for data in tabular format see appendix, Tables A55.141).

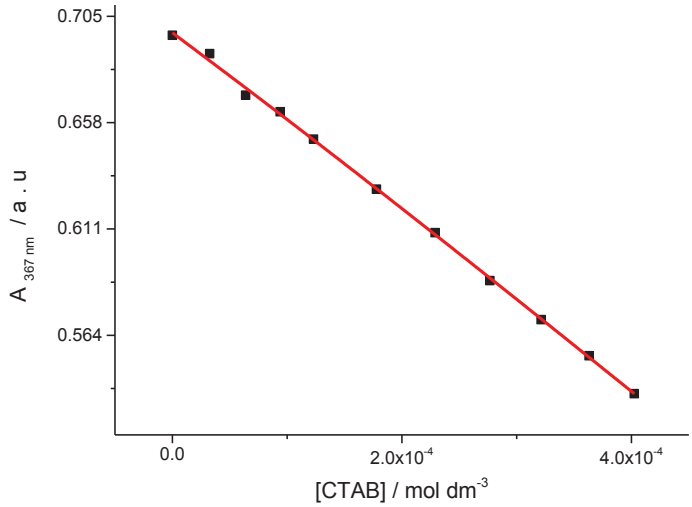



**Figure A54.2:** Absorbance at 367 nm for 0.020 mM **6.12** upon addition of 0 –0.40 mM CTAB, at 25 °C in buffer (25 mM MOPS, pH 7.0, 50 mM NaCl). The solid line represents the best fit to the data fit in terms of a multiple independent binding sites model.

Figure A54.2 shows decrease in the absorbance at 367 nm for **6.12** upon addition of CTAB. The binding affinity $K_{binding}$ and the binding site size *n* were determined by fitting a multiple independent binding sites model, which also takes ligand dilution into account data, giving an apparent equilibrium constant $K_{binding}$ of (2.4 ± 5.1×10$^5$) M$^{-1}$ for a binding site size of (0.027 ±575). The fit corresponded to simple dilution and thus suggests that **6.12** does not interact with CTAB and the decrease in absorbance is the result of simple dilution only.

**A55 UV-visible titrations for compounds with DNA**

**Table A55.1 Absorbance for 0.058 mM 2.4 at 434 nm upon addition of 0 – 3.14 mM DNA, in 25 mM MOPS, pH 7.0, 50 mM NaCl, at 25 °C.$[DNA]_{stock}$ = 17.2 mM, $[2.4]_{stock}$ = 0.98 mM**

| Cumulative added volume DNA µL | Added volume 2.4 µL | Total volume µL | [DNA] µmol $dm^{-3}$ | [2.4] µmol $dm^{-3}$ | A 434 nm |
|---|---|---|---|---|---|
| 0 | 0 | 2350 | 0.00 | 0.00 | 0.00 |
| 0 | 150 | 2500 | 0.00 | 58.86 | 0.64 |
| 2 | 150 | 2502 | 13.75 | 58.81 | 0.62 |
| 5 | 150 | 2505 | 34.33 | 58.74 | 0.59 |
| 20 | 150 | 2520 | 136.51 | 58.39 | 0.51 |
| 40 | 150 | 2540 | 270.87 | 57.93 | 0.45 |
| 60 | 150 | 2560 | 403.13 | 57.48 | 0.42 |
| 85 | 150 | 2585 | 565.57 | 56.92 | 0.41 |
| 120 | 150 | 2620 | 787.79 | 56.16 | 0.39 |
| 165 | 150 | 2665 | 1064.92 | 55.22 | 0.37 |
| 215 | 150 | 2715 | 1362.06 | 54.20 | 0.37 |
| 260 | 150 | 2760 | 1620.29 | 53.32 | 0.36 |
| 325 | 150 | 2825 | 1978.76 | 52.09 | 0.35 |
| 395 | 150 | 2895 | 2346.80 | 50.83 | 0.34 |
| 470 | 150 | 2970 | 2721.89 | 49.55 | 0.33 |
| 560 | 150 | 3060 | 3147.71 | 48.09 | 0.32 |

**Table A55.2 Absorbance for 0.057 mM 2.4 at 434 nm upon addition of 0 – 4.5 mM DNA, in 25 mM MOPS, pH 7.0, 50 mM NaCl, at 25 °C.$[DNA]_{stock}$ = 17.0 mM, $[2.4]_{stock}$ = 0.97 mM**

| Cumulative added volume DNA µL | Added volume 2.4 µL | Total volume µL | [DNA] µmol $dm^{-3}$ | [2.4] µmol $dm^{-3}$ | $A_{434\ nm}$ |
|---|---|---|---|---|---|
| 0 | 0 | 2400 | 0.00 | 0.00 | 0.00 |
| 0 | 150 | 2550 | 0.00 | 57.47 | 0.62 |
| 10 | 150 | 2560 | 66.41 | 57.25 | 0.53 |
| 20 | 150 | 2570 | 132.30 | 57.02 | 0.48 |
| 30 | 150 | 2580 | 197.67 | 56.80 | 0.45 |
| 50 | 150 | 2600 | 326.92 | 56.37 | 0.41 |
| 80 | 150 | 2630 | 517.11 | 55.72 | 0.38 |
| 120 | 150 | 2670 | 764.04 | 54.89 | 0.36 |
| 170 | 150 | 2720 | 1062.50 | 53.88 | 0.34 |
| 230 | 150 | 2780 | 1406.47 | 52.72 | 0.33 |
| 300 | 150 | 2850 | 1789.47 | 51.42 | 0.32 |
| 380 | 150 | 2930 | 2204.78 | 50.02 | 0.32 |
| 470 | 150 | 3020 | 2645.70 | 48.53 | 0.30 |
| 570 | 150 | 3120 | 3105.77 | 46.97 | 0.30 |
| 680 | 150 | 3230 | 3578.95 | 45.37 | 0.29 |
| 800 | 150 | 3350 | 4059.70 | 43.75 | 0.28 |
| 930 | 150 | 3480 | 4543.10 | 42.11 | 0.27 |

| **Table A55.3 Absorbance for 0.075 mM 2.5 at 444 nm upon addition of 0 – 2.5 mM DNA, in 25 mM MOPS, pH 7.0, 50 mM NaCl, at 25 °C.[DNA] $_{stock}$ = 15.0 mM, [2.5] $_{stock}$ = 1.9 mM** | | | | | |
|---|---|---|---|---|---|
| **Cumulative added volume DNA µL** | **Added volume 2.5 µL** | **Total volume µL** | **[DNA] µmol dm$^{-3}$** | **[2.5] µmol dm$^{-3}$** | **A $_{444}$ nm** |
| 0 | 0 | 2000 | 0.00 | 0.00 | 0.00 |
| 0 | 80 | 2080 | 0.00 | 75.00 | 0.77 |
| 2 | 80 | 2082 | 15.27 | 74.93 | 0.75 |
| 4 | 80 | 2084 | 30.52 | 74.86 | 0.71 |
| 6 | 80 | 2086 | 45.73 | 74.78 | 0.69 |
| 8 | 80 | 2088 | 60.92 | 74.71 | 0.67 |
| 10 | 80 | 2090 | 76.08 | 74.64 | 0.65 |
| 15 | 80 | 2095 | 113.84 | 74.46 | 0.61 |
| 20 | 80 | 2100 | 151.43 | 74.29 | 0.57 |
| 30 | 80 | 2110 | 226.07 | 73.93 | 0.55 |
| 40 | 80 | 2120 | 300.00 | 73.58 | 0.51 |
| 50 | 80 | 2130 | 373.24 | 73.24 | 0.49 |
| 75 | 80 | 2155 | 553.36 | 72.39 | 0.46 |
| 125 | 80 | 2205 | 901.36 | 70.75 | 0.44 |
| 200 | 80 | 2280 | 1394.74 | 68.42 | 0.42 |
| 300 | 80 | 2380 | 2004.20 | 65.55 | 0.40 |
| 400 | 80 | 2480 | 2564.52 | 62.90 | 0.38 |

**Table A55.4 Absorbance for 0.0014 mM 2.7 at 338 and 385 nm upon addition of 0 – 0.079 mM DNA, in 25 mM MOPS, pH 7.0, 50 mM NaCl, at 25 °C.$[DNA]_{stock}$ = 1.0 mM, $[2.7]_{stock}$ = 0.042 mM, 10%DMSO**

| Cumulative added volume DNA µL | Added volume 2.7 µL | Total volume µL | [DNA] µmol $dm^{-3}$ | [2.7] µmol $dm^{-3}$ | A 338 nm | A 385 nm |
|---|---|---|---|---|---|---|
| 0 | 0 | 2000 | 0.00 | 0.000 | 0.00 | 0.0000 |
| 0 | 70 | 2070 | 0.00 | 1.434 | 0.48 | 0.0257 |
| 2 | 70 | 2072 | 0.97 | 1.433 | 0.45 | 0.0306 |
| 4 | 70 | 2074 | 1.93 | 1.431 | 0.43 | 0.0321 |
| 6 | 70 | 2076 | 2.89 | 1.430 | 0.42 | 0.0345 |
| 8 | 70 | 2078 | 3.85 | 1.429 | 0.39 | 0.0300 |
| 10 | 70 | 2080 | 4.81 | 1.427 | 0.38 | 0.0321 |
| 15 | 70 | 2085 | 7.19 | 1.424 | 0.37 | 0.0335 |
| 25 | 70 | 2095 | 11.93 | 1.417 | 0.35 | 0.0455 |
| 50 | 70 | 2120 | 23.58 | 1.400 | 0.33 | 0.0565 |
| 75 | 70 | 2145 | 34.97 | 1.384 | 0.30 | 0.0576 |
| 125 | 70 | 2195 | 56.95 | 1.352 | 0.29 | 0.0665 |
| 175 | 70 | 2195 | 79.73 | 1.352 | 0.27 | 0.0731 |

**Table A55.5 Absorbance for 0.0075 mM 2.8 at 664 nm upon addition of 0 – 0.303 mM DNA, in 25 mM MOPS, pH 7.0, 50 mM NaCl, at 25 °C.$[DNA]_{stock}$ = 1.6 mM, $[2.8]_{stock}$ = 1.0 mM**

| Cumulative added volume DNA µL | Added volume 2.8 µL | Total volume µL | [DNA] µmol $dm^{-3}$ | [2.8] µmol $dm^{-3}$ | $A_{664\ nm}$ |
|---|---|---|---|---|---|
| 0 | 0 | 2000 | 0.00 | 0.00 | 0.00 |
| 0 | 15 | 2015 | 0.00 | 7.59 | 0.51 |
| 5 | 15 | 2020 | 4.11 | 7.57 | 0.48 |
| 10 | 15 | 2025 | 8.20 | 7.56 | 0.46 |
| 20 | 15 | 2035 | 16.31 | 7.52 | 0.43 |
| 40 | 15 | 2055 | 32.31 | 7.45 | 0.39 |
| 70 | 15 | 2085 | 55.73 | 7.34 | 0.36 |
| 100 | 15 | 2115 | 78.49 | 7.23 | 0.35 |
| 150 | 15 | 2165 | 115.01 | 7.07 | 0.33 |
| 250 | 15 | 2265 | 183.22 | 6.75 | 0.32 |
| 350 | 15 | 2365 | 245.67 | 6.47 | 0.30 |
| 450 | 15 | 2465 | 303.04 | 6.21 | 0.29 |

| **Table A55.6 Absorbance for 0.0075 mM 2.9 at 489 nm upon addition of 0 – 0.303 mM DNA, in 25 mM MOPS, pH 7.0, 50 mM NaCl, at 25 °C.[DNA] $_{stock}$ = 1.6 mM, [2.9] $_{stock}$ = 1.0 mM** | | | | | |
|---|---|---|---|---|---|
| **Cumulative added volume DNA µL** | **Added volume 2.9 µL** | **Total volume µL** | **[DNA] µmol dm$^{-3}$** | **[2.9] µmol dm$^{-3}$** | **A $_{489}$ nm** |
| 0 | 0 | 2350 | 0.00 | 0.00 | 0.000 |
| 0 | 30 | 2380 | 0.00 | 12.61 | 0.673 |
| 10 | 30 | 2390 | 71.97 | 12.55 | 0.705 |
| 40 | 30 | 2420 | 284.30 | 12.40 | 0.703 |
| 90 | 30 | 2470 | 626.72 | 12.15 | 0.691 |
| 150 | 30 | 2530 | 1019.76 | 11.86 | 0.678 |
| 220 | 30 | 2600 | 1455.38 | 11.54 | 0.662 |
| 300 | 30 | 2680 | 1925.37 | 11.19 | 0.662 |
| 390 | 30 | 2770 | 2421.66 | 10.83 | 0.646 |
| 490 | 30 | 2870 | 2936.59 | 10.45 | 0.629 |
| 610 | 30 | 2990 | 3509.03 | 10.03 | 0.609 |
| 740 | 30 | 3120 | 4079.49 | 9.62 | 0.590 |
| 890 | 30 | 3270 | 4681.35 | 9.17 | 0.544 |
| 1060 | 30 | 3440 | 5300.00 | 8.72 | 0.520 |
| 1240 | 30 | 3620 | 5891.71 | 8.29 | 0.498 |
| 1430 | 30 | 3810 | 6455.64 | 7.87 | 0.475 |
| 1530 | 30 | 3910 | 6730.43 | 7.67 | 0.465 |

| **Table A55.7 Absorbance for 0.026 mM 2.10 at 411 and 432 nm upon addition of 0 – 3.06 mM DNA, in 25 mM MOPS, pH 7.0, 50 mM NaCl, at 25 °C.[DNA] $_{stock}$ = 14.4 mM, [2.10] $_{stock}$ = 1.7 mM** | | | | | | |
|---|---|---|---|---|---|---|
| **Cumulative added volume DNA µL** | **Added volume 2.10 µL** | **Total volume µL** | **[DNA] µmol dm$^{-3}$** | **[2.10] µmol dm$^{-3}$** | **A $_{411}$ nm** | **A $_{432}$ nm** |
| 0 | 0 | 2000 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0 | 30 | 2030 | 0.00 | 26.25 | 0.68 | 0.48 |
| 10 | 30 | 2040 | 70.98 | 26.12 | 0.65 | 0.51 |
| 20 | 30 | 2050 | 141.27 | 25.99 | 0.62 | 0.54 |
| 30 | 30 | 2060 | 210.87 | 25.86 | 0.60 | 0.55 |
| 40 | 30 | 2070 | 279.81 | 25.74 | 0.58 | 0.56 |
| 70 | 30 | 2100 | 482.67 | 25.37 | 0.54 | 0.59 |
| 100 | 30 | 2130 | 679.81 | 25.01 | 0.51 | 0.60 |
| 150 | 30 | 2180 | 996.33 | 24.44 | 0.48 | 0.61 |
| 200 | 30 | 2230 | 1298.65 | 23.89 | 0.45 | 0.61 |
| 250 | 30 | 2280 | 1587.72 | 23.37 | 0.45 | 0.61 |
| 350 | 30 | 2380 | 2129.41 | 22.39 | 0.43 | 0.61 |
| 450 | 30 | 2480 | 2627.42 | 21.48 | 0.41 | 0.59 |
| 550 | 30 | 2580 | 3086.82 | 20.65 | 0.38 | 0.57 |

**Table A55.8 Absorbance for 0.025 mM 2.11 at 343 and 375 nm upon addition of 0 – 2.5 mM DNA, in 25 mM MOPS, pH 7.0, 50 mM NaCl, at 25 °C.$[DNA]_{stock}$ = 15.9 mM, $[2.11]_{stock}$ = 0.41 mM**

| Cumulative added volume DNA µL | Added volume 2.11 µL | Total volume µL | [DNA] µmol $dm^{-3}$ | [2.11] µmol $dm^{-3}$ | $A_{343}$ nm | $A_{375}$ nm |
|---|---|---|---|---|---|---|
| 0 | 0 | 2000 | 0.00 | 0.00 | 0.00 | 0.000 |
| 0 | 130 | 2130 | 0.00 | 25.39 | 0.74 | 0.062 |
| 10 | 130 | 2140 | 74.69 | 25.27 | 0.68 | 0.086 |
| 30 | 130 | 2160 | 222.00 | 25.04 | 0.61 | 0.117 |
| 60 | 130 | 2190 | 437.92 | 24.69 | 0.55 | 0.141 |
| 90 | 130 | 2220 | 648.00 | 24.36 | 0.52 | 0.151 |
| 120 | 130 | 2250 | 852.48 | 24.04 | 0.51 | 0.159 |
| 150 | 130 | 2280 | 1051.58 | 23.72 | 0.49 | 0.163 |
| 180 | 130 | 2310 | 1245.51 | 23.41 | 0.48 | 0.166 |
| 210 | 130 | 2340 | 1434.46 | 23.11 | 0.48 | 0.167 |
| 240 | 130 | 2370 | 1618.63 | 22.82 | 0.47 | 0.171 |
| 270 | 130 | 2400 | 1798.20 | 22.53 | 0.46 | 0.170 |
| 330 | 130 | 2460 | 2144.20 | 21.98 | 0.46 | 0.171 |
| 400 | 130 | 2530 | 2527.11 | 21.38 | 0.45 | 0.173 |

**Table A55.9 Absorbance for 0.024 mM 2.12 at 367 and 430 nm upon addition of 0 – 0.83 mM DNA, in 25 mM MOPS, pH 7.0, 50 mM NaCl, at 25 °C.[DNA] $_{stock}$ = 14.5 mM, [2.12] $_{stock}$ = 0.13 mM**

| Cumulative added volume DNA µL | Added volume 2.12 µL | Total volume µL | [DNA] µmol $dm^{-3}$ | [2.12] µmol $dm^{-3}$ | A $_{367}$ nm | A $_{430}$ nm |
|---|---|---|---|---|---|---|
| 0 | 0 | 2000 | 0.00 | 0.00 | 0.000 | 0.000 |
| 0 | 500 | 2040 | 0.00 | 24.20 | 0.652 | 0.152 |
| 10 | 500 | 2510 | 19.92 | 24.10 | 0.585 | 0.210 |
| 20 | 500 | 2520 | 39.68 | 24.01 | 0.536 | 0.256 |
| 50 | 500 | 2550 | 98.04 | 23.73 | 0.469 | 0.319 |
| 80 | 500 | 2580 | 155.04 | 23.45 | 0.444 | 0.339 |
| 110 | 500 | 2610 | 210.73 | 23.18 | 0.430 | 0.348 |
| 140 | 500 | 2640 | 265.15 | 22.92 | 0.424 | 0.353 |
| 200 | 500 | 2700 | 370.37 | 22.41 | 0.409 | 0.354 |
| 300 | 500 | 2800 | 535.71 | 21.61 | 0.392 | 0.352 |
| 400 | 500 | 2900 | 689.66 | 20.86 | 0.381 | 0.349 |
| 500 | 500 | 3000 | 833.33 | 20.17 | 0.370 | 0.340 |

**Table A55.10 Absorbance for 0.044 mM 2.13 at 446 nm upon addition of 0 – 2.2 mM DNA, in 25 mM MOPS, pH 7.0, 50 mM NaCl, at 25 °C.$[DNA]_{stock}$ = 15.5 mM, $[2.13]_{stock}$ = 0.34 mM**

| Cumulative added volume DNA µL | Added volume 2.13 µL | Total volume µL | [DNA] µmol $dm^{-3}$ | [2.13] µmol $dm^{-3}$ | $A_{446\ nm}$ |
|---|---|---|---|---|---|
| 0 | 0 | 2000 | 0.00 | 0.00 | 0.000 |
| 0 | 350 | 2350 | 0.00 | 44.68 | 0.966 |
| 10 | 350 | 2360 | 65.81 | 44.49 | 0.926 |
| 30 | 350 | 2380 | 195.76 | 44.12 | 0.886 |
| 60 | 350 | 2410 | 386.64 | 43.57 | 0.839 |
| 100 | 350 | 2450 | 633.88 | 42.86 | 0.788 |
| 150 | 350 | 2500 | 931.80 | 42.00 | 0.747 |
| 200 | 350 | 2550 | 1218.04 | 41.18 | 0.698 |
| 250 | 350 | 2600 | 1493.27 | 40.38 | 0.667 |
| 300 | 350 | 2650 | 1758.11 | 39.62 | 0.642 |
| 350 | 350 | 2700 | 2013.15 | 38.89 | 0.620 |
| 400 | 350 | 2750 | 2258.91 | 38.18 | 0.601 |

**Table A55.11 Absorbance for 0.044 mM 2.15 at 446 nm upon addition of 0 – 3.14 mM DNA, in 25 mM MOPS, pH 7.0, 50 mM NaCl, at 25 °C.$[DNA]_{stock}$ = 15.5 mM, $[2.13]_{stock}$ = 0.3 mM**

| Cumulative added volume DNA µL | Added volume 2.15 µL | Total volume µL | [DNA] µmol $dm^{-3}$ | [2.15] µmol $dm^{-3}$ | $A_{446}$ nm |
|---|---|---|---|---|---|
| 0 | 0 | 2000 | 0.00 | 0.00 | 0.000 |
| 0 | 300 | 2300 | 0.00 | 14.35 | 0.155 |
| 10 | 300 | 2310 | 67.10 | 14.29 | 0.152 |
| 20 | 300 | 2320 | 133.62 | 14.22 | 0.148 |
| 30 | 300 | 2330 | 199.57 | 14.16 | 0.145 |
| 60 | 300 | 2360 | 394.07 | 13.98 | 0.137 |
| 90 | 300 | 2390 | 583.68 | 13.81 | 0.131 |
| 120 | 300 | 2420 | 768.60 | 13.64 | 0.126 |
| 150 | 300 | 2450 | 948.98 | 13.47 | 0.122 |
| 200 | 300 | 2500 | 1240.00 | 13.20 | 0.116 |
| 250 | 300 | 2550 | 1519.61 | 12.94 | 0.112 |
| 350 | 300 | 2650 | 2047.17 | 12.45 | 0.104 |

**A55 UV-visible titrations for all compounds with selected proteins SA and TF**

**Table A55.12 Corrected absorbance for 0.024 mM 3.1 at 443 nm upon addition of 0 - 0.25 mM SA, in 25 mM MOPS, pH 7.0, 50 mM NaCl, at 25 °C.$[SA]_{stock}$ = 1.0 mM, $[3.1]_{stock}$ = 0.5 mM**

| Cumulative added volume [SA] µL | Added volume [3.1] µL | Total volume µL | [SA] µmol $dm^{-3}$ | [3.1] µmol $dm^{-3}$ | $A_{443}$ nm | $\Delta A_{443}$ nm |
|---|---|---|---|---|---|---|
| 0 | 0 | 2000 | 0.00 | 0.00 | 0.393 | 0.000 |
| 0 | 100 | 2100 | 0.00 | 24.60 | 0.356 | 0.393 |
| 5 | 100 | 2105 | 2.38 | 24.54 | 0.333 | 0.355 |
| 10 | 100 | 2110 | 4.74 | 24.48 | 0.321 | 0.332 |
| 20 | 100 | 2120 | 9.43 | 24.37 | 0.312 | 0.319 |
| 30 | 100 | 2130 | 14.08 | 24.25 | 0.301 | 0.309 |
| 40 | 100 | 2140 | 18.69 | 24.14 | 0.296 | 0.298 |
| 60 | 100 | 2160 | 27.78 | 23.92 | 0.289 | 0.291 |
| 100 | 100 | 2200 | 45.45 | 23.48 | 0.286 | 0.281 |
| 160 | 100 | 2260 | 70.80 | 22.86 | 0.285 | 0.274 |
| 200 | 100 | 2300 | 86.96 | 22.46 | 0.285 | 0.271 |
| 300 | 100 | 2400 | 125.00 | 21.53 | 0.283 | 0.264 |
| 400 | 100 | 2500 | 160.00 | 20.66 | 0.282 | 0.256 |
| 500 | 100 | 2600 | 192.31 | 19.87 | 0.280 | 0.250 |
| 600 | 100 | 2700 | 222.22 | 19.13 | 0.279 | 0.243 |
| 700 | 100 | 2800 | 250.00 | 18.45 | 0.393 | 0.237 |

**Table A55.13 Corrected absorbance for 0.014 mM 3.1 at 443 nm upon addition of 0 - 0.28 mM SA, in 25 mM MOPS pH 7.0, 50 mM NaCl, at 25 °C.$[SA]_{stock}$ = 1.0 mM, $[3.1]_{stock}$ = 0.60 mM**

| Cumulative added volume [SA] µL | Added volume [3.1] µL | Total volume µL | [SA] µmol $dm^{-3}$ | [3.1] µmol $dm^{-3}$ | $A_{443\ nm}$ | $\Delta A_{443\ nm}$ |
|---|---|---|---|---|---|---|
| 0 | 0 | 2000 | 0.00 | 0.00 | 0.04 | 0.00 |
| 0 | 50 | 2050 | 0.0 | 14.71 | 0.27 | 0.235 |
| 5 | 50 | 2055 | 2.43 | 14.67 | 0.25 | 0.211 |
| 10 | 50 | 2060 | 4.85 | 14.64 | 0.24 | 0.201 |
| 20 | 50 | 2070 | 9.66 | 14.57 | 0.23 | 0.194 |
| 30 | 50 | 2080 | 14.42 | 14.50 | 0.23 | 0.189 |
| 40 | 50 | 2090 | 19.14 | 14.43 | 0.22 | 0.183 |
| 60 | 50 | 2110 | 28.44 | 14.29 | 0.22 | 0.181 |
| 100 | 50 | 2150 | 46.51 | 14.02 | 0.22 | 0.174 |
| 160 | 50 | 2210 | 72.40 | 13.64 | 0.22 | 0.170 |
| 200 | 50 | 2250 | 88.89 | 13.40 | 0.22 | 0.169 |
| 300 | 50 | 2350 | 127.66 | 12.83 | 0.22 | 0.163 |
| 400 | 50 | 2450 | 163.27 | 12.31 | 0.23 | 0.159 |
| 500 | 50 | 2550 | 196.08 | 11.82 | 0.23 | 0.152 |
| 600 | 50 | 2650 | 226.42 | 11.38 | 0.23 | 0.148 |
| 700 | 50 | 2750 | 254.55 | 10.96 | 0.23 | 0.145 |
| 800 | 50 | 2850 | 280.70 | 10.58 | 0.23 | 0.141 |

| **Table A55.14 Absorbance for 0 - 0.25 mM SA, in buffer 25 mM MOPS, pH 7.0, 50 mM NaCl at 25 °C.$[SA]_{stock}$ = 1.0 mM. 1) To correct SA with 3.1** | | | | |
|---|---|---|---|---|
| **Cumulative added volume SA µL** | **Added volume [MOPS µL** | **Total volume µL** | **[SA] µmol $dm^{-3}$** | **A $_{443}$ nm** |
| 0 | 0 | 2000 | 0.00 | 0.000 |
| 0 | 100 | 2100 | 0.00 | 0.000 |
| 5 | 100 | 2105 | 2.38 | 0.034 |
| 10 | 100 | 2110 | 4.74 | 0.035 |
| 20 | 100 | 2120 | 9.43 | 0.038 |
| 30 | 100 | 2130 | 14.08 | 0.039 |
| 40 | 100 | 2140 | 18.69 | 0.041 |
| 60 | 100 | 2160 | 27.78 | 0.044 |
| 100 | 100 | 2200 | 45.45 | 0.048 |
| 160 | 100 | 2260 | 70.80 | 0.051 |
| 200 | 100 | 2300 | 86.96 | 0.056 |
| 300 | 100 | 2400 | 125.00 | 0.061 |
| 400 | 100 | 2500 | 160.00 | 0.065 |
| 500 | 100 | 2600 | 192.31 | 0.069 |
| 600 | 100 | 2700 | 222.22 | 0.075 |
| 700 | 100 | 2800 | 250.00 | 0.078 |

**Table A55.15 Corrected absorbance for 0.018 mM 3.2 upon addition of 0 - 0.11 mM SA, in buffer 25 mM MOPS, pH 7.0, 50 mM NaCl at 25 °C.[SA] $_{stock}$ = 1.0 mM, [3.2] $_{stock}$ = 0.18 mM**

| Cumulative added volume SA µL | Added volume [3.2] µL | Total volume µL | [SA] µmol $dm^{-3}$ | [3.2] µmol $dm^{-3}$ | A $_{447\ nm}$ | ΔA $_{447\ nm}$ |
|---|---|---|---|---|---|---|
| 0 | 0 | 1500 | 0.00 | 0.00 | 0.03 | 0.00 |
| 0 | 750 | 2250 | 0.00 | 18.68 | 0.34 | 0.31 |
| 10 | 750 | 2260 | 4.42 | 18.60 | 0.32 | 0.29 |
| 20 | 750 | 2270 | 8.81 | 18.52 | 0.31 | 0.27 |
| 30 | 750 | 2280 | 13.16 | 18.44 | 0.30 | 0.27 |
| 40 | 750 | 2290 | 17.47 | 18.36 | 0.30 | 0.26 |
| 50 | 750 | 2300 | 21.74 | 18.28 | 0.29 | 0.25 |
| 60 | 750 | 2310 | 25.97 | 18.20 | 0.29 | 0.25 |
| 70 | 750 | 2320 | 30.17 | 18.12 | 0.29 | 0.25 |
| 80 | 750 | 2330 | 34.33 | 18.04 | 0.28 | 0.24 |
| 130 | 750 | 2380 | 54.62 | 17.66 | 0.28 | 0.24 |
| 200 | 750 | 2450 | 81.63 | 17.16 | 0.28 | 0.23 |
| 300 | 750 | 2550 | 117.65 | 16.49 | 0.27 | 0.22 |

| **Table A55.16 Corrected absorbance for 0.023 mM 3.2 upon addition of 0 - 0.09 mM BSA, in buffer 25 mM MOPS, pH 7.0, 50 mM NaCl at 25 °C.[SA] $_{stock}$ = 1.0 mM, [3.2] $_{stock}$ = 0.23 mM** | | | | | | |
|---|---|---|---|---|---|---|
| **Cumulative added volume SA µL** | **Added volume 3.2 µL** | **Total volume µL** | **[SA] µmol dm$^{-3}$** | **[3.2] µmol dm$^{-3}$** | **A $_{447}$ nm** | **∆A $_{447}$ nm** |
| 0 | 0 | 1000 | 0.00 | 0.00 | 0.04 | 0.00 |
| 0 | 1000 | 2000 | 0.00 | 23.00 | 0.42 | 0.38 |
| 5 | 1000 | 2005 | 2.49 | 22.94 | 0.39 | 0.35 |
| 10 | 1000 | 2010 | 4.98 | 22.89 | 0.38 | 0.34 |
| 20 | 1000 | 2020 | 9.90 | 22.77 | 0.37 | 0.33 |
| 30 | 1000 | 2030 | 14.78 | 22.66 | 0.36 | 0.33 |
| 40 | 1000 | 2040 | 19.61 | 22.55 | 0.36 | 0.32 |
| 60 | 1000 | 2060 | 29.13 | 22.33 | 0.35 | 0.31 |
| 100 | 1000 | 2100 | 47.62 | 21.90 | 0.35 | 0.30 |
| 160 | 1000 | 2160 | 74.07 | 21.30 | 0.34 | 0.30 |
| 200 | 1000 | 2200 | 90.91 | 20.91 | 0.34 | 0.29 |

**Table A55.17 Corrected absorbance for 0.033 mM 3.3 upon addition of 0 - 0.214 mM SA, in buffer 25 mM MOPS, pH 7.0, 50 mM NaCl at 25 °C.[SA] $_{stock}$ = 1.0 mM, [3.3] $_{stock}$ = 0.33 mM**

| Cumulative volume SA µL | Added volume [3.3] µL | Total volume µL | [SA] µmol $dm^{-3}$ | [3.3] µmol $dm^{-3}$ | A $_{347}$ nm | ΔA $_{347}$ nm |
|---|---|---|---|---|---|---|
| 0 | 0 | 1500 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0 | 500 | 2000 | 0.00 | 33.75 | 0.34 | 0.34 |
| 5 | 500 | 2000 | 2.50 | 33.75 | 0.33 | 0.33 |
| 15 | 500 | 2015 | 7.44 | 33.50 | 0.33 | 0.32 |
| 55 | 500 | 2055 | 26.76 | 32.85 | 0.33 | 0.31 |
| 85 | 500 | 2085 | 40.77 | 32.37 | 0.33 | 0.30 |
| 135 | 500 | 2135 | 63.23 | 31.62 | 0.34 | 0.29 |
| 185 | 500 | 2185 | 84.67 | 30.89 | 0.34 | 0.28 |
| 235 | 500 | 2235 | 105.15 | 30.20 | 0.35 | 0.27 |
| 335 | 500 | 2335 | 143.47 | 28.91 | 0.36 | 0.25 |
| 435 | 500 | 2435 | 178.64 | 27.72 | 0.38 | 0.24 |
| 535 | 500 | 2500 | 214.00 | 27.00 | 0.39 | 0.23 |

**Table A55.18 Absorbance for 0.059 mM 3.4 at 434 nm upon addition of 0 – 0.054 mM SA, in 25 mM MOPS, pH 7.0, 50 mM NaCl, at 25 °C.[SA] $_{stock}$ = 0.17 mM, [3.4] $_{stock}$ = 0.99 mM**

| Cumulative added volume SA µL | Added volume 3.4 µL | Total volume µL | [SA] µmol $dm^{-3}$ | [3.4] µmol $dm^{-3}$ | A $_{434}$ nm |
|---|---|---|---|---|---|
| 0 | 0 | 2350 | 0.00 | 0.00 | 0.000 |
| 0 | 150 | 2500 | 0.00 | 59.76 | 0.645 |
| 10 | 150 | 2510 | 0.69 | 59.52 | 0.641 |
| 30 | 150 | 2530 | 2.04 | 59.05 | 0.635 |
| 60 | 150 | 2560 | 4.03 | 58.36 | 0.624 |
| 100 | 150 | 2600 | 6.62 | 57.46 | 0.612 |
| 150 | 150 | 2650 | 9.74 | 56.38 | 0.596 |
| 210 | 150 | 2710 | 13.33 | 55.13 | 0.578 |
| 280 | 150 | 2780 | 17.32 | 53.74 | 0.578 |
| 360 | 150 | 2860 | 21.65 | 52.24 | 0.535 |
| 450 | 150 | 2950 | 26.24 | 50.64 | 0.514 |
| 550 | 150 | 3050 | 31.02 | 48.98 | 0.490 |
| 670 | 150 | 3170 | 36.35 | 47.13 | 0.466 |
| 800 | 150 | 3300 | 41.70 | 45.27 | 0.440 |
| 940 | 150 | 3440 | 47.00 | 43.43 | 0.416 |
| 1090 | 150 | 3590 | 52.22 | 41.62 | 0.392 |
| 1150 | 150 | 3650 | 54.19 | 40.93 | 0.371 |

**Table A55.19 Absorbance for 0.059 mM 3.5 at 444 nm upon addition of 0 – 0.054 mM SA, in 25 mM MOPS, pH 7.0, 50 mM NaCl, at 25 °C.[SA] $_{stock}$ = 0.17 mM, [3.5] $_{stock}$ = 0.99 mM**

| Cumulative added volume SA µL | Added volume 3.5 µL | Total volume µL | [SA] µmol $dm^{-3}$ | [3.5] µmol $dm^{-3}$ | A $_{444}$ nm |
|---|---|---|---|---|---|
| 0 | 0 | 2000 | 0.00 | 0.00 | 0.000 |
| 0 | 80 | 2080 | 0.00 | 69.31 | 0.748 |
| 10 | 80 | 2090 | 4.78 | 68.98 | 0.743 |
| 20 | 80 | 2100 | 9.52 | 68.65 | 0.736 |
| 30 | 80 | 2110 | 14.22 | 68.32 | 0.728 |
| 40 | 80 | 2120 | 18.87 | 68.00 | 0.729 |
| 90 | 80 | 2170 | 41.47 | 66.43 | 0.715 |
| 140 | 80 | 2220 | 63.06 | 64.94 | 0.703 |
| 190 | 80 | 2270 | 83.70 | 63.51 | 0.686 |
| 250 | 80 | 2330 | 107.30 | 61.87 | 0.678 |
| 350 | 80 | 2430 | 144.03 | 59.33 | 0.656 |

**Table A55.20 Absorbance for 0.015 mM 3.6 at 440 nm upon addition of 0 – 0.268 mM SA, in 25 mM MOPS, pH 7.0, 50 mM NaCl, at 25 °C.[SA] $_{stock}$ = 1.0 mM, [3.6] $_{stock}$ = 0.075 mM**

| Cumulative added volume SA µL | Added volume 3.6 µL | Total volume µL | [SA] µmol $dm^{-3}$ | [3.6] µmol $dm^{-3}$ | A $_{440}$ nm |
|---|---|---|---|---|---|
| 0 | 0 | 2000 | 0.00 | 0.00 | 0.000 |
| 0 | 500 | 2500 | 0.00 | 15.17 | 0.248 |
| 5 | 500 | 2505 | 2.00 | 15.14 | 0.247 |
| 15 | 500 | 2515 | 5.96 | 15.08 | 0.246 |
| 35 | 500 | 2535 | 13.81 | 14.96 | 0.244 |
| 75 | 500 | 2575 | 29.13 | 14.73 | 0.242 |
| 155 | 500 | 2655 | 58.38 | 14.28 | 0.238 |
| 255 | 500 | 2755 | 92.56 | 13.77 | 0.233 |
| 405 | 500 | 2905 | 139.41 | 13.05 | 0.227 |
| 605 | 500 | 3105 | 194.85 | 12.21 | 0.219 |
| 805 | 500 | 3305 | 243.57 | 11.47 | 0.214 |
| 1005 | 500 | 3505 | 286.73 | 10.82 | 0.208 |

| **Table A55.21 Corrected absorbance for 0.0042 mM 3.7 upon addition of 0 - 0.111 mM SA, in buffer 25 mM MOPS, pH 7.0, 50 mM NaCl at 25 °C.[SA] $_{stock}$ = 1.0 mM, [3.7] $_{stock}$ = 0.046 mM** | | | | | | |
|---|---|---|---|---|---|---|
| **Cumulative added volume SA µL** | **Added volume [3.7] µL** | **Total volume µL** | **[SA] µmol dm$^{-3}$** | **[3.7] µmol dm$^{-3}$** | **A $_{339}$ nm** | **ΔA $_{339}$ nm** |
| 0 | 0 | 2000 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0 | 200 | 2200 | 0.00 | 4.23 | 0.14 | 0.14 |
| 5 | 200 | 2205 | 2.27 | 4.22 | 0.13 | 0.13 |
| 15 | 200 | 2215 | 6.77 | 4.20 | 0.13 | 0.12 |
| 25 | 200 | 2225 | 11.24 | 4.18 | 0.13 | 0.12 |
| 50 | 200 | 2250 | 22.22 | 4.13 | 0.13 | 0.11 |
| 75 | 200 | 2275 | 32.97 | 4.09 | 0.14 | 0.11 |
| 100 | 200 | 2300 | 43.48 | 4.04 | 0.14 | 0.10 |
| 125 | 200 | 2325 | 53.76 | 4.00 | 0.15 | 0.10 |
| 175 | 200 | 2375 | 73.68 | 3.92 | 0.16 | 0.09 |
| 225 | 200 | 2425 | 92.78 | 3.84 | 0.17 | 0.08 |
| 275 | 200 | 2475 | 111.11 | 3.76 | 0.18 | 0.08 |

**Table A55.22 Corrected absorbance for 0.0129 mM 3.8 upon addition of 0 - 0.30 mM SA, in buffer 25 mM MOPS, pH 7.0, 50 mM NaCl at 25 °C.$[SA]_{stock}$ = 1.0 mM, $[3.8]_{stock}$ = 0.35 mM**

| Cumulative added volume SA µL | Added volume 3.8 µL | Total volume µL | [SA] µmol $dm^{-3}$ | [3.8] µmol $dm^{-3}$ | A 664 nm | ΔA 664 nm |
|---|---|---|---|---|---|---|
| 0 | 0 | 2000 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0 | 75 | 2075 | 0.00 | 12.87 | 0.86 | 0.86 |
| 5 | 75 | 2080 | 2.40 | 12.84 | 0.83 | 0.83 |
| 10 | 75 | 2085 | 4.80 | 12.81 | 0.82 | 0.82 |
| 15 | 75 | 2090 | 7.18 | 12.78 | 0.81 | 0.81 |
| 20 | 75 | 2095 | 9.55 | 12.74 | 0.81 | 0.81 |
| 25 | 75 | 2100 | 11.90 | 12.71 | 0.81 | 0.81 |
| 35 | 75 | 2110 | 16.59 | 12.65 | 0.80 | 0.80 |
| 45 | 75 | 2120 | 21.23 | 12.59 | 0.80 | 0.80 |
| 70 | 75 | 2145 | 32.63 | 12.45 | 0.79 | 0.79 |
| 100 | 75 | 2175 | 45.98 | 12.28 | 0.78 | 0.78 |
| 150 | 75 | 2225 | 67.42 | 12.00 | 0.76 | 0.76 |
| 200 | 75 | 2275 | 87.91 | 11.74 | 0.75 | 0.75 |
| 300 | 75 | 2375 | 126.32 | 11.24 | 0.73 | 0.72 |
| 400 | 75 | 2475 | 161.62 | 10.79 | 0.70 | 0.69 |
| 500 | 75 | 2575 | 194.17 | 10.37 | 0.68 | 0.67 |
| 700 | 75 | 2775 | 252.25 | 9.62 | 0.63 | 0.62 |
| 900 | 75 | 2975 | 302.52 | 8.97 | 0.60 | 0.58 |

**Table A55.23 Corrected absorbance for 0.0126 mM 3.9 upon addition of 0 - 0.29 mM SA, in buffer 25 mM MOPS, pH 7.0, 50 mM NaCl at 25 °C.[SA] $_{stock}$ = 0.75 mM, [3.9] $_{stock}$ = 1 mM**

| Cumulative added volume SA µL | Added volume 3.9 µL | Total volume µL | [SA] µmol $dm^{-3}$ | [3.9] µmol $dm^{-3}$ | $\Delta A_{489\ nm}$ | $\Delta A_{500\ nm}$ |
|---|---|---|---|---|---|---|
| 0 | 0 | 2350 | 0 | 0 | 0 | 0 |
| 0 | 30 | 2380 | 0 | 12.6 | 0.63 | 0.39 |
| 10 | 30 | 2390 | 12.6 | 12.5 | 0.60 | 0.50 |
| 40 | 30 | 2420 | 49.6 | 12.39 | 0.56 | 0.59 |
| 90 | 30 | 2470 | 109 | 12.14 | 0.52 | 0.64 |
| 160 | 30 | 2540 | 188.9 | 11.81 | 0.50 | 0.65 |
| 250 | 30 | 2630 | 285 | 11.40 | 0.48 | 0.65 |
| 350 | 30 | 2730 | 384.6 | 10.98 | 0.46 | 0.64 |
| 480 | 30 | 2860 | 503.4 | 10.48 | 0.44 | 0.62 |
| 630 | 30 | 3010 | 627.9 | 9.96 | 0.42 | 0.60 |
| 800 | 30 | 3180 | 754.7 | 9.43 | 0.41 | 0.57 |
| 980 | 30 | 3360 | 875 | 8.92 | 0.39 | 0.55 |
| 1165 | 30 | 3545 | 985.8 | 8.46 | 0.37 | 0.53 |
| 1355 | 30 | 3735 | 1088.3 | 8.03 | 0.36 | 0.50 |
| 1555 | 30 | 3935 | 1185.5 | 7.62 | 0.35 | 0.48 |

**Table A55.24 Absorbance for 0.026 mM 3.10 at 411 nm upon addition of 0 – 0.269 mM SA, in 25 mM MOPS, pH 7.0, 50 mM NaCl, at 25 °C.[SA] $_{stock}$ = 1.0 mM, [3.10] $_{stock}$ = 1.7 mM**

| Cumulative added volume SA µL | Added volume 3.10 µL | Total volume µL | [SA] µmol $dm^{-3}$ | [3.10] µmol $dm^{-3}$ | A $_{411}$ nm |
|---|---|---|---|---|---|
| 0 | 0 | 2000 | 0.00 | 0.00 | 0.000 |
| 0 | 30 | 2030 | 0.00 | 26.25 | 0.682 |
| 40 | 30 | 2070 | 19.32 | 25.74 | 0.680 |
| 70 | 30 | 2100 | 33.33 | 25.37 | 0.671 |
| 100 | 30 | 2130 | 46.95 | 25.01 | 0.665 |
| 150 | 30 | 2180 | 68.81 | 24.44 | 0.653 |
| 250 | 30 | 2280 | 109.65 | 23.37 | 0.627 |
| 350 | 30 | 2380 | 147.06 | 22.39 | 0.606 |
| 450 | 30 | 2480 | 181.45 | 21.48 | 0.588 |
| 550 | 30 | 2580 | 213.18 | 20.65 | 0.573 |
| 650 | 30 | 2680 | 242.54 | 19.88 | 0.557 |
| 750 | 30 | 2780 | 269.78 | 19.17 | 0.541 |

| **Table A55.25 Absorbance for 0.025 mM 3.11 at 343 nm upon addition of 0 – 0.297 mM SA, in 25 mM MOPS, pH 7.0, 50 mM NaCl, at 25 °C.[SA] $_{stock}$ = 1.0 mM, [3.11] $_{stock}$ = 0.4 mM** | | | | | |
|---|---|---|---|---|---|
| **Cumulative added volume SA µL** | **Added volume 3.11 µL** | **Total volume µL** | **[SA] µmol dm$^{-3}$** | **[3.11] µmol dm$^{-3}$** | **A $_{343}$ nm** |
| 0 | 0 | 2000 | 0 | 0.00 | 0.000 |
| 0 | 130 | 2130 | 0.00 | 25.15 | 0.730 |
| 10 | 130 | 2140 | 4.67 | 25.03 | 0.732 |
| 30 | 130 | 2160 | 13.89 | 24.80 | 0.725 |
| 60 | 130 | 2190 | 27.40 | 24.46 | 0.716 |
| 120 | 130 | 2250 | 53.33 | 23.80 | 0.696 |
| 200 | 130 | 2330 | 85.84 | 22.99 | 0.668 |
| 300 | 130 | 2430 | 123.46 | 22.04 | 0.640 |
| 400 | 130 | 2530 | 158.10 | 21.17 | 0.612 |
| 500 | 130 | 2630 | 190.11 | 20.37 | 0.587 |
| 600 | 130 | 2730 | 219.78 | 19.62 | 0.562 |
| 700 | 130 | 2830 | 247.35 | 18.93 | 0.540 |
| 900 | 130 | 3030 | 297.03 | 17.68 | 0.500 |

**Table A55.26 Corrected absorbance for 0.036 mM 3.12 upon addition of 0 - 0.223 mM SA, in buffer 25 mM MOPS, pH 7.0, 50 mM NaCl at 25 °C.$[SA]_{stock}$ = 0.75 mM, $[3.12]_{stock}$ = 1 2mM**

| Cumulative added volume SA µL | Added volume 3.12 µL | Total volume µL | [SA] µmol $dm^{-3}$ | [3.12] µmol $dm^{-3}$ | A 368 nm | ΔA 368 nm |
|---|---|---|---|---|---|---|
| 0 | 0 | 2350 | 0.00 | 0.00 | 0.000 | 0.000 |
| 0 | 70 | 2420 | 0.00 | 36.16 | 0.488 | 0.488 |
| 10 | 70 | 2430 | 3.09 | 36.01 | 0.480 | 0.479 |
| 40 | 70 | 2460 | 12.20 | 35.57 | 0.480 | 0.476 |
| 90 | 70 | 2510 | 26.89 | 34.86 | 0.465 | 0.456 |
| 150 | 70 | 2570 | 43.77 | 34.05 | 0.458 | 0.444 |
| 220 | 70 | 2640 | 62.50 | 33.14 | 0.451 | 0.430 |
| 300 | 70 | 2720 | 82.72 | 32.17 | 0.445 | 0.416 |
| 400 | 70 | 2820 | 106.38 | 31.03 | 0.440 | 0.403 |
| 530 | 70 | 2950 | 134.75 | 29.66 | 0.425 | 0.379 |
| 680 | 70 | 3100 | 164.52 | 28.23 | 0.419 | 0.362 |
| 840 | 70 | 3260 | 193.25 | 26.84 | 0.414 | 0.348 |
| 1025 | 70 | 3445 | 223.15 | 25.40 | 0.408 | 0.332 |

| **Table A55.27 Corrected absorbance for 0.0215 mM 3.1 upon addition of 0 - 0.074 mM TF, in buffer 25 mM MOPS, pH 7.0, 50 mM NaCl at 25 °C.$[TF]_{stock}$ = 1 mM, $[3.1]_{stock}$ = 1.1 mM** | | | | | | |
|---|---|---|---|---|---|---|
| **Cumulative added volume TF µL** | **Added volume 3.1 µL** | **Total volume µL** | **[TF] µmol $dm^{-3}$** | **[3.1] µmol $dm^{-3}$** | **$A_{444\ nm}$** | **$\Delta A_{444\ nm}$** |
| 0 | 0 | 2000 | 0.00 | 0.0 | 0.06 | 0.00 |
| 0 | 40 | 2040 | 0.00 | 21.57 | 0.40 | 0.35 |
| 1 | 40 | 2041 | 0.49 | 21.56 | 0.38 | 0.32 |
| 2 | 40 | 2042 | 0.98 | 21.55 | 0.36 | 0.30 |
| 5 | 40 | 2045 | 2.44 | 21.52 | 0.35 | 0.29 |
| 10 | 40 | 2050 | 4.88 | 21.46 | 0.36 | 0.28 |
| 20 | 40 | 2060 | 9.71 | 21.36 | 0.36 | 0.27 |
| 30 | 40 | 2070 | 14.49 | 21.26 | 0.36 | 0.26 |
| 40 | 40 | 2080 | 19.23 | 21.15 | 0.37 | 0.25 |
| 50 | 40 | 2090 | 23.92 | 21.05 | 0.37 | 0.24 |
| 60 | 40 | 2100 | 28.57 | 20.95 | 0.38 | 0.24 |
| 70 | 40 | 2110 | 33.18 | 20.85 | 0.39 | 0.23 |
| 100 | 40 | 2140 | 46.73 | 20.56 | 0.42 | 0.22 |
| 130 | 40 | 2170 | 59.91 | 20.28 | 0.45 | 0.21 |
| 160 | 40 | 2160 | 74.07 | 20.37 | 0.48 | 0.20 |

| **Table A55.28 Absorbance for 0 - 0.25 mM TF, in buffer 25 mM MOPS, pH 7.0, 50 mM NaCl at 25 °C.$[TF]_{stock}$ = 1.0 mM. 1) To correct TF with 3.1** | | | | |
|---|---|---|---|---|
| **Cumulative added volume SA µL** | **Added volume [MOPS µL** | **Total volume µL** | **[TF] µmol $dm^{-3}$** | **A 444 nm** |
| 0 | 0 | 2000 | 0.00 | 0.048 |
| 0 | 40 | 2040 | 0.00 | 0.051 |
| 1 | 40 | 2041 | 0.49 | 0.059 |
| 2 | 40 | 2042 | 0.98 | 0.069 |
| 5 | 40 | 2045 | 2.44 | 0.084 |
| 10 | 40 | 2050 | 4.88 | 0.097 |
| 20 | 40 | 2060 | 9.71 | 0.115 |
| 30 | 40 | 2070 | 14.49 | 0.126 |
| 40 | 40 | 2080 | 19.23 | 0.140 |
| 50 | 40 | 2090 | 23.92 | 0.155 |
| 60 | 40 | 2100 | 28.57 | 0.193 |
| 70 | 40 | 2110 | 33.18 | 0.233 |
| 100 | 40 | 2140 | 46.73 | 0.272 |
| 130 | 40 | 2170 | 59.91 | 0.048 |
| 160 | 40 | 2160 | 74.07 | 0.051 |

**Table A55.29 Corrected absorbance for 0.023 mM 3.2 upon addition of 0 - 0.0727 mM TF, in buffer 25 mM MOPS, pH 7.0, 50 mM NaCl at 25 °C.$[TF]_{stock}$ = 1 mM, $[3.2]_{stock}$ = 1.19 mM**

| Cumulative added volume TF µL | Added volume 3.2 µL | Total volume µL | [TF] µmol $dm^{-3}$ | [3.2] µmol $dm^{-3}$ | $A_{452\ nm}$ | $\Delta A_{452\ nm}$ |
|---|---|---|---|---|---|---|
| 0 | 0 | 2000 | 0.00 | 0.00 | 0.05 | 0.00 |
| 0 | 40 | 2040 | 0.00 | 23.33 | 0.43 | 0.38 |
| 1 | 40 | 2041 | 0.49 | 23.32 | 0.40 | 0.35 |
| 2 | 40 | 2042 | 0.98 | 23.31 | 0.40 | 0.35 |
| 5 | 40 | 2045 | 2.44 | 23.28 | 0.39 | 0.34 |
| 10 | 40 | 2050 | 4.88 | 23.22 | 0.38 | 0.32 |
| 20 | 40 | 2060 | 9.71 | 23.11 | 0.39 | 0.31 |
| 30 | 40 | 2070 | 14.49 | 23.00 | 0.40 | 0.31 |
| 40 | 40 | 2080 | 19.23 | 22.88 | 0.41 | 0.30 |
| 50 | 40 | 2090 | 23.92 | 22.78 | 0.41 | 0.29 |
| 60 | 40 | 2100 | 28.57 | 22.67 | 0.42 | 0.28 |
| 70 | 40 | 2110 | 33.18 | 22.56 | 0.43 | 0.28 |
| 100 | 40 | 2140 | 46.73 | 22.24 | 0.46 | 0.27 |
| 130 | 40 | 2170 | 59.91 | 21.94 | 0.49 | 0.26 |
| 160 | 40 | 2200 | 72.73 | 21.64 | 0.52 | 0.25 |

**Table A55.30 Corrected absorbance for 0.021 mM 3.3 upon addition of 0 - 0.042 mM TF, in buffer 25 mM MOPS, pH 7.0, 50 mM NaCl at 25 °C.$[TF]_{stock}$ = 1 mM, $[3.3]_{stock}$ = 0.19 mM**

| Cumulative added volume TF µL | Added volume 3.3 µL | Total volume µL | [TF] µmol $dm^{-3}$ | [3.3] µmol $dm^{-3}$ | $A_{347\ nm}$ | $\Delta A_{347\ nm}$ |
|---|---|---|---|---|---|---|
| 0 | 0 | 2000 | 0.00 | 0.00 | 0 | 0 |
| 0 | 250 | 2250 | 0.00 | 21.67 | 0.125 | 0.125 |
| 5 | 250 | 2255 | 2.22 | 21.62 | 0.138 | 0.131 |
| 10 | 250 | 2260 | 4.42 | 21.57 | 0.151 | 0.137 |
| 15 | 250 | 2265 | 6.62 | 21.52 | 0.166 | 0.145 |
| 20 | 250 | 2270 | 8.81 | 21.48 | 0.180 | 0.152 |
| 25 | 250 | 2275 | 10.99 | 21.43 | 0.194 | 0.159 |
| 30 | 250 | 2280 | 13.16 | 21.38 | 0.208 | 0.167 |
| 35 | 250 | 2285 | 15.32 | 21.33 | 0.221 | 0.173 |
| 40 | 250 | 2290 | 17.47 | 21.29 | 0.235 | 0.180 |
| 45 | 250 | 2295 | 19.61 | 21.24 | 0.250 | 0.188 |
| 50 | 250 | 2300 | 21.74 | 21.20 | 0.258 | 0.189 |
| 60 | 250 | 2310 | 25.97 | 21.10 | 0.289 | 0.206 |
| 70 | 250 | 2320 | 30.17 | 21.01 | 0.316 | 0.221 |
| 80 | 250 | 2330 | 34.33 | 20.92 | 0.344 | 0.236 |
| 90 | 250 | 2340 | 38.46 | 20.83 | 0.372 | 0.250 |
| 100 | 250 | 2350 | 42.55 | 20.74 | 0.401 | 0.267 |

**Table A55.31 Corrected absorbance for 0.017 mM 3.4 upon addition of 0 - 0.045 mM TF, in buffer 25 mM MOPS, pH 7.0, 50 mM NaCl at 25 °C.$[TF]_{stock}$ = 1 mM, $[3.4]_{stock}$ = 0.39 mM**

| Cumulative added volume TF µL | Added volume 3.4 µL | Total volume µL | [TF] µmol $dm^{-3}$ | [3.4] µmol $dm^{-3}$ | $A_{434\ nm}$ | $\Delta A_{434\ nm}$ |
|---|---|---|---|---|---|---|
| 0 | 0 | 2000 | 0.00 | 0.00 | 0.000 | 0.000 |
| 0 | 100 | 2100 | 0.00 | 17.19 | 0.203 | 0.203 |
| 10 | 100 | 2110 | 4.74 | 17.11 | 0.220 | 0.203 |
| 20 | 100 | 2120 | 9.43 | 17.03 | 0.236 | 0.201 |
| 30 | 100 | 2130 | 14.08 | 16.95 | 0.252 | 0.200 |
| 40 | 100 | 2140 | 18.69 | 16.87 | 0.267 | 0.199 |
| 50 | 100 | 2150 | 23.26 | 16.79 | 0.283 | 0.198 |
| 60 | 100 | 2160 | 27.78 | 16.71 | 0.299 | 0.197 |
| 70 | 100 | 2170 | 32.26 | 16.64 | 0.314 | 0.196 |
| 80 | 100 | 2180 | 36.70 | 16.56 | 0.329 | 0.195 |
| 90 | 100 | 2190 | 41.10 | 16.48 | 0.345 | 0.194 |
| 100 | 100 | 2200 | 45.45 | 16.41 | 0.359 | 0.192 |

**Table A55.32 Corrected absorbance at 440 nm for 0.069 mM 3.5 upon addition of 0 - 0.029 mM TF, in buffer 25 mM MOPS, pH 7.0, 50 mM NaCl at 25 °C.$[TF]_{stock}$ = 0.5 mM, $[3.5]_{stock}$ = 1.8 mM**

| Cumulative added volume TF µL | Added volume 3.5 µL | Total volume µL | [TF] µmol $dm^{-3}$ | [3.5] µmol $dm^{-3}$ | $A_{444\ nm}$ | $\Delta A_{444\ nm}$ |
|---|---|---|---|---|---|---|
| 0 | 0 | 2000 | 0.00 | 0.00 | 0.000 | 0.000 |
| 0 | 80 | 2080 | 0.00 | 69.23 | 0.756 | 0.756 |
| 10 | 80 | 2090 | 2.39 | 68.90 | 0.766 | 0.747 |
| 20 | 80 | 2100 | 4.76 | 68.57 | 0.786 | 0.748 |
| 30 | 80 | 2110 | 7.11 | 68.25 | 0.803 | 0.760 |
| 40 | 80 | 2120 | 9.43 | 67.92 | 0.809 | 0.768 |
| 50 | 80 | 2130 | 11.74 | 67.61 | 0.822 | 0.765 |
| 60 | 80 | 2140 | 14.02 | 67.29 | 0.838 | 0.769 |
| 70 | 80 | 2150 | 16.28 | 66.98 | 0.849 | 0.777 |
| 80 | 80 | 2160 | 18.52 | 66.67 | 0.873 | 0.779 |
| 105 | 80 | 2185 | 24.03 | 65.90 | 0.936 | 0.782 |
| 130 | 80 | 2210 | 29.41 | 65.16 | 0.998 | 0.825 |

| **Table A55.33 Absorbance for 0.009 mM 3.7 at 339 nm upon addition of 0 – 0.017 mM TF, in 25 mM MOPS, pH 7.0, 50 mM NaCl, at 25 °C.$[TF]_{stock}$ = 0.5 mM, $[3.7]_{stock}$ = 1.0 mM** | | | | | |
|---|---|---|---|---|---|
| **Cumulative added volume TF µL** | **Added volume 3.7 µL** | **Total volume µL** | **[TF] µmol $dm^{-3}$** | **[3.7] µmol $dm^{-3}$** | **$\Delta A_{339}$ nm** |
| 0 | 0 | 2000 | 0.00 | 0.00 | 0.000 |
| 0 | 20 | 2020 | 0.00 | 9.97 | 0.336 |
| 5 | 20 | 2025 | 1.23 | 9.95 | 0.313 |
| 10 | 20 | 2030 | 2.46 | 9.92 | 0.300 |
| 15 | 20 | 2035 | 3.69 | 9.90 | 0.292 |
| 20 | 20 | 2040 | 4.90 | 9.87 | 0.298 |
| 25 | 20 | 2045 | 6.11 | 9.85 | 0.301 |
| 35 | 20 | 2055 | 8.52 | 9.80 | 0.295 |
| 45 | 20 | 2065 | 10.90 | 9.75 | 0.288 |
| 55 | 20 | 2075 | 13.25 | 9.71 | 0.283 |
| 65 | 20 | 2085 | 15.59 | 9.66 | 0.277 |
| 75 | 20 | 2095 | 17.90 | 9.61 | 0.274 |

**Table A55.34 Corrected absorbance for 0.0049 mM 3.8 upon addition of 0 - 0.045 mM TF, in buffer 25 mM MOPS, pH 7.0, 50 mM NaCl at 25 °C.$[TF]_{stock}$ = 0.5 mM, $[3.8]_{stock}$ = 0.98 mM**

| Cumulative added volume TF µL | Added volume 3.8 µL | Total volume µL | [TF] µmol $dm^{-3}$ | [3.8] µmol $dm^{-3}$ | A $_{664}$ nm | ΔA $_{664}$ nm |
|---|---|---|---|---|---|---|
| 0 | 0 | 0 | 0.00 | 0.00 | 0.04 | 0.00 |
| 0 | 0 | 10 | 0.00 | 4.90 | 0.36 | 0.33 |
| 10 | 5 | 10 | 0.13 | 4.88 | 0.33 | 0.30 |
| 40 | 10 | 10 | 0.26 | 4.87 | 0.32 | 0.28 |
| 90 | 15 | 10 | 0.39 | 4.86 | 0.31 | 0.27 |
| 150 | 20 | 10 | 0.53 | 4.85 | 0.30 | 0.26 |
| 220 | 25 | 10 | 0.65 | 4.84 | 0.30 | 0.26 |
| 300 | 30 | 10 | 0.78 | 4.82 | 0.29 | 0.25 |
| 390 | 35 | 10 | 0.91 | 4.81 | 0.28 | 0.24 |
| 490 | 45 | 10 | 1.17 | 4.79 | 0.28 | 0.24 |
| 590 | 70 | 10 | 1.79 | 4.73 | 0.27 | 0.23 |
| 690 | 100 | 10 | 2.53 | 4.66 | 0.27 | 0.22 |
| 790 | 200 | 10 | 4.82 | 4.45 | 0.26 | 0.21 |

| **Table A55.35 Corrected absorbance for 0.0275 mM 3.10 upon addition of 0 - 0.032 mM TF, in buffer 25 mM MOPS, pH 7.0, 50 mM NaCl at 25 °C.$[TF]_{stock}$ =0.5 mM, $[3.10]_{stock}$ = 5.5 mM** | | | | | | |
|---|---|---|---|---|---|---|
| **Cumulative added volume TF µL** | **Added volume 3.10 µL** | **Total volume µL** | **[TF] µmol $dm^{-3}$** | **[3.10] µmol $dm^{-3}$** | **$A_{410\ nm}$** | **$\Delta A_{410\ nm}$** |
| 0 | 0 | 2000 | 0.00 | 0.00 | 0.06 | 0.00 |
| 0 | 10 | 2010 | 0.00 | 27.36 | 0.40 | 0.35 |
| 10 | 10 | 2020 | 2.48 | 27.23 | 0.38 | 0.32 |
| 20 | 10 | 2030 | 4.93 | 27.09 | 0.36 | 0.30 |
| 30 | 10 | 2040 | 7.35 | 26.96 | 0.35 | 0.29 |
| 40 | 10 | 2050 | 9.76 | 26.83 | 0.36 | 0.28 |
| 50 | 10 | 2060 | 12.14 | 26.70 | 0.36 | 0.27 |
| 60 | 10 | 2070 | 14.49 | 26.57 | 0.36 | 0.26 |
| 80 | 10 | 2090 | 19.14 | 26.32 | 0.37 | 0.25 |
| 100 | 10 | 2110 | 23.70 | 26.07 | 0.37 | 0.24 |
| 120 | 10 | 2130 | 28.17 | 25.82 | 0.38 | 0.24 |
| 140 | 10 | 2150 | 32.56 | 25.58 | 0.39 | 0.23 |

**Table A55.36 Corrected absorbance for 0.018 mM 3.11 upon addition of 0 - 0.049 mM TF, in buffer 25 mM MOPS, pH 7.0, 50 mM NaCl at 25 °C.$[TF]_{stock}$ = 1.0 mM, $[3.11]_{stock}$ = 0.38 mM**

| Cumulative added volume TF µL | Added volume 3.11 µL | Total volume µL | [TF] µmol $dm^{-3}$ | [3.11] µmol $dm^{-3}$ | $A_{344\ nm}$ | $\Delta A_{344\ nm}$ |
|---|---|---|---|---|---|---|
| 0 | 0 | 2000 | 0.00 | 0.00 | 0.000 | 0.000 |
| 0 | 100 | 2100 | 0.00 | 18.43 | 0.535 | 0.535 |
| 10 | 100 | 2110 | 4.74 | 18.34 | 0.572 | 0.344 |
| 20 | 100 | 2120 | 9.43 | 18.25 | 0.602 | 0.147 |
| 30 | 100 | 2130 | 14.08 | 18.17 | 0.631 | -0.047 |
| 40 | 100 | 2140 | 18.69 | 18.08 | 0.660 | -0.240 |
| 50 | 100 | 2150 | 23.26 | 18.00 | 0.689 | -0.431 |
| 60 | 100 | 2160 | 27.78 | 17.92 | 0.716 | -0.621 |
| 70 | 100 | 2170 | 32.26 | 17.83 | 0.744 | -0.809 |
| 80 | 100 | 2180 | 36.70 | 17.75 | 0.775 | -0.992 |
| 90 | 100 | 2190 | 41.10 | 17.67 | 0.802 | -1.177 |
| 100 | 100 | 2200 | 45.45 | 17.59 | 0.830 | -1.359 |
| 110 | 100 | 2210 | 49.77 | 17.51 | 0.857 | -1.540 |

**Table A55.37 Corrected absorbance for 0.023 mM 3.12 upon addition of 0 - 0.060 mM TF, in buffer 25 mM MOPS, pH 7.0, 50 mM NaCl at 25 °C.$[TF]_{stock}$ = 1.0 mM, $[3.12]_{stock}$ = 3.1 mM**

| Cumulative added volume TF µL | Added volume 3.12 µL | Total volume µL | [TF] µmol $dm^{-3}$ | [3.12] µmol $dm^{-3}$ | $A_{367\ nm}$ | $\Delta A_{367\ nm}$ |
|---|---|---|---|---|---|---|
| 0 | 0 | 2000 | 0.00 | 0.00 | 0.000 | 0.000 |
| 0 | 15 | 2015 | 0.00 | 23.08 | 0.626 | 0.626 |
| 5 | 15 | 2020 | 2.48 | 23.02 | 0.627 | 0.614 |
| 10 | 15 | 2025 | 4.94 | 22.96 | 0.634 | 0.608 |
| 20 | 15 | 2035 | 9.83 | 22.85 | 0.647 | 0.594 |
| 30 | 15 | 2045 | 14.67 | 22.74 | 0.662 | 0.584 |
| 40 | 15 | 2055 | 19.46 | 22.63 | 0.682 | 0.579 |
| 70 | 15 | 2085 | 33.57 | 22.30 | 0.733 | 0.554 |
| 100 | 15 | 2115 | 47.28 | 21.99 | 0.789 | 0.537 |
| 130 | 15 | 2145 | 60.61 | 21.68 | 0.842 | 0.519 |

**A55 UV-visible titrations for all compounds with DNA in presence of selected proteins SA and TF**

**Table A55.38 UV-visible titration of 0.054 mM 3.1 at 445 nm upon addition of 0 – 2.4 mM DNA in presence 0.1 mM SA in buffer (25 mM MOPS, pH 7.0, 50 mM NaCl), at 25 °C.$[DNA]_{stock\ 1}$ = 1.6 mM, $[DNA]_{stock\ 2}$ = 16 mM, $[3.1]_{stock}$ = 0.43 mM, [SA]=1.0 mM**

| Cumulative added volume DNA µL | Added volume 3.1 µL | Total volume SA µL | Total volume µL | [DNA] µmol $dm^{-3}$ | [3.1] µmol $dm^{-3}$ | [SA] µmol $dm^{-3}$ | $A_{445\ nm}$ |
|---|---|---|---|---|---|---|---|
| 0 | 0 | 0 | 1750 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0 | 0 | 250 | 2000 | 0.00 | 54.63 | 0.00 | 0.87 |
| 0 | 250 | 250 | 2250 | 0.00 | 48.56 | 111.11 | 0.77 |
| 10 | 250 | 250 | 2260 | 7.35 | 48.34 | 110.62 | 0.73 |
| 20 | 250 | 250 | 2270 | 14.63 | 48.13 | 110.13 | 0.71 |
| 30 | 250 | 250 | 2280 | 21.84 | 47.92 | 109.65 | 0.70 |
| 40 | 250 | 250 | 2290 | 29.00 | 47.71 | 109.17 | 0.69 |
| 50 | 250 | 250 | 2300 | 36.09 | 47.50 | 108.70 | 0.69 |
| 10 | 250 | 250 | 2260 | 70.80 | 48.34 | 110.62 | 0.71 |
| 20 | 250 | 250 | 2270 | 140.97 | 48.13 | 110.13 | 0.73 |
| 30 | 250 | 250 | 2280 | 210.53 | 47.92 | 109.65 | 0.74 |
| 50 | 250 | 250 | 2300 | 347.83 | 47.50 | 108.70 | 0.75 |
| 80 | 250 | 250 | 2330 | 549.36 | 46.89 | 107.30 | 0.75 |
| 140 | 250 | 250 | 2390 | 937.24 | 45.71 | 104.60 | 0.74 |
| 200 | 250 | 250 | 2450 | 1306.12 | 44.59 | 102.04 | 0.72 |
| 300 | 250 | 250 | 2550 | 1882.35 | 42.84 | 98.04 | 0.70 |
| 400 | 250 | 250 | 2650 | 2415.09 | 41.23 | 94.34 | 0.68 |

**Table A55.39 UV-visible titration of 0.054 mM 3.2 at 452 nm upon addition of 0 – 4.2 mM DNA in presence 0.1 mM SA in buffer (25 mM MOPS, pH 7.0, 50 mM NaCl), at 25 °C.$[DNA]_{stock}$ = 17 mM, $[3.2]_{stock}$ = 1.24 Mm, SA=1.0 mM**

| Cumulative added volume DNA µL | Added volume SA µL | Total volume 3.2 µL | Total volume µL | [ DNA] µmol $dm^{-3}$ | [3.2] µmol $dm^{-3}$ | [SA] µmol $dm^{-3}$ | $A_{452}$ nm |
|---|---|---|---|---|---|---|---|
| 0 | 0 | 0 | 2000 | 0.00 | 0.00 | 0.00 | 0 |
| 0 | 0 | 50 | 2050 | 0.00 | 30.41 | 0.00 | 0.50 |
| 0 | 250 | 50 | 2300 | 0.00 | 27.10 | 108.70 | 0.44 |
| 10 | 250 | 50 | 2310 | 74.46 | 26.99 | 108.23 | 0.36 |
| 20 | 250 | 50 | 2320 | 148.28 | 26.87 | 107.76 | 0.37 |
| 30 | 250 | 50 | 2330 | 221.46 | 26.75 | 107.30 | 0.37 |
| 40 | 250 | 50 | 2340 | 294.02 | 26.64 | 106.84 | 0.38 |
| 50 | 250 | 50 | 2350 | 365.96 | 26.53 | 106.38 | 0.38 |
| 60 | 250 | 50 | 2360 | 437.29 | 26.41 | 105.93 | 0.38 |
| 70 | 250 | 50 | 2370 | 508.02 | 26.30 | 105.49 | 0.38 |
| 80 | 250 | 50 | 2380 | 578.15 | 26.19 | 105.04 | 0.38 |
| 100 | 250 | 50 | 2400 | 716.67 | 25.97 | 104.17 | 0.38 |
| 150 | 250 | 50 | 2450 | 1053.06 | 25.44 | 102.04 | 0.38 |
| 250 | 250 | 50 | 2550 | 1686.27 | 24.45 | 98.04 | 0.37 |
| 350 | 250 | 50 | 2650 | 2271.70 | 23.52 | 94.34 | 0.35 |
| 450 | 250 | 50 | 2750 | 2814.55 | 22.67 | 90.91 | 0.34 |
| 550 | 250 | 50 | 2850 | 3319.30 | 21.87 | 87.72 | 0.33 |
| 650 | 250 | 50 | 2950 | 3789.83 | 21.13 | 84.75 | 0.32 |
| 750 | 250 | 50 | 3050 | 4229.51 | 20.44 | 81.97 | 0.31 |

**Table A55.40 UV-visible titration of 0.041 mM 3.3 at 348 nm upon addition of 0 – 1.96 mM DNA in presence 0.2 mM SA in buffer (25 mM MOPS, pH 7.0, 50 mM NaCl), at 25 °C.$[DNA]_{stock}$ = 16 mM, $[SA]_{stock}$ = 1 mM, $[3.3]_{stock}$ = 0.16 mM**

| Cumulative added volume DNA µL | Added volume 3.3 µL | Added volume SA µL | Total volume µL | [DNA] µmol $dm^{-3}$ | [3.3] µmol $dm^{-3}$ | [SA] µmol $dm^{-3}$ | $A_{348}$ nm |
|---|---|---|---|---|---|---|---|
| 0 | 0 | 0 | 1500 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0 | 500 | 0 | 2000 | 0.00 | 41.25 | 0.00 | 0.41 |
| 0 | 500 | 500 | 2500 | 0.00 | 33.00 | 200.00 | 0.43 |
| 5 | 500 | 500 | 2505 | 31.94 | 32.93 | 199.60 | 0.41 |
| 10 | 500 | 500 | 2510 | 63.75 | 32.87 | 199.20 | 0.40 |
| 35 | 500 | 500 | 2535 | 220.91 | 32.54 | 197.24 | 0.38 |
| 50 | 500 | 500 | 2550 | 313.73 | 32.35 | 196.08 | 0.37 |
| 100 | 500 | 500 | 2600 | 615.38 | 31.73 | 192.31 | 0.36 |
| 150 | 500 | 500 | 2650 | 905.66 | 31.13 | 188.68 | 0.35 |
| 200 | 500 | 500 | 2700 | 1185.19 | 30.56 | 185.19 | 0.34 |
| 250 | 500 | 500 | 2750 | 1454.55 | 30.00 | 181.82 | 0.33 |
| 350 | 500 | 500 | 2850 | 1964.91 | 28.95 | 175.44 | 0.32 |

**Table A55.41 UV-visible titration of 0.053 mM 3.4 at 434 nm upon addition of 0 – 2.3 mM DNA in presence 0.1 mM SA in buffer (25 mM MOPS, pH 7.0, 50 mM NaCl), at 25 °C.$[DNA]_{stock}$ = 16 mM, $[SA]_{stock}$ = 1 mM, $[3.4]_{stock}$ = 1.13 mM**

| Cumulative added volume DNA µL | Added volume 3.4 µL | Added volume SA µL | Total volume µL | [DNA] µmol $dm^{-3}$ | [3.4] µmol $dm^{-3}$ | [SA] µmol $dm^{-3}$ | $A_{434}$ nm |
|---|---|---|---|---|---|---|---|
| 0 | 0 | 0 | 2000 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0 | 100 | 0 | 2100 | 0.00 | 53.81 | 0.00 | 0.58 |
| 0 | 100 | 250 | 2350 | 0.00 | 48.09 | 106.38 | 0.54 |
| 5 | 100 | 250 | 2355 | 33.97 | 47.98 | 106.16 | 0.50 |
| 10 | 100 | 250 | 2360 | 67.80 | 47.88 | 105.93 | 0.47 |
| 15 | 100 | 250 | 2365 | 101.48 | 47.78 | 105.71 | 0.45 |
| 20 | 100 | 250 | 2370 | 135.02 | 47.68 | 105.49 | 0.43 |
| 30 | 100 | 250 | 2380 | 201.68 | 47.48 | 105.04 | 0.40 |
| 40 | 100 | 250 | 2390 | 267.78 | 47.28 | 104.60 | 0.37 |
| 50 | 100 | 250 | 2400 | 333.33 | 47.08 | 104.17 | 0.36 |
| 100 | 100 | 250 | 2450 | 653.06 | 46.12 | 102.04 | 0.33 |
| 200 | 100 | 250 | 2550 | 1254.90 | 44.31 | 98.04 | 0.30 |
| 300 | 100 | 250 | 2650 | 1811.32 | 42.64 | 94.34 | 0.29 |
| 400 | 100 | 250 | 2750 | 2327.27 | 41.09 | 90.91 | 0.28 |

**Table A55.42 UV-visible titration of 0.074 mM 3.5 at 444 nm upon addition of 0 – 2.8 mM DNA in presence 0.1 mM SA in buffer (25 mM MOPS, pH 7.0, 50 mM NaCl), at 25 °C.$[DNA]_{stock}$ = 15.9 mM, $[SA]_{stock}$ = 1 mM, $[3.5]_{stock}$ = 1.94 mM**

| Cumulative added volume DNA µL | Added volume 3.5 µL | Added volume SA µL | Total volume µL | [DNA] µmol $dm^{-3}$ | [3.5] µmol $dm^{-3}$ | [SA] µmol $dm^{-3}$ | A 444 nm |
|---|---|---|---|---|---|---|---|
| 0 | 0 | 0 | 2000 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0 | 80 | 0 | 2080 | 0.00 | 74.73 | 0.00 | 0.77 |
| 0 | 80 | 250 | 2330 | 0.00 | 66.71 | 107.30 | 0.68 |
| 2 | 80 | 250 | 2332 | 13.64 | 66.66 | 107.20 | 0.67 |
| 4 | 80 | 250 | 2334 | 27.25 | 66.60 | 107.11 | 0.66 |
| 6 | 80 | 250 | 2336 | 40.84 | 66.54 | 107.02 | 0.65 |
| 8 | 80 | 250 | 2338 | 54.41 | 66.48 | 106.93 | 0.63 |
| 10 | 80 | 250 | 2340 | 67.95 | 66.43 | 106.84 | 0.61 |
| 15 | 80 | 250 | 2345 | 101.71 | 66.29 | 106.61 | 0.58 |
| 20 | 80 | 250 | 2350 | 135.32 | 66.14 | 106.38 | 0.55 |
| 30 | 80 | 250 | 2360 | 202.12 | 65.86 | 105.93 | 0.51 |
| 40 | 80 | 250 | 2370 | 268.35 | 65.59 | 105.49 | 0.48 |
| 50 | 80 | 250 | 2380 | 334.03 | 65.31 | 105.04 | 0.46 |
| 75 | 80 | 250 | 2405 | 495.84 | 64.63 | 103.95 | 0.44 |
| 125 | 80 | 250 | 2455 | 809.57 | 63.32 | 101.83 | 0.41 |
| 200 | 80 | 250 | 2530 | 1256.92 | 61.44 | 98.81 | 0.39 |
| 300 | 80 | 250 | 2630 | 1813.69 | 59.10 | 95.06 | 0.38 |
| 400 | 80 | 250 | 2730 | 2329.67 | 56.94 | 91.58 | 0.36 |
| 500 | 80 | 250 | 2830 | 2809.19 | 54.93 | 88.34 | 0.35 |

**Table A55.43 UV-visible titration of 0.011 mM 3.6 at 440 nm upon addition of 0 – 2.03 mM DNA in presence 0.5 mM SA in buffer (25 mM MOPS, pH 7.0, 50 mM NaCl), at 25 °C.$[DNA]_{stock}$ = 18.2 mM, $[SA]_{stock}$ = 1 mM, $[3.6]_{stock}$ = 0.066 mM**

| Cumulative added volume DNA µL | Added volume 3.6 µL | Added volume SA µL | Total volume µL | [DNA] µmol $dm^{-3}$ | [3.6] µmol $dm^{-3}$ | [SA] µmol $dm^{-3}$ | $A_{440\ nm}$ |
|---|---|---|---|---|---|---|---|
| 0 | 0 | 1000 | 1000 | 0.00 | 0.00 | 500.00 | 0.00 |
| 0 | 400 | 1000 | 2400 | 0.00 | 11.10 | 416.67 | 0.18 |
| 10 | 400 | 1000 | 2410 | 75.64 | 11.05 | 414.94 | 0.17 |
| 20 | 400 | 1000 | 2420 | 150.66 | 11.01 | 413.22 | 0.17 |
| 30 | 400 | 1000 | 2430 | 225.06 | 10.96 | 411.52 | 0.16 |
| 40 | 400 | 1000 | 2440 | 298.85 | 10.92 | 409.84 | 0.15 |
| 50 | 400 | 1000 | 2450 | 372.04 | 10.87 | 408.16 | 0.14 |
| 60 | 400 | 1000 | 2460 | 444.63 | 10.83 | 406.50 | 0.13 |
| 70 | 400 | 1000 | 2470 | 516.64 | 10.79 | 404.86 | 0.13 |
| 100 | 400 | 1000 | 2500 | 729.20 | 10.66 | 400.00 | 0.13 |
| 160 | 400 | 1000 | 2560 | 1139.38 | 10.41 | 390.63 | 0.13 |
| 240 | 400 | 1000 | 2640 | 1657.27 | 10.09 | 378.79 | 0.12 |
| 300 | 400 | 1000 | 2700 | 2025.56 | 9.87 | 370.37 | 0.12 |

**Table A55.44 UV-visible titration of 0.016 mM 3.7 at 340 and 385 nm upon addition of 0 – 0.151 mM DNA in presence 0.1 mM SA in buffer (25 mM MOPS, pH 7.0, 50 mM NaCl), at 25 °C.$[DNA]_{stock}$ = 1mM, $[SA]_{stock}$ = 1.0 mM, $[3.7]_{stock}$ = 0.133 mM**

| Cumulative added volume DNA µL | Added volume 3.7 µL | Added volume SA µL | Total volume µL | [DNA] µmol $dm^{-3}$ | [3.7] µmol $dm^{-3}$ | [SA] µmol $dm^{-3}$ | A 340 nm | A 385 nm |
|---|---|---|---|---|---|---|---|---|
| 0 | 0 | 0 | 1750 | 0.00 | 0.00 | 0.00 | 0.000 | 0.000 |
| 0 | 250 | 0 | 2000 | 0.00 | 16.63 | 0.00 | 0.558 | 0.050 |
| 0 | 250 | 250 | 2250 | 0.00 | 14.78 | 111.11 | 0.568 | 0.077 |
| 5 | 250 | 250 | 2255 | 2.22 | 14.75 | 110.86 | 0.552 | 0.080 |
| 10 | 250 | 250 | 2260 | 4.42 | 14.71 | 110.62 | 0.539 | 0.083 |
| 20 | 250 | 250 | 2270 | 8.81 | 14.65 | 110.13 | 0.525 | 0.104 |
| 50 | 250 | 250 | 2300 | 21.74 | 14.46 | 108.70 | 0.478 | 0.112 |
| 80 | 250 | 250 | 2330 | 34.33 | 14.27 | 107.30 | 0.468 | 0.125 |
| 110 | 250 | 250 | 2360 | 46.61 | 14.09 | 105.93 | 0.452 | 0.128 |
| 150 | 250 | 250 | 2400 | 62.50 | 13.85 | 104.17 | 0.460 | 0.146 |
| 200 | 250 | 250 | 2450 | 81.63 | 13.57 | 102.04 | 0.432 | 0.139 |
| 250 | 250 | 250 | 2500 | 100.00 | 13.30 | 100.00 | 0.422 | 0.140 |
| 300 | 250 | 250 | 2550 | 117.65 | 13.04 | 98.04 | 0.413 | 0.145 |
| 350 | 250 | 250 | 2600 | 134.62 | 12.79 | 96.15 | 0.405 | 0.145 |
| 400 | 250 | 250 | 2650 | 150.94 | 12.55 | 94.34 | 0.396 | 0.143 |

**Table A55.45 UV-visible titration of 0.0099 mM 3.8 at 664 nm upon addition of 0 – 0.19 mM DNA in presence 0.1 mM SA in buffer (25 mM MOPS, pH 7.0, 50 mM NaCl), at 25 °C.$[DNA]_{stock}$ = 1.6 mM, $[SA]_{stock}$ = 1 mM, $[3.8]_{stock}$ = 1.0 mM**

| Cumulative added volume DNA µL | Added volume 3.8 µL | Added volume SA µL | Total volume µL | [DNA] µmol $dm^{-3}$ | [3.8] µmol $dm^{-3}$ | [SA] µmol $dm^{-3}$ | $A_{664}$ nm |
|---|---|---|---|---|---|---|---|
| 0 | 0 | 0 | 2000 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0 | 20 | 0 | 2020 | 0.00 | 9.92 | 0.00 | 0.67 |
| 0 | 20 | 250 | 2270 | 0.00 | 8.83 | 110.13 | 0.58 |
| 5 | 20 | 250 | 2275 | 3.65 | 8.81 | 109.89 | 0.56 |
| 10 | 20 | 250 | 2280 | 7.28 | 8.79 | 109.65 | 0.54 |
| 15 | 20 | 250 | 2285 | 10.90 | 8.77 | 109.41 | 0.53 |
| 25 | 20 | 250 | 2295 | 18.08 | 8.73 | 108.93 | 0.50 |
| 35 | 20 | 250 | 2305 | 25.21 | 8.69 | 108.46 | 0.48 |
| 55 | 20 | 250 | 2325 | 39.27 | 8.62 | 107.53 | 0.46 |
| 100 | 20 | 250 | 2370 | 70.04 | 8.46 | 105.49 | 0.42 |
| 150 | 20 | 250 | 2420 | 102.89 | 8.28 | 103.31 | 0.40 |
| 200 | 20 | 250 | 2470 | 134.41 | 8.11 | 101.21 | 0.39 |
| 300 | 20 | 250 | 2570 | 193.77 | 7.80 | 97.28 | 0.37 |

**Table A55.46 UV-visible titration of 0.019 mM 3.10 at 412 and 432 nm upon addition of 0 – 1.8 mM DNA in presence 0.1 mM SA in buffer (25 mM MOPS, pH 7.0, 50 mM NaCl), at 25 °C.$[DNA]_{stock}$ = 15.7 mM, $[SA]_{stock}$ = 1 mM, $[3.10]_{stock}$ = 3.8 mM**

| Cumulative added volume DNA µL | Added volume 3.10 µL | Added volume SA µL | Total volume µL | [DNA] µmol $dm^{-3}$ | [3.10] µmol $dm^{-3}$ | [SA] µmol $dm^{-3}$ | $A_{412}$ nm | $A_{432}$ nm |
|---|---|---|---|---|---|---|---|---|
| 0 | 0 | 0 | 2000 | 0.00 | 0.00 | 0.00 | 0.000 | 0.000 |
| 0 | 10 | 0 | 2010 | 0.00 | 19.10 | 0.00 | 0.640 | 0.453 |
| 0 | 10 | 250 | 2260 | 0.00 | 16.99 | 110.62 | 0.591 | 0.427 |
| 10 | 10 | 250 | 2270 | 69.16 | 16.92 | 110.13 | 0.568 | 0.450 |
| 20 | 10 | 250 | 2280 | 137.72 | 16.84 | 109.65 | 0.535 | 0.454 |
| 30 | 10 | 250 | 2290 | 205.68 | 16.77 | 109.17 | 0.518 | 0.467 |
| 40 | 10 | 250 | 2300 | 273.04 | 16.70 | 108.70 | 0.505 | 0.479 |
| 50 | 10 | 250 | 2310 | 339.83 | 16.62 | 108.23 | 0.494 | 0.489 |
| 75 | 10 | 250 | 2335 | 504.28 | 16.45 | 107.07 | 0.472 | 0.506 |
| 100 | 10 | 250 | 2360 | 665.25 | 16.27 | 105.93 | 0.457 | 0.517 |
| 150 | 10 | 250 | 2410 | 977.18 | 15.93 | 103.73 | 0.429 | 0.524 |
| 200 | 10 | 250 | 2460 | 1276.42 | 15.61 | 101.63 | 0.409 | 0.524 |
| 250 | 10 | 250 | 2510 | 1563.75 | 15.30 | 99.60 | 0.396 | 0.522 |
| 300 | 10 | 250 | 2560 | 1839.84 | 15.00 | 97.66 | 0.383 | 0.517 |

**Table A55.47 UV-visible titration of 0.024 mM 3.11 at 343 and 375 nm upon addition of 0 – 3.3 mM DNA in presence 0.09 mM SA in buffer (25 mM MOPS, pH 7.0, 50 mM NaCl), at 25 °C.$[DNA]_{stock}$ = 16.0 mM, $[SA]_{stock}$ = 1 mM, $[3.11]_{stock}$ = 0.45 mM**

| Cumulative added volume DNA µL | Added volume 3.11 µL | Added volume SA µL | Total volume µL | [DNA] µmol $dm^{-3}$ | [3.11] µmol $dm^{-3}$ | [SA] µmol $dm^{-3}$ | $A_{343}$ nm | $A_{375}$ nm |
|---|---|---|---|---|---|---|---|---|
| 0 | 0 | 0 | 1750 | 0.00 | 0.00 | 0.00 | 0.000 | 0.104 |
| 0 | 100 | 0 | 1850 | 0.00 | 24.38 | 0.00 | 0.708 | 0.146 |
| 0 | 100 | 250 | 2100 | 0.00 | 21.48 | 119.05 | 0.731 | 0.166 |
| 10 | 100 | 250 | 2110 | 75.75 | 21.37 | 118.48 | 0.684 | 0.199 |
| 40 | 100 | 250 | 2140 | 298.77 | 21.07 | 116.82 | 0.609 | 0.210 |
| 70 | 100 | 250 | 2170 | 515.61 | 20.78 | 115.21 | 0.576 | 0.212 |
| 100 | 100 | 250 | 2200 | 726.55 | 20.50 | 113.64 | 0.545 | 0.219 |
| 130 | 100 | 250 | 2230 | 931.80 | 20.22 | 112.11 | 0.528 | 0.225 |
| 180 | 100 | 250 | 2280 | 1261.89 | 19.78 | 109.65 | 0.512 | 0.226 |
| 260 | 100 | 250 | 2360 | 1760.95 | 19.11 | 105.93 | 0.499 | 0.227 |
| 360 | 100 | 250 | 2460 | 2339.12 | 18.33 | 101.63 | 0.491 | 0.227 |
| 460 | 100 | 250 | 2560 | 2872.13 | 17.62 | 97.66 | 0.485 | 0.230 |
| 560 | 100 | 250 | 2660 | 3365.05 | 16.95 | 93.98 | 0.474 | 0.104 |

**Table A55.48 UV-visible titration of 0.023 mM 3.12 at 367 and 430 nm upon addition of 0 – 1.03 mM DNA in presence 0.09 mM SA in buffer (25 mM MOPS, pH 7.0, 50 mM NaCl), at 25 °C.$[DNA]_{stock}$ = 5 mM, $[SA]_{stock}$ = 1 mM, $[3.12]_{stock}$ = 0.11 mM**

| Cumulative added volume DNA µL | Added volume 3.12 µL | Added volume SA µL | Total volume µL | [DNA] µmol $dm^{-3}$ | [3.12] µmol $dm^{-3}$ | [SA] µmol $dm^{-3}$ | $A_{367}$ nm | $A_{430}$ nm |
|---|---|---|---|---|---|---|---|---|
| 0 | 0 | 0 | 2000 | 0.00 | 0.00 | 0.00 | 0.000 | 0.000 |
| 0 | 500 | 0 | 2500 | 0.00 | 23.60 | 0.00 | 0.635 | 0.140 |
| 0 | 500 | 250 | 2750 | 0.00 | 21.45 | 90.91 | 0.600 | 0.149 |
| 10 | 500 | 250 | 2760 | 18.12 | 21.38 | 90.58 | 0.563 | 0.180 |
| 20 | 500 | 250 | 2770 | 36.10 | 21.30 | 90.25 | 0.532 | 0.207 |
| 50 | 500 | 250 | 2800 | 89.29 | 21.07 | 89.29 | 0.479 | 0.255 |
| 80 | 500 | 250 | 2830 | 141.34 | 20.85 | 88.34 | 0.453 | 0.278 |
| 110 | 500 | 250 | 2860 | 192.31 | 20.63 | 87.41 | 0.438 | 0.291 |
| 140 | 500 | 250 | 2890 | 242.21 | 20.42 | 86.51 | 0.427 | 0.296 |
| 200 | 500 | 250 | 2660 | 375.94 | 20.00 | 93.98 | 0.411 | 0.302 |
| 300 | 500 | 250 | 2760 | 543.48 | 19.34 | 90.58 | 0.394 | 0.304 |
| 400 | 500 | 250 | 2810 | 711.74 | 18.73 | 88.97 | 0.383 | 0.303 |
| 500 | 500 | 250 | 2860 | 874.13 | 18.15 | 87.41 | 0.372 | 0.299 |
| 600 | 500 | 250 | 2910 | 1030.93 | 17.61 | 85.91 | 0.365 | 0.295 |

**Table A55.49 UV-visible titration of 0.063 mM 3.1 at 444 nm upon addition of 0 – 2.3 mM DNA in presence 0.053 mM TF in buffer (25 mM MOPS, pH 7.0, 50 mM NaCl), at 25 °C.$[DNA]_{stock}$ = 14.8 mM, $[TF]_{stock}$ = 0.5 mM, $[3.1]_{stock}$ = 1.3 mM**

| Cumulative added volume DNA µL | Added volume 3.1 µL | Added volume TF µL | Total volume µL | [DNA] µmol $dm^{-3}$ | [3.1] µmol $dm^{-3}$ | [TF] µmol $dm^{-3}$ | $A_{444\ nm}$ | $\Delta A_{444\ nm}$ |
|---|---|---|---|---|---|---|---|---|
| 0 | 0 | 0 | 2000 | 0.00 | 0.00 | 0.00 | 0.00 | 0.000 |
| 0 | 100 | 0 | 2100 | 0.00 | 63.81 | 0.00 | 1.03 | 1.026 |
| 0 | 100 | 250 | 2350 | 0.00 | 57.02 | 53.19 | 1.43 | 0.874 |
| 20 | 100 | 250 | 2370 | 124.89 | 56.54 | 52.74 | 1.36 | 0.805 |
| 40 | 100 | 250 | 2390 | 247.70 | 56.07 | 52.30 | 1.38 | 0.832 |
| 100 | 100 | 250 | 2450 | 604.08 | 54.69 | 51.02 | 1.40 | 0.864 |
| 150 | 100 | 250 | 2500 | 888.00 | 53.60 | 50.00 | 1.38 | 0.858 |
| 200 | 100 | 250 | 2550 | 1160.78 | 52.55 | 49.02 | 1.36 | 0.851 |
| 250 | 100 | 250 | 2600 | 1423.08 | 51.54 | 48.08 | 1.34 | 0.837 |
| 300 | 100 | 250 | 2650 | 1675.47 | 50.57 | 47.17 | 1.31 | 0.821 |
| 350 | 100 | 250 | 2700 | 1918.52 | 49.63 | 46.30 | 1.28 | 0.798 |
| 400 | 100 | 250 | 2750 | 2152.73 | 48.73 | 45.45 | 1.26 | 0.789 |
| 450 | 100 | 250 | 2800 | 2378.57 | 47.86 | 44.64 | 1.24 | 0.774 |

**Table A55.50 UV-visible titration of 0.045 mM 3.2 at 444 nm upon addition of 0 – 1.4 mM DNA in presence 0.053 mM TF in buffer (25 mM MOPS, pH 7.0, 50 mM NaCl), at 25 °C.$[DNA]_{stock}$ = 14.8 mM, $[TF]_{stock}$ = 0.5 mM, $[3.2]_{stock}$ = 0.96 mM**

| Cumulative added volume DNA µL | Added volume 3.2 µL | Added volume TF µL | Total volume µL | [DNA] µmol $dm^{-3}$ | [3.2] µmol $dm^{-3}$ | [TF] µmol $dm^{-3}$ | $A_{444}$ nm | $\Delta A_{444}$ nm |
|---|---|---|---|---|---|---|---|---|
| 0 | 0 | 0 | 2000 | 0.00 | 0.00 | 0.00 | 0.000 | 0.000 |
| 0 | 100 | 0 | 2100 | 0.00 | 45.71 | 0.00 | 0.754 | 0.754 |
| 0 | 100 | 250 | 2350 | 0.00 | 40.85 | 53.19 | 1.261 | 0.706 |
| 10 | 100 | 250 | 2360 | 62.71 | 40.68 | 52.74 | 1.165 | 0.614 |
| 20 | 100 | 250 | 2370 | 124.89 | 40.51 | 52.30 | 1.160 | 0.614 |
| 30 | 100 | 250 | 2380 | 186.55 | 40.34 | 51.02 | 1.166 | 0.633 |
| 40 | 100 | 250 | 2390 | 247.70 | 40.17 | 50.00 | 1.186 | 0.663 |
| 50 | 100 | 250 | 2400 | 308.33 | 40.00 | 49.02 | 1.178 | 0.666 |
| 60 | 100 | 250 | 2410 | 368.46 | 39.83 | 48.08 | 1.177 | 0.675 |
| 100 | 100 | 250 | 2450 | 604.08 | 39.18 | 47.17 | 1.156 | 0.663 |
| 150 | 100 | 250 | 2500 | 888.00 | 38.40 | 46.30 | 1.140 | 0.657 |
| 200 | 100 | 250 | 2550 | 1160.78 | 37.65 | 45.45 | 1.120 | 0.645 |
| 250 | 100 | 250 | 2600 | 1423.08 | 36.92 | 44.64 | 1.100 | 0.633 |

**A55 UV-visible titrations for compounds with biopolymers HA and AA**

| **Table A55.51 Absorbance for 0.019 mM 4.1 at 448 nm upon addition of 0 – 0.35 mM HA, in 25 mM MOPS, pH 7.0, 50 mM NaCl, at 25 °C.$[HA]_{stock}$ = 6.0 mM, $[4.1]_{stock}$ = 0.81 mM** | | | | | |
|---|---|---|---|---|---|
| **Cumulative added volume HA µL** | **Added volume 4.1 µL** | **Total volume µL** | **[HA] µmol $dm^{-3}$** | **[4.1] µmol $dm^{-3}$** | **$A_{448}$ nm** |
| 0 | 0 | 2000 | 0.00 | 0.00 | 0.000 |
| 0 | 50 | 2050 | 0.00 | 19.76 | 0.321 |
| 10 | 50 | 2060 | 29.13 | 19.66 | 0.289 |
| 20 | 50 | 2070 | 57.97 | 19.57 | 0.273 |
| 30 | 50 | 2080 | 86.54 | 19.47 | 0.258 |
| 40 | 50 | 2090 | 114.83 | 19.38 | 0.249 |
| 50 | 50 | 2100 | 142.86 | 19.29 | 0.248 |
| 80 | 50 | 2130 | 225.35 | 19.01 | 0.247 |
| 90 | 50 | 2140 | 252.34 | 18.93 | 0.239 |
| 110 | 50 | 2160 | 305.56 | 18.75 | 0.240 |
| 130 | 50 | 2180 | 357.80 | 18.58 | 0.232 |

**Table A55.52 Absorbance for 0.038 mM 4.2 at 450 nm upon addition of 0 – 0.71 mM HA, in 25 mM MOPS pH 7.0, 50 mM NaCl, at 25 °C.$[HA]_{stock}$ = 6.0 mM, $[4.2]_{stock}$ = 1.1mM**

| Cumulative added volume HA µL | Added volume 4.2 µL | Total volume µL | [HA] µmol $dm^{-3}$ | [4.2] µmol $dm^{-3}$ | $A_{450}$ nm |
|---|---|---|---|---|---|
| 0 | 0 | 2500 | 0.00 | 0.00 | 0.000 |
| 0 | 100 | 2600 | 0.00 | 38.85 | 0.623 |
| 10 | 100 | 2610 | 22.99 | 38.70 | 0.607 |
| 30 | 100 | 2630 | 68.44 | 38.40 | 0.599 |
| 50 | 100 | 2650 | 113.21 | 38.11 | 0.591 |
| 100 | 100 | 2700 | 222.22 | 37.41 | 0.576 |
| 150 | 100 | 2750 | 327.27 | 36.73 | 0.564 |
| 200 | 100 | 2800 | 428.57 | 36.07 | 0.556 |
| 250 | 100 | 2850 | 526.32 | 35.44 | 0.542 |
| 300 | 100 | 2900 | 620.69 | 34.83 | 0.533 |
| 350 | 100 | 2950 | 711.86 | 34.24 | 0.526 |

**Table A55.53 Absorbance for 0.045 mM 4.4 at 434 nm upon addition of 0 – 1.4 mM HA, in 25 mM MOPS, pH 7.0, 50 mM NaCl, at 25 °C.$[HA]_{stock}$ = 6.0 mM, $[4.4]_{stock}$ = 0.96 mM**

| Cumulative added volume HA µL | Added volume 4.4 µL | Total volume µL | [HA] µmol $dm^{-3}$ | [4.4] µmol $dm^{-3}$ | $A_{434}$ nm |
|---|---|---|---|---|---|
| 0 | 0 | 2000 | 0.00 | 0.00 | 0.000 |
| 0 | 100 | 2100 | 0.00 | 45.78 | 0.494 |
| 10 | 100 | 2110 | 28.44 | 45.56 | 0.487 |
| 20 | 100 | 2120 | 56.60 | 45.35 | 0.479 |
| 50 | 100 | 2150 | 139.53 | 44.72 | 0.471 |
| 100 | 100 | 2200 | 272.73 | 43.70 | 0.462 |
| 150 | 100 | 2250 | 400.00 | 42.73 | 0.453 |
| 250 | 100 | 2350 | 638.30 | 40.91 | 0.434 |
| 350 | 100 | 2450 | 857.14 | 39.24 | 0.417 |
| 450 | 100 | 2550 | 1058.82 | 37.70 | 0.401 |
| 550 | 100 | 2650 | 1245.28 | 36.28 | 0.388 |
| 650 | 100 | 2750 | 1418.18 | 34.96 | 0.376 |

**Table A55.54 Absorbance for 0.035 mM 4.5 at 444 nm upon addition of 0 – 0.16 mM HA, in 25 mM MOPS, pH 7.0, 50 mM NaCl, at 25 °C.$[HA]_{stock}$ = 1.0 mM, $[4.5]_{stock}$ = 0.73mM**

| Cumulative added volume HA µL | Added volume 4.5 µL | Total volume µL | [HA] µmol $dm^{-3}$ | [4.5] µmol $dm^{-3}$ | A 444 nm |
|---|---|---|---|---|---|
| 0 | 0 | 2000 | 0.00 | 0.00 | 0.000 |
| 0 | 100 | 2100 | 0.00 | 35.00 | 0.379 |
| 25 | 100 | 2125 | 11.76 | 34.59 | 0.373 |
| 50 | 100 | 2150 | 23.26 | 34.19 | 0.369 |
| 75 | 100 | 2175 | 34.48 | 33.79 | 0.365 |
| 100 | 100 | 2200 | 45.45 | 33.41 | 0.361 |
| 150 | 100 | 2250 | 66.67 | 32.67 | 0.353 |
| 200 | 100 | 2300 | 86.96 | 31.96 | 0.345 |
| 250 | 100 | 2350 | 106.38 | 31.28 | 0.339 |
| 300 | 100 | 2400 | 125.00 | 30.63 | 0.332 |
| 350 | 100 | 2450 | 142.86 | 30.00 | 0.326 |
| 400 | 100 | 2500 | 160.00 | 29.40 | 0.322 |

| **Table A55.55 Absorbance for 0.021 mM 4.7 at 339 nm upon addition of 0 – 1.8 mM HA, in 25 mM MOPS pH 7.0, 50 mM NaCl, at 25 °C.$[HA]_{stock}$ = 14.1 mM, $[4.7]_{stock}$ = 1.09 mM** | | | | | |
|---|---|---|---|---|---|
| **Cumulative added volume HA µL** | **Added volume 4.7 µL** | **Total volume µL** | **[HA] µmol $dm^{-3}$** | **[4.7] µmol $dm^{-3}$** | **$A_{339}$ nm** |
| 0 | 0 | 2000 | 0.00 | 0.00 | 0.046 |
| 0 | 40 | 2040 | 0.00 | 21.37 | 0.727 |
| 2 | 40 | 2042 | 34.47 | 21.35 | 0.706 |
| 12 | 40 | 2052 | 68.78 | 21.25 | 0.696 |
| 20 | 40 | 2060 | 136.89 | 21.17 | 0.683 |
| 30 | 40 | 2070 | 204.35 | 21.06 | 0.676 |
| 40 | 40 | 2080 | 271.15 | 20.96 | 0.665 |
| 60 | 40 | 2100 | 402.86 | 20.76 | 0.651 |
| 100 | 40 | 2140 | 658.88 | 20.37 | 0.631 |
| 150 | 40 | 2190 | 965.75 | 19.91 | 0.595 |
| 200 | 40 | 2240 | 1258.93 | 19.46 | 0.578 |
| 250 | 40 | 2290 | 1539.30 | 19.04 | 0.564 |
| 300 | 40 | 2340 | 1807.69 | 18.63 | 0.551 |

| **Table A55.56 Absorbance for 0.009 mM 4.8 at 665 nm upon addition of 0 – 2.7 mM HA, in 25 mM MOPS pH 7.0, 50 mM NaCl, at 25 °C.$[HA]_{stock}$ = 14 mM, $[4.8]_{stock}$ = 0.55 mM** | | | | | |
|---|---|---|---|---|---|
| **Cumulative added volume HA µL** | **Added volume 4.8 µL** | **Total volume µL** | **[HA] µmol $dm^{-3}$** | **[4.8] µmol $dm^{-3}$** | **$A_{665\ nm}$** |
| 0 | 0 | 2000 | 0.00 | 0.00 | 0.000 |
| 0 | 35 | 2035 | 0.00 | 9.49 | 0.637 |
| 5 | 35 | 2040 | 34.31 | 9.47 | 0.629 |
| 10 | 35 | 2045 | 68.46 | 9.45 | 0.624 |
| 20 | 35 | 2055 | 136.25 | 9.40 | 0.619 |
| 40 | 35 | 2075 | 269.88 | 9.31 | 0.609 |
| 80 | 35 | 2115 | 529.55 | 9.13 | 0.598 |
| 140 | 35 | 2175 | 901.15 | 8.88 | 0.585 |
| 220 | 35 | 2255 | 1365.85 | 8.57 | 0.566 |
| 320 | 35 | 2355 | 1902.34 | 8.20 | 0.544 |
| 420 | 35 | 2455 | 2395.11 | 7.87 | 0.523 |
| 500 | 35 | 2535 | 2761.34 | 7.62 | 0.509 |

| **Table A55.57 Absorbance for 0.026 mM 4.10 at 411 nm upon addition of 0 – 1.5 mM HA, in 25 mM MOPS, pH 7.0, 50 mM NaCl, at 25 °C.$[HA]_{stock}$ = 6.0 mM, $[4.10]_{stock}$ = 5.2 mM, 10% DMSO** | | | | | |
|---|---|---|---|---|---|
| **Cumulative added volume HA µL** | **Added volume 4.10 µL** | **Total volume µL** | **[HA] µmol $dm^{-3}$** | **[4.10] µmol $dm^{-3}$** | **$A_{411\ nm}$** |
| 0 | 0 | 2000 | 0.00 | 0.00 | 0.000 |
| 0 | 10 | 2010 | 0.00 | 26.12 | 0.679 |
| 10 | 10 | 2020 | 29.70 | 25.99 | 0.665 |
| 40 | 10 | 2050 | 117.07 | 25.61 | 0.655 |
| 90 | 10 | 2100 | 257.14 | 25.00 | 0.642 |
| 150 | 10 | 2160 | 416.67 | 24.31 | 0.623 |
| 200 | 10 | 2210 | 542.99 | 23.76 | 0.612 |
| 250 | 10 | 2260 | 663.72 | 23.23 | 0.598 |
| 350 | 10 | 2360 | 889.83 | 22.25 | 0.570 |
| 450 | 10 | 2460 | 1097.56 | 21.34 | 0.550 |
| 600 | 10 | 2610 | 1379.31 | 20.11 | 0.512 |
| 700 | 10 | 2710 | 1549.82 | 19.37 | 0.488 |

**Table A55.58 Absorbance for 0.024 mM 4.11 at 345 nm upon addition of 0 – 1.1 mM HA, in 25 mM MOPS, pH 7.0, 50 mM NaCl, at 25 °C.$[HA]_{stock}$ = 6.0 mM, $[4.11]_{stock}$ = 0.27 mM**

| Cumulative added volume HA µL | Added volume 4.11 µL | Total volume µL | [HA] µmol $dm^{-3}$ | [4.11 µmol $dm^{-3}$ | A $_{345}$ nm |
|---|---|---|---|---|---|
| 0 | 0 | 2000 | 0.00 | 0.00 | 0.000 |
| 0 | 200 | 2200 | 0.00 | 24.73 | 0.653 |
| 50 | 200 | 2250 | 133.33 | 24.18 | 0.631 |
| 100 | 200 | 2300 | 260.87 | 23.65 | 0.618 |
| 150 | 200 | 2350 | 382.98 | 23.15 | 0.599 |
| 200 | 200 | 2400 | 500.00 | 22.67 | 0.583 |
| 250 | 200 | 2450 | 612.24 | 22.20 | 0.570 |
| 300 | 200 | 2500 | 720.00 | 21.76 | 0.556 |
| 350 | 200 | 2550 | 823.53 | 21.33 | 0.542 |
| 400 | 200 | 2600 | 923.08 | 20.92 | 0.534 |
| 450 | 200 | 2650 | 1018.87 | 20.53 | 0.522 |
| 500 | 200 | 2700 | 1111.11 | 20.15 | 0.511 |

| **Table A55.59 Absorbance for 0.034 mM 4.12 at 367 nm upon addition of 0 – 0.9 mM HA, in 25 mM MOPS, pH 7.0, 50 mM NaCl, at 25 °C.$[HA]_{stock}$ = 4.3 mM, $[4.12]_{stock}$ = 1.3 mM** | | | | | |
|---|---|---|---|---|---|
| **Cumulative added volume HA µL** | **Added volume 4.12 µL** | **Total volume µL** | **[HA] µmol $dm^{-3}$** | **[4.12 µmol $dm^{-3}$** | **$A_{367}$ nm** |
| 0 | 0 | 2000 | 0.00 | 0.00 | 0.000 |
| 5 | 55 | 2060 | 10.53 | 34.71 | 0.957 |
| 15 | 55 | 2070 | 31.45 | 34.54 | 0.946 |
| 25 | 55 | 2080 | 52.16 | 34.38 | 0.939 |
| 35 | 55 | 2090 | 72.68 | 34.21 | 0.937 |
| 55 | 55 | 2110 | 113.13 | 33.89 | 0.923 |
| 90 | 55 | 2145 | 182.10 | 33.33 | 0.909 |
| 150 | 55 | 2205 | 295.24 | 32.43 | 0.877 |
| 200 | 55 | 2255 | 384.92 | 31.71 | 0.860 |
| 250 | 55 | 2305 | 470.72 | 31.02 | 0.844 |
| 300 | 55 | 2355 | 552.87 | 30.36 | 0.821 |
| 350 | 55 | 2405 | 631.60 | 29.73 | 0.806 |
| 450 | 55 | 2505 | 779.64 | 28.54 | 0.772 |
| 550 | 55 | 2605 | 916.31 | 27.45 | 0.748 |

**A55 UV-visible titrations for all compounds with DNA in presence of HA.**

**Table A55.60 UV-visible titration of 0.045 mM 4.1 at 443 nm upon addition of 0 – 1.2 mM DNA in presence 0.3 mM HA in buffer (25 mM MOPS, pH 7.0, 50 mM NaCl), at 25 °C.$[DNA]_{stock}$ = 15.7 mM, $[HA]_{stock}$ = 3.3 mM, $[4.1]_{stock}$ = 1.35 Mm**

| Cumulative added volume DNA µL | Added volume 4.1 µL | Added volume HA µL | Total volume µL | [DNA] µmol $dm^{-3}$ | [4.1] µmol $dm^{-3}$ | [HA] µmol $dm^{-3}$ | $A_{443}$ nm |
|---|---|---|---|---|---|---|---|
| 0 | 0 | 0 | 2000 | 0.00 | 0.00 | 0.00 | 0.000 |
| 0 | 70 | 0 | 2070 | 0.00 | 45.65 | 0.00 | 0.732 |
| 0 | 70 | 250 | 2320 | 0.00 | 40.73 | 355.60 | 0.595 |
| 10 | 70 | 250 | 2330 | 67.38 | 40.56 | 354.08 | 0.544 |
| 20 | 70 | 250 | 2340 | 134.19 | 40.38 | 352.56 | 0.558 |
| 30 | 70 | 250 | 2350 | 200.43 | 40.21 | 351.06 | 0.573 |
| 40 | 70 | 250 | 2360 | 266.10 | 40.04 | 349.58 | 0.586 |
| 50 | 70 | 250 | 2370 | 331.22 | 39.87 | 348.10 | 0.597 |
| 60 | 70 | 250 | 2380 | 395.80 | 39.71 | 346.64 | 0.601 |
| 70 | 70 | 250 | 2390 | 459.83 | 39.54 | 345.19 | 0.598 |
| 100 | 70 | 250 | 2420 | 648.76 | 39.05 | 340.91 | 0.596 |
| 150 | 70 | 250 | 2470 | 953.44 | 38.26 | 334.01 | 0.591 |
| 200 | 70 | 250 | 2520 | 1246.03 | 37.50 | 327.38 | 0.581 |

**Table A55.61 UV-visible titration of 0.045 mM 4.2 at 451 nm upon addition of 0 – 1.5 mM DNA in presence 0.3 mM HA in buffer (25 mM MOPS, pH 7.0, 50 mM NaCl), at 25 °C.$[DNA]_{stock}$ = 15.7 mM, $[HA]_{stock}$ = 3.3 mM, $[4.2]_{stock}$ = 0.95 mM**

| Cumulative added volume DNA µL | Added volume 4.2 µL | Added volume HA µL | Total volume µL | [DNA] µmol $dm^{-3}$ | [4.2] µmol $dm^{-3}$ | [HA] µmol $dm^{-3}$ | $A_{451\ nm}$ |
|---|---|---|---|---|---|---|---|
| 0 | 0 | 0 | 2000 | 0.00 | 0.00 | 0.00 | 0.000 |
| 0 | 100 | 0 | 2100 | 0.00 | 45.29 | 0.00 | 0.748 |
| 0 | 100 | 250 | 2350 | 0.00 | 40.47 | 351.06 | 0.663 |
| 10 | 100 | 250 | 2360 | 66.53 | 40.30 | 349.58 | 0.638 |
| 20 | 100 | 250 | 2370 | 132.49 | 40.13 | 348.10 | 0.551 |
| 30 | 100 | 250 | 2380 | 197.90 | 39.96 | 346.64 | 0.556 |
| 40 | 100 | 250 | 2390 | 262.76 | 39.79 | 345.19 | 0.563 |
| 50 | 100 | 250 | 2400 | 327.08 | 39.63 | 343.75 | 0.567 |
| 100 | 100 | 250 | 2450 | 640.82 | 38.82 | 336.73 | 0.566 |
| 150 | 100 | 250 | 2500 | 942.00 | 38.04 | 330.00 | 0.563 |
| 200 | 100 | 250 | 2550 | 1231.37 | 37.29 | 323.53 | 0.559 |
| 250 | 100 | 250 | 2600 | 1509.62 | 36.58 | 317.31 | 0.551 |

**Table A55.62 UV-visible titration of 0.055 mM 4.4 at 434 nm upon addition of 0 – 1.23 mM DNA in presence 0.1 mM HA in buffer (25 mM MOPS, pH 7.0, 50 mM NaCl), at 25 °C.$[DNA]_{stock}$ = 15.7 mM, $[HA]_{stock}$ = 3.3 mM, $[4.4]_{stock}$ = 1.17 mM**

| Cumulative added volume DNA µL | Added volume 4.4 µL | Added volume HA µL | Total volume µL | [DNA] µmol $dm^{-3}$ | [4.4] µmol $dm^{-3}$ | [HA] µmol $dm^{-3}$ | $A_{434\ nm}$ |
|---|---|---|---|---|---|---|---|
| 0 | 0 | 0 | 2000 | 0.00 | 0.00 | 0.00 | 0.000 |
| 0 | 100 | 0 | 2100 | 0.00 | 55.71 | 0.00 | 0.607 |
| 0 | 100 | 250 | 2350 | 0.00 | 49.79 | 351.06 | 0.549 |
| 5 | 100 | 250 | 2355 | 33.33 | 49.68 | 350.32 | 0.509 |
| 10 | 100 | 250 | 2360 | 66.53 | 49.58 | 349.58 | 0.479 |
| 20 | 100 | 250 | 2370 | 132.49 | 49.37 | 348.10 | 0.431 |
| 30 | 100 | 250 | 2380 | 197.90 | 49.16 | 346.64 | 0.398 |
| 40 | 100 | 250 | 2390 | 262.76 | 48.95 | 345.19 | 0.377 |
| 50 | 100 | 250 | 2400 | 327.08 | 48.75 | 343.75 | 0.362 |
| 100 | 100 | 250 | 2450 | 640.82 | 47.76 | 336.73 | 0.325 |
| 150 | 100 | 250 | 2500 | 942.00 | 46.80 | 330.00 | 0.311 |
| 200 | 100 | 250 | 2550 | 1231.37 | 45.88 | 323.53 | 0.303 |

**Table A55.63 UV-visible titration of 0.063 mM 4.5 at 444 nm upon addition of 0 – 1.7 mM DNA in presence 0.2 mM HA in buffer (25 mM MOPS, pH 7.0, 50 mM NaCl), at 25 °C.$[DNA]_{stock}$ = 15.7 mM, $[HA]_{stock}$ = 2 mM, $[4.5]_{stock}$ = 0.76 mM**

| Cumulative added volume DNA µL | Added volume 4.5 µL | Added volume HA µL | Total volume µL | [DNA] µmol $dm^{-3}$ | [4.5] µmol $dm^{-3}$ | [HA] µmol $dm^{-3}$ | $A_{444\ nm}$ |
|---|---|---|---|---|---|---|---|
| 0 | 0 | 0 | 2000 | 0.00 | 0.00 | 0.00 | 0.000 |
| 0 | 100 | 0 | 2100 | 0.00 | 63.33 | 0.00 | 0.389 |
| 0 | 100 | 250 | 2350 | 0.00 | 56.60 | 212.77 | 0.349 |
| 10 | 100 | 250 | 2360 | 66.53 | 56.36 | 211.86 | 0.322 |
| 20 | 100 | 250 | 2370 | 132.49 | 56.12 | 210.97 | 0.310 |
| 30 | 100 | 250 | 2380 | 197.90 | 55.88 | 210.08 | 0.302 |
| 40 | 100 | 250 | 2390 | 262.76 | 55.65 | 209.21 | 0.292 |
| 50 | 100 | 250 | 2400 | 327.08 | 55.42 | 208.33 | 0.289 |
| 100 | 100 | 250 | 2450 | 640.82 | 54.29 | 204.08 | 0.278 |
| 150 | 100 | 250 | 2500 | 942.00 | 53.20 | 200.00 | 0.268 |
| 200 | 100 | 250 | 2550 | 1231.37 | 52.16 | 196.08 | 0.263 |
| 250 | 100 | 250 | 2600 | 1509.62 | 51.15 | 192.31 | 0.255 |
| 300 | 100 | 250 | 2650 | 1777.36 | 50.19 | 188.68 | 0.250 |

**Table A55.64 UV-visible titration of 0.018 mM 4.7 at 339 nm upon addition of 0 – 2.09 mM DNA in presence 0.1 mM HA in buffer (25 mM MOPS, pH 7.0, 50 mM NaCl), at 25 °C.$[DNA]_{stock}$ = 15.7 mM, $[HA]_{stock}$ = 1 mM, $[4.7]_{stock}$ = 1.4 Mm**

| Cumulative added volume DNA µL | Added volume 4.7 µL | Added volume HA µL | Total volume µL | [DNA] µmol $dm^{-3}$ | [4.7] µmol $dm^{-3}$ | [HA] µmol $dm^{-3}$ | $A_{339\ nm}$ |
|---|---|---|---|---|---|---|---|
| 0 | 0 | 0 | 2000 | 0.00 | 0.00 | 0.00 | 0.000 |
| 0 | 25 | 0 | 2025 | 0.00 | 18.27 | 0.00 | 0.621 |
| 10 | 25 | 250 | 2285 | 68.71 | 16.19 | 109.41 | 0.542 |
| 20 | 25 | 250 | 2295 | 136.82 | 16.12 | 108.93 | 0.326 |
| 30 | 25 | 250 | 2305 | 204.34 | 16.05 | 108.46 | 0.353 |
| 40 | 25 | 250 | 2315 | 271.27 | 15.98 | 107.99 | 0.377 |
| 50 | 25 | 250 | 2325 | 337.63 | 15.91 | 107.53 | 0.374 |
| 100 | 25 | 250 | 2375 | 661.05 | 15.58 | 105.26 | 0.379 |
| 150 | 25 | 250 | 2425 | 971.13 | 15.26 | 103.09 | 0.384 |
| 200 | 25 | 250 | 2475 | 1268.69 | 14.95 | 101.01 | 0.393 |
| 250 | 25 | 250 | 2525 | 1554.46 | 14.65 | 99.01 | 0.387 |
| 300 | 25 | 250 | 2575 | 1829.13 | 14.37 | 97.09 | 0.382 |
| 350 | 25 | 250 | 2625 | 2093.33 | 14.10 | 95.24 | 0.383 |

**Table A55 65 UV-visible titration of 0.012 mM 4.8 at 665 nm upon addition of 0 – 1.5 mM DNA in presence 0.1 mM HA in buffer (25 mM MOPS, pH 7.0, 50 mM NaCl and 10% DMSO), at 25 °C.$[DNA]_{stock}$ = 15.9 mM, $[HA]_{stock}$ = 3.3 mM, $[4.8]_{stock}$ = 1 mM**

| Cumulative added volume DNA µL | Added volume 4.8 µL | Added volume HA µL | Total volume µL | [DNA] µmol $dm^{-3}$ | [4.8] µmol $dm^{-3}$ | [HA] µmol $dm^{-3}$ | $A_{665\ nm}$ |
|---|---|---|---|---|---|---|---|
| 0 | 0 | 0 | 2000 | 0.00 | 0.00 | 0.0 | 0.000 |
| 0 | 25 | 0 | 2025 | 0.00 | 12.35 | 0.00 | 0.869 |
| 0 | 25 | 250 | 2275 | 0.00 | 10.99 | 331.87 | 0.774 |
| 5 | 25 | 250 | 2280 | 34.87 | 10.96 | 331.14 | 0.689 |
| 10 | 25 | 250 | 2285 | 69.58 | 10.94 | 330.42 | 0.645 |
| 15 | 25 | 250 | 2290 | 104.15 | 10.92 | 329.69 | 0.623 |
| 20 | 25 | 250 | 2295 | 138.56 | 10.89 | 328.98 | 0.610 |
| 30 | 25 | 250 | 2305 | 206.94 | 10.85 | 327.55 | 0.596 |
| 50 | 25 | 250 | 2325 | 341.94 | 10.75 | 324.73 | 0.584 |
| 100 | 25 | 250 | 2375 | 669.47 | 10.53 | 317.89 | 0.572 |
| 150 | 25 | 250 | 2425 | 983.51 | 10.31 | 311.34 | 0.566 |
| 200 | 25 | 250 | 2475 | 1284.85 | 10.10 | 305.05 | 0.557 |
| 250 | 25 | 250 | 2525 | 1574.26 | 9.90 | 299.01 | 0.547 |

**Table A55.66 UV-visible titration of 0.026 mM 4.10 at 411 and 432 nm upon addition of 0 – 1.45 mM DNA in presence 0.1 mM HA in buffer (25 mM MOPS, pH 7.0, 50 mM NaCl), at 25 °C.$[DNA]_{stock}$ = 14.8 mM, $[HA]_{stock}$ = 1.1 mM, $[4.10]_{stock}$ = 1.09 mM**

| Cumulative added volume DNA µL | Added volume 4.10 µL | Added volume HA µL | Total volume µL | [DNA] µmol $dm^{-3}$ | [4.10] µmol $dm^{-3}$ | [HA] µmol $dm^{-3}$ | $A_{411}$ nm | $A_{432}$ nm |
|---|---|---|---|---|---|---|---|---|
| 0 | 0 | 0 | 2000 | 0.0 | 0.0 | 0.0 | 0.000 | 0.000 |
| 0 | 50 | 0 | 2050 | 0.0 | 26.6 | 0.0 | 0.696 | 0.494 |
| 0 | 50 | 250 | 2300 | 0.0 | 23.7 | 119.6 | 0.622 | 0.445 |
| 10 | 50 | 250 | 2310 | 64.1 | 23.6 | 119.0 | 0.587 | 0.472 |
| 20 | 50 | 250 | 2320 | 127.6 | 23.5 | 118.5 | 0.566 | 0.497 |
| 20 | 50 | 250 | 2320 | 127.6 | 23.5 | 118.5 | 0.544 | 0.511 |
| 30 | 50 | 250 | 2330 | 190.6 | 23.4 | 118.0 | 0.524 | 0.520 |
| 40 | 50 | 250 | 2340 | 253.0 | 23.3 | 117.5 | 0.510 | 0.530 |
| 50 | 50 | 250 | 2350 | 314.9 | 23.2 | 117.0 | 0.461 | 0.557 |
| 100 | 50 | 250 | 2400 | 616.7 | 22.7 | 114.6 | 0.433 | 0.566 |
| 150 | 50 | 250 | 2450 | 906.1 | 22.2 | 112.2 | 0.412 | 0.564 |
| 200 | 50 | 250 | 2500 | 1184.0 | 21.8 | 110.0 | 0.394 | 0.559 |
| 250 | 50 | 250 | 2550 | 1451.0 | 21.4 | 107.8 | 0.379 | 0.552 |

**Table A55.67 UV-visible titration of 0.063 mM 4.11 at 343 nm upon addition of 0 – 1.9 mM DNA in presence 0.2 mM HA in buffer (25 mM MOPS, pH 7.0, 50 mM NaCl), at 25 °C.$[DNA]_{stock}$ = 15.7 mM, $[HA]_{stock}$ = 1.1 mM, $[4.11]_{stock}$ = 0.43 mM**

| Cumulative added volume DNA µL | Added volume 4.11 µL | Added volume HA µL | Total volume µL | [DNA] µmol $dm^{-3}$ | [4.11] µmol $dm^{-3}$ | [HA] µmol $dm^{-3}$ | $A_{343}$ nm | $A_{375}$ nm |
|---|---|---|---|---|---|---|---|---|
| 0 | 0 | 0 | 2000 | 0.00 | 0.00 | 0.00 | 0.000 | 0.000 |
| 0 | 100 | 0 | 2100 | 0.00 | 20.52 | 0.00 | 0.554 | 0.062 |
| 0 | 100 | 250 | 2350 | 0.00 | 18.34 | 117.02 | 0.498 | 0.048 |
| 25 | 100 | 250 | 2375 | 155.79 | 18.14 | 115.79 | 0.413 | 0.080 |
| 50 | 100 | 250 | 2400 | 308.33 | 17.95 | 114.58 | 0.379 | 0.094 |
| 75 | 100 | 250 | 2425 | 457.73 | 17.77 | 113.40 | 0.357 | 0.101 |
| 100 | 100 | 250 | 2450 | 604.08 | 17.59 | 112.24 | 0.346 | 0.103 |
| 125 | 100 | 250 | 2475 | 747.47 | 17.41 | 111.11 | 0.329 | 0.104 |
| 150 | 100 | 250 | 2500 | 888.00 | 17.24 | 110.00 | 0.330 | 0.107 |
| 200 | 100 | 250 | 2550 | 1160.78 | 16.90 | 107.84 | 0.322 | 0.110 |
| 250 | 100 | 250 | 2600 | 1423.08 | 16.57 | 105.77 | 0.317 | 0.109 |
| 300 | 100 | 250 | 2650 | 1675.47 | 16.26 | 103.77 | 0.309 | 0.109 |
| 350 | 100 | 250 | 2700 | 1918.52 | 15.96 | 101.85 | 0.304 | 0.107 |

**Table A55.68 UV-visible titration of 0.021 mM 4.12 at 367 and 430 nm upon addition of 0 – 1.3 mM DNA in presence 0.1 mM HA in buffer (25 mM MOPS, pH 7.0, 50 mM NaCl), at 25 °C.$[DNA]_{stock}$ = 15.7 mM, $[HA]_{stock}$ = 1.1 mM, $[4.12]_{stock}$ = 0.105 mM**

| Cumulative added volume DNA µL | Added volume 4.12 µL | Added volume HA µL | Total volume µL | [DNA] µmol $dm^{-3}$ | [4.12] µmol $dm^{-3}$ | [HA] µmol $dm^{-3}$ | $A_{367}$ nm | $A_{432}$ nm |
|---|---|---|---|---|---|---|---|---|
| 0 | 0 | 0 | 2000 | 0.00 | 0.00 | 0.00 | 0.000 | 0.000 |
| 0 | 500 | 0 | 2500 | 0.00 | 21.02 | 0.00 | 0.571 | 0.154 |
| 0 | 500 | 250 | 2750 | 0.00 | 19.11 | 100.00 | 0.509 | 0.147 |
| 10 | 500 | 250 | 2760 | 56.88 | 19.04 | 99.64 | 0.384 | 0.231 |
| 20 | 500 | 250 | 2770 | 113.36 | 18.97 | 99.28 | 0.361 | 0.252 |
| 30 | 500 | 250 | 2780 | 169.42 | 18.90 | 98.92 | 0.352 | 0.261 |
| 40 | 500 | 250 | 2790 | 225.09 | 18.84 | 98.57 | 0.345 | 0.267 |
| 50 | 500 | 250 | 2800 | 280.36 | 18.77 | 98.21 | 0.341 | 0.269 |
| 60 | 500 | 250 | 2810 | 335.23 | 18.70 | 97.86 | 0.339 | 0.274 |
| 100 | 500 | 250 | 2850 | 550.88 | 18.44 | 96.49 | 0.329 | 0.276 |
| 150 | 500 | 250 | 2900 | 812.07 | 18.12 | 94.83 | 0.321 | 0.273 |
| 200 | 500 | 250 | 2950 | 1064.41 | 17.82 | 93.22 | 0.314 | 0.271 |
| 250 | 500 | 250 | 3000 | 1308.33 | 17.52 | 91.67 | 0.310 | 0.270 |

**A55 UV-visible titrations for all compounds with AA**

| **Table A55.69 Absorbance for 0.021 mM 4.1 at 445 nm upon addition of 0 – 1.3 mM AA, in 25 mM MOPS pH 7.0, 50 mM NaCl and 10% DMSO, at 25 °C.$[AA]_{stock}$ = 5.0 mM, $[4.1]_{stock}$ = 0.88 mM** | | | | | |
|---|---|---|---|---|---|
| **Cumulative added volume AA µL** | **Added volume 4.1 µL** | **Total volume µL** | **[AA] µmol $dm^{-3}$** | **[4.1] µmol $dm^{-3}$** | **$A_{445\ nm}$** |
| 0 | 0 | 2000 | 0.00 | 0.00 | 0.000 |
| 0 | 50 | 2050 | 0.00 | 21.66 | 0.346 |
| 5 | 50 | 2055 | 12.17 | 21.61 | 0.272 |
| 10 | 50 | 2060 | 24.27 | 21.55 | 0.240 |
| 20 | 50 | 2070 | 48.31 | 21.45 | 0.225 |
| 30 | 50 | 2080 | 72.12 | 21.35 | 0.216 |
| 50 | 50 | 2100 | 119.05 | 21.14 | 0.210 |
| 110 | 50 | 2160 | 254.63 | 20.56 | 0.195 |
| 150 | 50 | 2200 | 340.91 | 20.18 | 0.194 |
| 250 | 50 | 2300 | 543.48 | 19.30 | 0.181 |
| 350 | 50 | 2400 | 729.17 | 18.50 | 0.178 |
| 450 | 50 | 2500 | 900.00 | 17.76 | 0.169 |
| 550 | 50 | 2600 | 1057.69 | 17.08 | 0.159 |
| 650 | 50 | 2700 | 1203.70 | 16.44 | 0.157 |
| 750 | 50 | 2800 | 1339.29 | 15.86 | 0.150 |

**Table A55.70 Absorbance for 0.028 mM 4.2 at 450 nm upon addition of 0 – 1.24 mM AA, in 25 mM MOPS pH 7.0, 50 mM NaCl and 10% DMSO, at 25 °C.$[AA]_{stock}$ = 5.0 mM, $[4.2]_{stock}$ = 1.15 mM**

| Cumulative added volume AA µL | Added volume 4.2 µL | Total volume µL | [AA] µmol $dm^{-3}$ | [4.2] µmol $dm^{-3}$ | $A_{450}$ nm |
|---|---|---|---|---|---|
| 0 | 0 | 2000 | 0.00 | 0.00 | 0.000 |
| 0 | 50 | 2050 | 0.00 | 28.05 | 0.465 |
| 10 | 50 | 2060 | 24.27 | 27.91 | 0.423 |
| 20 | 50 | 2070 | 48.31 | 27.78 | 0.395 |
| 40 | 50 | 2090 | 95.69 | 27.51 | 0.372 |
| 60 | 50 | 2110 | 142.18 | 27.25 | 0.347 |
| 80 | 50 | 2130 | 187.79 | 27.00 | 0.335 |
| 120 | 50 | 2170 | 276.50 | 26.50 | 0.317 |
| 180 | 50 | 2230 | 403.59 | 25.78 | 0.296 |
| 280 | 50 | 2330 | 600.86 | 24.68 | 0.286 |
| 380 | 50 | 2430 | 781.89 | 23.66 | 0.263 |
| 480 | 50 | 2530 | 948.62 | 22.73 | 0.256 |
| 580 | 50 | 2630 | 1102.66 | 21.86 | 0.242 |
| 680 | 50 | 2730 | 1245.42 | 21.06 | 0.232 |

**Table A55.71 Absorbance for 0.056 mM 4.4 at 435 nm upon addition of 0 – 1.2 mM AA, in 25 mM MOPS pH 7.0, 50 mM NaCl and 10% DMSO, at 25 °C.$[AA]_{stock}$ = 5.0 mM, $[4.4]_{stock}$ = 1.1 mM**

| Cumulative added volume AA µL | Added volume 4.4 µL | Total volume µL | [AA] µmol $dm^{-3}$ | [4.4] µmol $dm^{-3}$ | $A_{435}$ nm |
|---|---|---|---|---|---|
| 0 | 0 | 2000 | 0.00 | 0.00 | 0.000 |
| 0 | 100 | 2100 | 0.00 | 56.24 | 0.607 |
| 15 | 100 | 2115 | 35.46 | 55.84 | 0.592 |
| 40 | 100 | 2140 | 93.46 | 55.19 | 0.592 |
| 100 | 100 | 2200 | 227.27 | 53.68 | 0.574 |
| 200 | 100 | 2300 | 434.78 | 51.35 | 0.543 |
| 300 | 100 | 2400 | 625.00 | 49.21 | 0.536 |
| 400 | 100 | 2500 | 800.00 | 47.24 | 0.517 |
| 500 | 100 | 2600 | 961.54 | 45.42 | 0.508 |
| 600 | 100 | 2700 | 1111.11 | 43.74 | 0.481 |
| 700 | 100 | 2800 | 1250.00 | 42.18 | 0.476 |

| **Table A55.72 Absorbance for 0.064 mM 4.5 at 444 nm upon addition of 0 – 1.5 mM AA, in 25 mM MOPS pH 7.0, 50 mM at 25 °C.$[AA]_{stock}$ = 1.0 mM, $[4.4]_{stock}$ = 0.7 mM** | | | | | |
|---|---|---|---|---|---|
| **Cumulative added volume AA µL** | **Added volume 4.5 µL** | **Total volume µL** | **[AA] µmol $dm^{-3}$** | **[4.5] µmol $dm^{-3}$** | **$A_{444\ nm}$** |
| 0 | 0 | 2000 | 0.00 | 0.00 | 0.000 |
| 0 | 200 | 2200 | 0.00 | 64.09 | 0.692 |
| 10 | 200 | 2210 | 4.52 | 63.80 | 0.697 |
| 20 | 200 | 2220 | 9.01 | 63.51 | 0.693 |
| 50 | 200 | 2250 | 22.22 | 62.67 | 0.684 |
| 100 | 200 | 2300 | 43.48 | 61.30 | 0.670 |
| 150 | 200 | 2350 | 63.83 | 60.00 | 0.658 |
| 200 | 200 | 2400 | 83.33 | 58.75 | 0.646 |
| 250 | 200 | 2450 | 102.04 | 57.55 | 0.632 |
| 300 | 200 | 2500 | 120.00 | 56.40 | 0.620 |
| 350 | 200 | 2550 | 137.25 | 55.29 | 0.609 |
| 400 | 200 | 2600 | 153.85 | 54.23 | 0.596 |

| **Table A55.73 Absorbance for 0.0066 mM 4.7 at 339 nm upon addition of 0 – 1.2 mM AA, in 25 mM MOPS pH 7.0, 50 mM, 10%DMSO at 25 °C.$[AA]_{stock}$ = 3.7 mM, $[4.7]_{stock}$ = 0.07 mM** | | | | | |
|---|---|---|---|---|---|
| **Cumulative added volume AA µL** | **Added volume 4.7 µL** | **Total volume µL** | **[AA] µmol $dm^{-3}$** | **[4.7] µmol $dm^{-3}$** | **A $_{339}$ nm** |
| 0 | 0 | 2000 | 0.00 | 0.00 | 0.000 |
| 0 | 200 | 2200 | 0.00 | 6.65 | 0.226 |
| 10 | 200 | 2210 | 16.74 | 6.62 | 0.223 |
| 60 | 200 | 2260 | 98.23 | 6.48 | 0.223 |
| 110 | 200 | 2310 | 176.19 | 6.34 | 0.220 |
| 200 | 200 | 2400 | 308.33 | 6.10 | 0.210 |
| 300 | 200 | 2500 | 444.00 | 5.86 | 0.209 |
| 400 | 200 | 2600 | 569.23 | 5.63 | 0.202 |
| 500 | 200 | 2700 | 685.19 | 5.42 | 0.191 |
| 600 | 200 | 2800 | 792.86 | 5.23 | 0.181 |
| 700 | 200 | 2900 | 893.10 | 5.05 | 0.176 |
| 800 | 200 | 3000 | 986.67 | 4.88 | 0.164 |
| 900 | 200 | 3100 | 1074.19 | 4.72 | 0.158 |
| 1000 | 200 | 3200 | 1156.25 | 4.58 | 0.150 |
| 1100 | 200 | 3300 | 1233.33 | 4.44 | 0.144 |

**Table A55.74 Absorbance for 0.012 mM 4.8 at 665 nm upon addition of 0 – 1.5 mM AA, in 25 mM MOPS pH 7.0, 50 mM, 10%DMSO at 25 °C.$[AA]_{stock}$ = 5.0 mM, $[4.8]_{stock}$ = 0.8 mM**

| Cumulative added volume AA µL | Added volume 4.8 µL | Total volume µL | [AA] µmol $dm^{-3}$ | [4.8] µmol $dm^{-3}$ | A $_{665}$ nm |
|---|---|---|---|---|---|
| 0 | 0 | 2000 | 0.00 | 0.00 | 0.000 |
| 0 | 30 | 2030 | 0.00 | 12.18 | 0.815 |
| 10 | 30 | 2040 | 24.51 | 12.12 | 0.810 |
| 20 | 30 | 2050 | 48.78 | 12.06 | 0.807 |
| 50 | 30 | 2080 | 120.19 | 11.88 | 0.797 |
| 100 | 30 | 2130 | 234.74 | 11.61 | 0.776 |
| 150 | 30 | 2180 | 344.04 | 11.34 | 0.757 |
| 200 | 30 | 2230 | 448.43 | 11.09 | 0.740 |
| 300 | 30 | 2330 | 643.78 | 10.61 | 0.723 |
| 400 | 30 | 2430 | 823.05 | 10.17 | 0.691 |
| 500 | 30 | 2530 | 988.14 | 9.77 | 0.665 |
| 600 | 30 | 2630 | 1140.68 | 9.40 | 0.639 |
| 700 | 30 | 2730 | 1282.05 | 9.05 | 0.619 |
| 800 | 30 | 2830 | 1413.43 | 8.73 | 0.594 |
| 900 | 30 | 2930 | 1535.84 | 8.44 | 0.574 |

| **Table A55.75 Absorbance for 0.027 mM 4.10 at 411 nm upon addition of 0 – 0.96 mM AA, in 25 mM MOPS pH 7.0, 50 mM, at 25 °C.$[AA]_{stock}$ = 3.7 mM, $[4.10]_{stock}$ = 1.8 mM** | | | | | |
|---|---|---|---|---|---|
| **Cumulative added volume AA µL** | **Added volume 4.10 µL** | **Total volume µL** | **[AA] µmol $dm^{-3}$** | **[4.10] µmol $dm^{-3}$** | **$A_{411\ nm}$** |
| 0 | 0 | 2000 | 0.00 | 0.00 | 0.000 |
| 0 | 30 | 2030 | 0.00 | 27.13 | 0.703 |
| 30 | 30 | 2060 | 55.05 | 26.74 | 0.699 |
| 60 | 30 | 2090 | 108.52 | 26.35 | 0.686 |
| 100 | 30 | 2130 | 177.46 | 25.86 | 0.673 |
| 150 | 30 | 2180 | 260.09 | 25.27 | 0.657 |
| 200 | 30 | 2230 | 339.01 | 24.70 | 0.642 |
| 300 | 30 | 2330 | 486.70 | 23.64 | 0.615 |
| 400 | 30 | 2430 | 622.22 | 22.67 | 0.590 |
| 500 | 30 | 2530 | 747.04 | 21.77 | 0.565 |
| 600 | 30 | 2630 | 862.36 | 20.94 | 0.543 |
| 700 | 30 | 2730 | 969.23 | 20.18 | 0.523 |

| **Table A55.76 Absorbance for 0.045 mM 4.11 at 344 nm upon addition of 0 – 1.07 mM AA, in 25 mM MOPS pH 7.0, 50 mM, 10%DMSO, at 25 °C.$[AA]_{stock}$ = 3.7 mM, $[4.11]_{stock}$ = 0.5 mM** | | | | | |
|---|---|---|---|---|---|
| **Cumulative added volume AA µL** | **Added volume 4.11 µL** | **Total volume µL** | **[AA] µmol $dm^{-3}$** | **[4.11] µmol $dm^{-3}$** | **A $_{344}$ nm** |
| 0 | 0 | 2000 | 0.00 | 0.00 | 0.000 |
| 0 | 200 | 2200 | 0.00 | 45.64 | 1.232 |
| 10 | 200 | 2210 | 16.74 | 45.43 | 1.217 |
| 30 | 200 | 2230 | 49.78 | 45.02 | 1.202 |
| 60 | 200 | 2260 | 98.23 | 44.42 | 1.185 |
| 120 | 200 | 2320 | 191.38 | 43.28 | 1.155 |
| 200 | 200 | 2400 | 308.33 | 41.83 | 1.118 |
| 300 | 200 | 2500 | 444.00 | 40.16 | 1.079 |
| 400 | 200 | 2600 | 569.23 | 38.62 | 1.042 |
| 500 | 200 | 2700 | 685.19 | 37.19 | 1.006 |
| 600 | 200 | 2800 | 792.86 | 35.86 | 0.974 |
| 700 | 200 | 2900 | 893.10 | 34.62 | 0.943 |
| 800 | 200 | 3000 | 986.67 | 33.47 | 0.911 |
| 900 | 200 | 3100 | 1074.19 | 32.39 | 0.883 |

| **Table A55.77 Absorbance for 0.013 mM 4.12 at 369 nm upon addition of 0 – 1.6 mM AA, in 25 mM MOPS pH 7.0, 50 mM, at 25 °C.$[AA]_{stock}$ = 6.5 mM, $[4.12]_{stock}$ = 0.1 mM** | | | | | |
|---|---|---|---|---|---|
| **Cumulative added volume AA µL** | **Added volume 4.12 µL** | **Total volume µL** | **[AA] µmol $dm^{-3}$** | **[4.12] µmol $dm^{-3}$** | **$A_{369}$ nm** |
| 0 | 0 | 2000 | 0.00 | 0.00 | 0.000 |
| 0 | 300 | 2300 | 0.00 | 13.30 | 0.359 |
| 50 | 300 | 2350 | 138.30 | 13.02 | 0.349 |
| 100 | 300 | 2400 | 270.83 | 12.75 | 0.335 |
| 150 | 300 | 2450 | 397.96 | 12.49 | 0.326 |
| 200 | 300 | 2500 | 520.00 | 12.24 | 0.319 |
| 250 | 300 | 2550 | 637.25 | 12.00 | 0.314 |
| 300 | 300 | 2600 | 750.00 | 11.77 | 0.305 |
| 400 | 300 | 2700 | 962.96 | 11.33 | 0.303 |
| 500 | 300 | 2800 | 1160.71 | 10.93 | 0.289 |
| 600 | 300 | 2900 | 1344.83 | 10.55 | 0.276 |
| 700 | 300 | 3000 | 1516.67 | 10.20 | 0.265 |
| 800 | 300 | 3100 | 1677.42 | 9.87 | 0.256 |

**A55 UV-visible titrations for all compounds with DNA in presence of AA.**

**Table A55.78 UV-visible titration of 0.044 mM 4.1 at 443 nm upon addition of 0 – 1.7 mM DNA in presence 0.1 mM AA in buffer (25 mM MOPS, pH 7.0, 50 mM NaCl), at 25 °C.$[DNA]_{stock}$ = 15.7 mM, $[AA]_{stock}$ = 1 mM, $[4.1]_{stock}$ = 1.3 mM**

| Cumulative added volume DNA µL | Added volume 4.1 µL | Added volume AA µL | Total volume µL | [DNA] µmol $dm^{-3}$ | [4.1] µmol $dm^{-3}$ | [AA] µmol $dm^{-3}$ | $A_{443}$ nm |
|---|---|---|---|---|---|---|---|
| 0 | 0 | 0 | 2000 | 0.00 | 0.00 | 0.00 | 0.000 |
| 0 | 70 | 0 | 2070 | 0.00 | 44.98 | 0.00 | 0.720 |
| 0 | 70 | 250 | 2320 | 0.00 | 40.13 | 107.76 | 0.450 |
| 10 | 70 | 250 | 2330 | 67.38 | 39.96 | 107.30 | 0.472 |
| 20 | 70 | 250 | 2340 | 134.19 | 39.79 | 106.84 | 0.511 |
| 30 | 70 | 250 | 2350 | 200.43 | 39.62 | 106.38 | 0.553 |
| 40 | 70 | 250 | 2360 | 266.10 | 39.45 | 105.93 | 0.588 |
| 50 | 70 | 250 | 2370 | 331.22 | 39.28 | 105.49 | 0.590 |
| 60 | 70 | 250 | 2380 | 395.80 | 39.12 | 105.04 | 0.596 |
| 70 | 70 | 250 | 2390 | 459.83 | 38.95 | 104.60 | 0.596 |
| 100 | 70 | 250 | 2420 | 648.76 | 38.47 | 103.31 | 0.591 |
| 150 | 70 | 250 | 2470 | 953.44 | 37.69 | 101.21 | 0.583 |
| 200 | 70 | 250 | 2520 | 1246.03 | 36.94 | 99.21 | 0.576 |
| 250 | 70 | 250 | 2570 | 1527.24 | 36.23 | 97.28 | 0.568 |

**Table A55.79 UV-visible titration of 0.044 mM 4.2 at 443 nm upon addition of 0 – 1.7 mM DNA in presence 0.1 mM AA in buffer (25 mM MOPS, pH 7.0, 50 mM NaCl), at 25 °C.$[DNA]_{stock}$ = 15.7 mM, $[AA]_{stock}$ = 1 mM, $[4.2]_{stock}$ = 1.3 mM**

| Cumulative added volume DNA µL | Added volume 4.2 µL | Added volume AA µL | Total volume µL | [DNA] µmol $dm^{-3}$ | [4.2] µmol $dm^{-3}$ | [AA] µmol $dm^{-3}$ | $A_{450}$ nm |
|---|---|---|---|---|---|---|---|
| 0 | 0 | 0 | 2000 | 0.00 | 0.00 | 0.00 | 0.000 |
| 0 | 100 | 0 | 2100 | 0.00 | 42.99 | 0.00 | 0.708 |
| 0 | 100 | 250 | 2350 | 0.00 | 38.41 | 106.38 | 0.584 |
| 2 | 100 | 250 | 2352 | 13.52 | 38.38 | 106.29 | 0.591 |
| 4 | 100 | 250 | 2354 | 27.02 | 38.35 | 106.20 | 0.591 |
| 6 | 100 | 250 | 2356 | 40.49 | 38.31 | 106.11 | 0.590 |
| 11 | 100 | 250 | 2361 | 74.08 | 38.23 | 105.89 | 0.591 |
| 21 | 100 | 250 | 2371 | 140.83 | 38.07 | 105.44 | 0.588 |
| 50 | 100 | 250 | 2400 | 331.25 | 37.61 | 104.17 | 0.588 |
| 100 | 100 | 250 | 2450 | 648.98 | 36.84 | 102.04 | 0.579 |
| 150 | 100 | 250 | 2500 | 954.00 | 36.11 | 100.00 | 0.575 |
| 200 | 100 | 250 | 2550 | 1247.06 | 35.40 | 98.04 | 0.565 |
| 250 | 100 | 250 | 2600 | 1528.85 | 34.72 | 96.15 | 0.561 |

**Table A55.80 UV-visible titration of 0.076 Mm at 434 nm upon addition of 0 – 1.22 mM DNA in presence 0.1 mM AA in buffer (25 mM MOPS, pH 7.0, 50 mM NaCl), at 25 °C.$[DNA]_{stock}$ = 15.9 mM, $[AA]_{stock}$ = 1 mM, $[4.4]_{stock}$ = 1.1 mM**

| Cumulative added volume DNA µL | Added volume 4.4 µL | Added volume AA µL | Total volume µL | [DNA] µmol $dm^{-3}$ | [4.4] µmol $dm^{-3}$ | [AA] µmol $dm^{-3}$ | $A_{434}$ nm |
|---|---|---|---|---|---|---|---|
| 0 | 0 | 0 | 2000 | 0.00 | 0.00 | 0.00 | 0.000 |
| 0 | 150 | 0 | 2150 | 0.00 | 76.88 | 0.00 | 0.831 |
| 0 | 150 | 250 | 2400 | 0.00 | 68.88 | 104.17 | 0.738 |
| 10 | 150 | 250 | 2410 | 65.98 | 68.59 | 103.73 | 0.660 |
| 20 | 150 | 250 | 2420 | 131.40 | 68.31 | 103.31 | 0.603 |
| 30 | 150 | 250 | 2430 | 196.30 | 68.02 | 102.88 | 0.561 |
| 40 | 150 | 250 | 2440 | 260.66 | 67.75 | 102.46 | 0.529 |
| 50 | 150 | 250 | 2450 | 324.49 | 67.47 | 102.04 | 0.508 |
| 60 | 150 | 250 | 2460 | 387.80 | 67.20 | 101.63 | 0.479 |
| 80 | 150 | 250 | 2480 | 512.90 | 66.65 | 100.81 | 0.461 |
| 100 | 150 | 250 | 2500 | 636.00 | 66.12 | 100.00 | 0.440 |
| 150 | 150 | 250 | 2550 | 935.29 | 64.82 | 98.04 | 0.429 |
| 200 | 150 | 250 | 2600 | 1223.08 | 63.58 | 96.15 | 0.420 |

**Table A55.81 UV-visible titration of 0.063 mM 4.5 at 444 nm upon addition of 0 – 1.7 mM DNA in presence 0.1 mM AA in buffer (25 mM MOPS, pH 7.0, 50 mM NaCl), at 25 °C.$[DNA]_{stock}$ = 15.7 mM, $[AA]_{stock}$ = 1 mM, $[4.5]_{stock}$ = 0.76 mM**

| Cumulative added volume DNA µL | Added volume 4.5 µL | Added volume AA µL | Total volume µL | [DNA] µmol $dm^{-3}$ | [4.5] µmol $dm^{-3}$ | [AA] µmol $dm^{-3}$ | $A_{444\ nm}$ |
|---|---|---|---|---|---|---|---|
| 0 | 0 | 0 | 2000 | 0.00 | 0.00 | 0.00 | 0.000 |
| 0 | 100 | 0 | 2100 | 0.00 | 63.33 | 0.00 | 0.394 |
| 0 | 100 | 250 | 2350 | 0.00 | 56.60 | 106.38 | 0.362 |
| 10 | 100 | 250 | 2360 | 66.53 | 56.36 | 105.93 | 0.337 |
| 20 | 100 | 250 | 2370 | 132.49 | 56.12 | 105.49 | 0.323 |
| 30 | 100 | 250 | 2380 | 197.90 | 55.88 | 105.04 | 0.315 |
| 40 | 100 | 250 | 2390 | 262.76 | 55.65 | 104.60 | 0.310 |
| 50 | 100 | 250 | 2400 | 327.08 | 55.42 | 104.17 | 0.307 |
| 100 | 100 | 250 | 2450 | 640.82 | 54.29 | 102.04 | 0.291 |
| 150 | 100 | 250 | 2500 | 942.00 | 53.20 | 100.00 | 0.282 |
| 200 | 100 | 250 | 2550 | 1231.37 | 52.16 | 98.04 | 0.274 |
| 250 | 100 | 250 | 2600 | 1509.62 | 51.15 | 96.15 | 0.266 |
| 300 | 100 | 250 | 2650 | 1777.36 | 50.19 | 94.34 | 0.262 |

**Table A555.82 UV-visible titration of 0.017 mM 4.7 at 360 nm upon addition of 0 – 2.0 mM DNA in presence 0.1 mM AA in buffer (25 mM MOPS, pH 7.0, 50 mM NaCl), at 25 °C.$[DNA]_{stock}$ = 15.7 mM, $[AA]_{stock}$ = 1 mM, $[4.7]_{stock}$ = 1.4 mM**

| Cumulative added volume DNA µL | Added volume 4.7 µL | Added volume AA µL | Total volume µL | [DNA] µmol $dm^{-3}$ | [4.7] µmol $dm^{-3}$ | [AA] µmol $dm^{-3}$ | $A_{360\ nm}$ |
|---|---|---|---|---|---|---|---|
| 0 | 25 | 0 | 2025 | 0.00 | 17.14 | 0.00 | 0.425 |
| 0 | 25 | 0 | 2275 | 0.00 | 15.25 | 109.89 | 0.371 |
| 10 | 25 | 250 | 2285 | 68.71 | 15.19 | 109.41 | 0.422 |
| 20 | 25 | 250 | 2295 | 136.82 | 15.12 | 108.93 | 0.463 |
| 30 | 25 | 250 | 2305 | 204.34 | 15.05 | 108.46 | 0.479 |
| 40 | 25 | 250 | 2315 | 271.27 | 14.99 | 107.99 | 0.492 |
| 50 | 25 | 250 | 2325 | 337.63 | 14.92 | 107.53 | 0.501 |
| 100 | 25 | 250 | 2375 | 661.05 | 14.61 | 105.26 | 0.508 |
| 150 | 25 | 250 | 2425 | 971.13 | 14.31 | 103.09 | 0.517 |
| 200 | 25 | 250 | 2475 | 1268.69 | 14.02 | 101.01 | 0.524 |
| 250 | 25 | 250 | 2525 | 1554.46 | 13.74 | 99.01 | 0.534 |
| 300 | 25 | 250 | 2575 | 1829.13 | 13.48 | 97.09 | 0.535 |
| 350 | 25 | 250 | 2625 | 2093.33 | 13.22 | 95.24 | 0.532 |

**Table A55.83 UV-visible titration of 0.013 mM 4.8 at 663 nm upon addition of 0 – 1.8 mM DNA in presence 0.1 mM AA in buffer (25 mM MOPS, pH 7.0, 50 mM NaCl), at 25 °C.$[DNA]_{stock}$ = 15.9 mM, $[AA]_{stock}$ = 1 mM, $[4.8]_{stock}$ = 1.12 mM**

| Cumulative added volume DNA µL | Added volume 4.8 µL | Added volume AA µL | Total volume µL | [DNA] µmol $dm^{-3}$ | [4.8] µmol $dm^{-3}$ | [AA] µmol $dm^{-3}$ | $A_{663}$ nm |
|---|---|---|---|---|---|---|---|
| 0 | 0 | 0 | 2575 | 0.00 | 0.00 | 0.00 | 0.000 |
| 0 | 25 | 0 | 2575 | 0.00 | 13.83 | 0.00 | 0.933 |
| 0 | 25 | 250 | 2575 | 0.00 | 12.31 | 109.89 | 0.838 |
| 10 | 25 | 250 | 2575 | 69.58 | 12.25 | 109.41 | 0.632 |
| 20 | 25 | 250 | 2575 | 138.56 | 12.20 | 108.93 | 0.619 |
| 30 | 25 | 250 | 2575 | 206.94 | 12.15 | 108.46 | 0.622 |
| 40 | 25 | 250 | 2575 | 274.73 | 12.10 | 107.99 | 0.627 |
| 50 | 25 | 250 | 2575 | 341.94 | 12.04 | 107.53 | 0.630 |
| 100 | 25 | 250 | 2575 | 669.47 | 11.79 | 105.26 | 0.635 |
| 150 | 25 | 250 | 2575 | 983.51 | 11.55 | 103.09 | 0.632 |
| 200 | 25 | 250 | 2575 | 1284.85 | 11.31 | 101.01 | 0.623 |
| 250 | 25 | 250 | 2575 | 1574.26 | 11.09 | 99.01 | 0.614 |
| 300 | 25 | 250 | 2575 | 1852.43 | 10.87 | 97.09 | 0.604 |

**Table A55.84 UV-visible titration of 0.026 mM 4.10 at 411 and 432 nm upon addition of 0 – 1.5 mM DNA in presence 0.1 mM AA in buffer (25 mM MOPS, pH 7.0, 50 mM NaCl), at 25 °C.$[DNA]_{stock}$ = 15.7 mM, $[AA]_{stock}$ = 1 mM, $[4.10]_{stock}$ = 1.09 mM**

| Cumulative added volume DNA µL | Added volume 4.10 µL | Added volume AA µL | Total volume µL | [DNA] µmol $dm^{-3}$ | [4.10] µmol $dm^{-3}$ | [AA] µmol $dm^{-3}$ | $A_{411}$ nm | $A_{432}$ nm |
|---|---|---|---|---|---|---|---|---|
| 0 | 0 | 0 | 2000 | 0.00 | 0.00 | 0.00 | 0 | 0.000 |
| 0 | 50 | 0 | 2050 | 0.00 | 26.59 | 0.00 | 0.694 | 0.488 |
| 0 | 50 | 250 | 2300 | 0.00 | 23.70 | 108.70 | 0.633 | 0.452 |
| 10 | 50 | 250 | 2310 | 67.97 | 23.59 | 108.23 | 0.603 | 0.481 |
| 20 | 50 | 250 | 2320 | 135.34 | 23.49 | 107.76 | 0.577 | 0.503 |
| 30 | 50 | 250 | 2330 | 202.15 | 23.39 | 107.30 | 0.556 | 0.517 |
| 40 | 50 | 250 | 2340 | 268.38 | 23.29 | 106.84 | 0.537 | 0.529 |
| 50 | 50 | 250 | 2350 | 334.04 | 23.19 | 106.38 | 0.524 | 0.538 |
| 60 | 50 | 250 | 2360 | 399.15 | 23.09 | 105.93 | 0.476 | 0.562 |
| 100 | 50 | 250 | 2400 | 654.17 | 22.71 | 104.17 | 0.446 | 0.571 |
| 150 | 50 | 250 | 2450 | 961.22 | 22.24 | 102.04 | 0.425 | 0.570 |
| 200 | 50 | 250 | 2500 | 1256.00 | 21.80 | 100.00 | 0.409 | 0.567 |
| 250 | 50 | 250 | 2550 | 1539.22 | 21.37 | 98.04 | 0.397 | 0.562 |

**Table A55.85 UV-visible titration of 0.022 mM 4.11 at 343 and 370 nm upon addition of 0 – 1.9 mM DNA in presence 0.1 mM AA in buffer (25 mM MOPS, pH 7.0, 50 mM NaCl), at 25 °C.$[DNA]_{stock}$ = 14.8 mM, $[AA]_{stock}$ = 1 mM, $[4.11]_{stock}$ = 0.47 mM**

| Cumulative added volume DNA µL | Added volume 4.11 µL | Added volume AA µL | Total volume µL | [DNA] µmol $dm^{-3}$ | [4.11] µmol $dm^{-3}$ | [AA] µmol $dm^{-3}$ | $A_{343}$ nm | $A_{370}$ nm |
|---|---|---|---|---|---|---|---|---|
| 0.00 | 0.00 | 0.0 | 2000 | 0.00 | 0.00 | 0.00 | 0.000 | 0.000 |
| 0 | 100 | 0 | 2100 | 0.00 | 22.48 | 0.00 | 0.607 | 0.090 |
| 0 | 100 | 250 | 2350 | 0.00 | 20.09 | 106.38 | 0.567 | 0.093 |
| 25 | 100 | 250 | 2375 | 155.79 | 19.87 | 105.26 | 0.482 | 0.163 |
| 50 | 100 | 250 | 2400 | 308.33 | 19.67 | 104.17 | 0.440 | 0.197 |
| 75 | 100 | 250 | 2425 | 457.73 | 19.46 | 103.09 | 0.417 | 0.213 |
| 100 | 100 | 250 | 2450 | 604.08 | 19.27 | 102.04 | 0.402 | 0.223 |
| 125 | 100 | 250 | 2475 | 747.47 | 19.07 | 101.01 | 0.393 | 0.231 |
| 150 | 100 | 250 | 2500 | 888.00 | 18.88 | 100.00 | 0.375 | 0.234 |
| 200 | 100 | 250 | 2550 | 1160.78 | 18.51 | 98.04 | 0.367 | 0.238 |
| 250 | 100 | 250 | 2600 | 1423.08 | 18.15 | 96.15 | 0.360 | 0.239 |
| 300 | 100 | 250 | 2650 | 1675.47 | 17.81 | 94.34 | 0.349 | 0.237 |
| 350 | 100 | 250 | 2700 | 1918.52 | 17.48 | 92.59 | 0.344 | 0.233 |

**Table A55.86 UV-visible titration of 0.023 mM 4.12 at 367 and 430 nm upon addition of 0 – 1.35 mM DNA in presence 0.1 mM AA in buffer (25 mM MOPS, pH 7.0, 50 mM NaCl), at 25 °C.$[DNA]_{stock}$ = 15.9 mM, $[AA]_{stock}$ = 1 mM, $[4.12]_{stock}$ = 0.117 Mm**

| Cumulative added volume DNA µL | Added volume 4.12 µL | Added volume AA µL | Total volume µL | [DNA] µmol $dm^{-3}$ | [4.12] µmol $dm^{-3}$ | [AA] µmol $dm^{-3}$ | $A_{367}$ nm | $A_{430}$ nm |
|---|---|---|---|---|---|---|---|---|
| 0 | 0 | 0 | 2000 | 0.00 | 0.00 | 0.00 | 0.000 | 0.000 |
| 0 | 500 | 0 | 2500 | 0.00 | 23.40 | 0.00 | 0.640 | 0.135 |
| 0 | 500 | 250 | 2750 | 0.00 | 21.27 | 90.91 | 0.595 | 0.130 |
| 10 | 500 | 250 | 2760 | 57.61 | 21.20 | 90.58 | 0.465 | 0.250 |
| 20 | 500 | 250 | 2770 | 114.80 | 21.12 | 90.25 | 0.430 | 0.286 |
| 30 | 500 | 250 | 2780 | 171.58 | 21.04 | 89.93 | 0.418 | 0.299 |
| 40 | 500 | 250 | 2790 | 227.96 | 20.97 | 89.61 | 0.409 | 0.307 |
| 50 | 500 | 250 | 2800 | 283.93 | 20.89 | 89.29 | 0.399 | 0.309 |
| 60 | 500 | 250 | 2810 | 339.50 | 20.82 | 88.97 | 0.396 | 0.311 |
| 100 | 500 | 250 | 2850 | 557.89 | 20.53 | 87.72 | 0.382 | 0.315 |
| 150 | 500 | 250 | 2900 | 822.41 | 20.17 | 86.21 | 0.376 | 0.316 |
| 200 | 500 | 250 | 2950 | 1077.97 | 19.83 | 84.75 | 0.373 | 0.316 |
| 250 | 500 | 250 | 3000 | 1325.00 | 19.50 | 83.33 | 0.368 | 0.313 |

| **Table A55.87 Absorbance for 0.016 mM 5.1 at 444nm upon addition of 0 – 1.9 mM POSA, in 25 mM MOPS, pH 7.0, 50 mM NaCl, at 25 °C.$[POSA]_{stock}$ = 10.0 mM, $[5.1]_{stock}$ = 0.45mM, 10%DMSO** | | | | | |
|---|---|---|---|---|---|
| **Cumulative added volume POSA µL** | **Added volume 5.1 µL** | **Total volume µL** | **[POSA] µmol $dm^{-3}$** | **[5.1] µmol $dm^{-3}$** | **A 444 nm** |
| 0 | 0 | 2000 | 0.00 | 0.00 | 0.000 |
| 0 | 75 | 2075 | 0.00 | 16.41 | 0.263 |
| 5 | 75 | 2080 | 24.04 | 16.37 | 0.161 |
| 10 | 75 | 2085 | 47.96 | 16.33 | 0.172 |
| 20 | 75 | 2095 | 95.47 | 16.25 | 0.170 |
| 30 | 75 | 2105 | 142.52 | 16.18 | 0.175 |
| 40 | 75 | 2115 | 189.13 | 16.10 | 0.175 |
| 70 | 75 | 2145 | 326.34 | 15.87 | 0.180 |
| 120 | 75 | 2195 | 546.70 | 15.51 | 0.186 |
| 200 | 75 | 2275 | 879.12 | 14.97 | 0.183 |
| 300 | 75 | 2375 | 1263.16 | 14.34 | 0.177 |
| 400 | 75 | 2475 | 1616.16 | 13.76 | 0.174 |
| 500 | 75 | 2575 | 1941.75 | 13.22 | 0.169 |

**Table A55.88 Absorbance for 0.036 mM 5.2 at 450 nm upon addition of 0 – 3.3 mM POSA, in 25 mM MOPS, pH 7.0, 50 mM NaCl, at 25 °C.$[POSA]_{stock}$ = 10.0 mM, $[5.2]_{stock}$ = 1.2mM, 10%DMSO**

| Cumulative added volume POSA µL | Added volume 5.2 µL | Total volume µL | [POSA] µmol $dm^{-3}$ | [5.2] µmol $dm^{-3}$ | $A_{450}$ nm |
|---|---|---|---|---|---|
| 0 | 0 | 2000 | 0.00 | 0.00 | 0.000 |
| 0 | 60 | 2060 | 0.00 | 36.15 | 0.598 |
| 10 | 60 | 2070 | 48.31 | 35.97 | 0.421 |
| 20 | 60 | 2080 | 96.15 | 35.80 | 0.410 |
| 30 | 60 | 2090 | 143.54 | 35.63 | 0.390 |
| 90 | 60 | 2150 | 418.60 | 34.63 | 0.389 |
| 150 | 60 | 2210 | 678.73 | 33.69 | 0.393 |
| 250 | 60 | 2310 | 1082.25 | 32.23 | 0.386 |
| 350 | 60 | 2410 | 1452.28 | 30.90 | 0.381 |
| 450 | 60 | 2510 | 1792.83 | 29.67 | 0.370 |
| 650 | 60 | 2710 | 2398.52 | 27.48 | 0.350 |
| 850 | 60 | 2910 | 2920.96 | 25.59 | 0.327 |
| 1050 | 60 | 3110 | 3376.21 | 23.94 | 0.312 |

| **Table A55.89 Absorbance for 0.042 mM 5.4 at 435nm upon addition of 0 – 2.0 mM POSA, in 25 mM MOPS, pH 7.0, 50 mM NaCl, at 25 °C.$[POSA]_{stock}$ = 10.0 mM, $[5.4]_{stock}$ = 0.84 mM, 10% DMSO** | | | | | |
|---|---|---|---|---|---|
| **Cumulative added volume POSA µL** | **Added volume 5.4 µL** | **Total volume µL** | **[POSA] µmol $dm^{-3}$** | **[5.4] µmol $dm^{-3}$** | **$A_{435\ nm}$** |
| 0 | 0 | 2000 | 0.00 | 0.00 | 0.000 |
| 0 | 100 | 2100 | 0.00 | 42.81 | 0.462 |
| 10 | 100 | 2110 | 47.39 | 42.61 | 0.441 |
| 20 | 100 | 2120 | 94.34 | 42.41 | 0.431 |
| 30 | 100 | 2130 | 140.85 | 42.21 | 0.419 |
| 40 | 100 | 2140 | 186.92 | 42.01 | 0.412 |
| 50 | 100 | 2150 | 232.56 | 41.81 | 0.408 |
| 100 | 100 | 2200 | 454.55 | 40.86 | 0.388 |
| 150 | 100 | 2250 | 666.67 | 39.96 | 0.354 |
| 250 | 100 | 2350 | 1063.83 | 38.26 | 0.339 |
| 350 | 100 | 2450 | 1428.57 | 36.69 | 0.325 |
| 450 | 100 | 2550 | 1764.71 | 35.25 | 0.325 |
| 550 | 100 | 2650 | 2075.47 | 33.92 | 0.319 |

**Table A55.90 Absorbance for 0.074 mM 5.5 at 443nm upon addition of 0 – 0.24 mM POSA, in 25 mM MOPS, pH 7.0, 50 mM NaCl, at 25 °C.$[POSA]_{stock}$ = 1 0 mM, $[5.5]_{stock}$ = 1.9 mM**

| Cumulative added volume POSA µL | Added volume 5.5 µL | Total volume µL | [POSA] µmol $dm^{-3}$ | [5.5] µmol $dm^{-3}$ | A $_{443}$ nm |
|---|---|---|---|---|---|
| 0 | 0 | 2000 | 0.00 | 0.00 | 0.000 |
| 0 | 80 | 2080 | 0.00 | 74.73 | 0.770 |
| 10 | 80 | 2090 | 4.78 | 74.37 | 0.737 |
| 20 | 80 | 2100 | 9.52 | 74.02 | 0.704 |
| 30 | 80 | 2110 | 14.22 | 73.67 | 0.683 |
| 40 | 80 | 2120 | 18.87 | 73.32 | 0.662 |
| 50 | 80 | 2130 | 23.47 | 72.98 | 0.644 |
| 75 | 80 | 2155 | 34.80 | 72.13 | 0.620 |
| 125 | 80 | 2205 | 56.69 | 70.49 | 0.575 |
| 200 | 80 | 2280 | 87.72 | 68.18 | 0.531 |
| 300 | 80 | 2380 | 126.05 | 65.31 | 0.502 |
| 400 | 80 | 2480 | 161.29 | 62.68 | 0.478 |
| 500 | 80 | 2580 | 193.80 | 60.25 | 0.461 |
| 600 | 80 | 2680 | 223.88 | 58.00 | 0.446 |
| 700 | 80 | 2780 | 251.80 | 55.91 | 0.433 |

**Table A55.91 Absorbance for 0.020 mM 5.7 at 340 and 388 nm upon addition of 0 – 0.067 mM POSA, in 25 mM MOPS, pH 7.0, 50 mM NaCl, at 25 °C.$[POSA]_{stock}$ = 1 9 mM, $[5.7]_{stock}$ = 0.84 mM, 10% DMSO**

| Cumulative added volume POSA µL | Added volume 5.7 µL | Total volume µL | [POSA] µmol $dm^{-3}$ | [5.7] µmol $dm^{-3}$ | $A_{340}$ nm | $A_{388}$ nm |
|---|---|---|---|---|---|---|
| 0 | 0 | 2000 | 0.00 | 0.00 | 0.000 | 0.000 |
| 0 | 50 | 2050 | 0.00 | 20.49 | 0.694 | 0.037 |
| 5 | 50 | 2055 | 4.65 | 20.44 | 0.627 | 0.073 |
| 10 | 50 | 2060 | 9.27 | 20.39 | 0.567 | 0.108 |
| 15 | 50 | 2065 | 13.87 | 20.34 | 0.519 | 0.137 |
| 20 | 50 | 2070 | 18.45 | 20.29 | 0.484 | 0.163 |
| 25 | 50 | 2075 | 23.01 | 20.24 | 0.457 | 0.172 |
| 30 | 50 | 2080 | 27.55 | 20.19 | 0.444 | 0.183 |
| 35 | 50 | 2085 | 32.06 | 20.14 | 0.430 | 0.183 |
| 45 | 50 | 2095 | 41.03 | 20.05 | 0.424 | 0.180 |
| 55 | 50 | 2105 | 49.90 | 19.95 | 0.425 | 0.179 |
| 65 | 50 | 2115 | 58.70 | 19.86 | 0.428 | 0.171 |
| 75 | 50 | 2125 | 67.41 | 19.76 | 0.431 | 0.169 |

**Table A55.92 Absorbance for 0.0078 mM 5.8 at 666 nm upon addition of 0 – 0.16 mM POSA, in 25 mM MOPS, pH 7.0, 50 mM NaCl, at 25 °C.$[POSA]_{stock}$ = 1 0 mM, $[5.8]_{stock}$ = 0.52 mM**

| Cumulative added volume POSA µL | Added volume 5.8 µL | Total volume µL | [POSA] µmol $dm^{-3}$ | [5.8] µmol $dm^{-3}$ | A 666 nm |
|---|---|---|---|---|---|
| 0 | 0 | 2000 | 0.00 | 0.00 | 0.000 |
| 0 | 30 | 2030 | 0.00 | 7.80 | 0.523 |
| 5 | 30 | 2035 | 2.46 | 7.78 | 0.518 |
| 10 | 30 | 2040 | 4.90 | 7.76 | 0.514 |
| 15 | 30 | 2045 | 7.33 | 7.75 | 0.511 |
| 25 | 30 | 2055 | 12.17 | 7.71 | 0.504 |
| 50 | 30 | 2080 | 24.04 | 7.62 | 0.489 |
| 75 | 30 | 2105 | 35.63 | 7.52 | 0.476 |
| 100 | 30 | 2130 | 46.95 | 7.44 | 0.466 |
| 125 | 30 | 2155 | 58.00 | 7.35 | 0.456 |
| 150 | 30 | 2180 | 68.81 | 7.27 | 0.446 |
| 200 | 30 | 2230 | 89.69 | 7.10 | 0.437 |
| 250 | 30 | 2280 | 109.65 | 6.95 | 0.421 |
| 300 | 30 | 2330 | 128.76 | 6.80 | 0.408 |
| 350 | 30 | 2380 | 147.06 | 6.66 | 0.396 |
| 400 | 30 | 2430 | 164.61 | 6.52 | 0.384 |

**Table A55.93 Absorbance for 0.024 mM 5.10 at 411 and 439 nm upon addition of 0 – 0.68 mM POSA, in 25 mM MOPS, pH 7.0, 50 mM NaCl, at 25 °C.$[POSA]_{stock}$ = 5.0 mM, $[5.10]_{stock}$ = 1.0 mM**

| Cumulative added volume POSA µL | Added volume 5.10 µL | Total volume µL | [POSA] µmol $dm^{-3}$ | [5.10] µmol $dm^{-3}$ | A 411 nm | A 439 nm |
|---|---|---|---|---|---|---|
| 0 | 0 | 2000 | 0.00 | 0.00 | 0.000 | 0.000 |
| 0 | 50 | 2050 | 0.00 | 24.84 | 0.646 | 0.324 |
| 25 | 50 | 2075 | 60.24 | 24.54 | 0.630 | 0.362 |
| 50 | 50 | 2100 | 119.05 | 24.25 | 0.616 | 0.390 |
| 75 | 50 | 2125 | 176.47 | 23.96 | 0.606 | 0.413 |
| 100 | 50 | 2150 | 232.56 | 23.68 | 0.597 | 0.428 |
| 125 | 50 | 2175 | 287.36 | 23.41 | 0.588 | 0.438 |
| 150 | 50 | 2200 | 340.91 | 23.14 | 0.579 | 0.446 |
| 175 | 50 | 2225 | 393.26 | 22.88 | 0.571 | 0.451 |
| 225 | 50 | 2275 | 494.51 | 22.38 | 0.556 | 0.455 |
| 275 | 50 | 2325 | 591.40 | 21.90 | 0.543 | 0.456 |
| 325 | 50 | 2375 | 684.21 | 21.44 | 0.530 | 0.455 |

**Table A55.94 Absorbance for 0.012 mM 5.12 at 369 and 435 nm upon addition of 0 – 0.037 mM POSA, in 25 mM MOPS, pH 7.0, 50 mM NaCl, at 25 °C. $[POSA]_{stock}$ = 0.2 mM, $[5.12]_{stock}$ = 0.037 mM, 10% DMSO**

| Cumulative added volume POSA µL | Added volume 5.12 µL | Total volume µL | [POSA] µmol $dm^{-3}$ | [5.12] µmol $dm^{-3}$ | $A_{369\ nm}$ | $A_{435\ nm}$ |
|---|---|---|---|---|---|---|
| 0 | 0 | 2000 | 0.00 | 0.00 | 0.000 | 0.000 |
| 0 | 1000 | 3000 | 0.00 | 12.47 | 0.340 | 0.023 |
| 5 | 1000 | 3005 | 0.33 | 12.45 | 0.339 | 0.023 |
| 10 | 1000 | 3010 | 0.66 | 12.43 | 0.323 | 0.022 |
| 20 | 1000 | 3020 | 1.32 | 12.39 | 0.320 | 0.024 |
| 30 | 1000 | 3030 | 1.98 | 12.35 | 0.312 | 0.024 |
| 50 | 1000 | 3050 | 3.28 | 12.27 | 0.316 | 0.029 |
| 100 | 1000 | 3100 | 6.45 | 12.07 | 0.303 | 0.037 |
| 150 | 1000 | 3150 | 9.52 | 11.88 | 0.283 | 0.042 |
| 200 | 1000 | 3200 | 12.50 | 11.69 | 0.270 | 0.048 |
| 250 | 1000 | 3250 | 15.38 | 11.51 | 0.265 | 0.055 |
| 300 | 1000 | 3300 | 18.18 | 11.34 | 0.253 | 0.055 |
| 400 | 1000 | 3400 | 23.53 | 11.00 | 0.243 | 0.062 |
| 500 | 1000 | 3500 | 28.57 | 10.69 | 0.232 | 0.065 |
| 600 | 1000 | 3600 | 33.33 | 10.39 | 0.230 | 0.069 |
| 700 | 1000 | 3700 | 37.84 | 10.11 | 0.230 | 0.075 |

| **Table A55.95 Absorbance for 0.011 mM 5.9 at 489 nm upon addition of 0 –1.2 mM POSA, in 25 mM MOPS, pH 7.0, 50 mM NaCl, at 25 °C.$[POSA]_{stock}$ = 5.0 mM, $[5.9]_{stock}$ = 1.0 mM, 10% DMSO** | | | | | |
|---|---|---|---|---|---|
| **Cumulative added volume POSA µL** | **Added volume 5.9 µL** | **Total volume µL** | **[POSA] µmol $dm^{-3}$** | **[5.9] µmol $dm^{-3}$** | **A $_{489}$ nm** |
| 0 | 0 | 2500 | 0.00 | 0.00 | 0.000 |
| 0 | 30 | 2530 | 0.00 | 11.86 | 0.621 |
| 10 | 30 | 2540 | 19.69 | 11.81 | 0.620 |
| 20 | 30 | 2550 | 39.22 | 11.76 | 0.616 |
| 50 | 30 | 2580 | 96.90 | 11.63 | 0.606 |
| 100 | 30 | 2630 | 190.11 | 11.41 | 0.590 |
| 150 | 30 | 2680 | 279.85 | 11.19 | 0.573 |
| 250 | 30 | 2780 | 449.64 | 10.79 | 0.544 |
| 350 | 30 | 2880 | 607.64 | 10.42 | 0.517 |
| 450 | 30 | 2980 | 755.03 | 10.07 | 0.488 |
| 650 | 30 | 3180 | 1022.01 | 9.43 | 0.437 |
| 850 | 30 | 3380 | 1257.40 | 8.88 | 0.391 |

| **Table A55.96 Absorbance for 0.012 mM 5.11 at 344 nm upon addition of 0 – 2.3 mM POSA, in 25 mM MOPS, pH 7.0, 50 mM NaCl, at 25 °C.$[POSA]_{stock}$ = 10.0 mM, $[5.11]_{stock}$ = 0.25 mM** | | | | | |
|---|---|---|---|---|---|
| **Cumulative added volume POSA µL** | **Added volume 5.11 µL** | **Total volume µL** | **[POSA] µmol $dm^{-3}$** | **[5.11] µmol $dm^{-3}$** | **$A_{344}$ nm** |
| 0 | 0 | 2000 | 0.00 | 0.00 | 0.000 |
| 0 | 100 | 2100 | 0.00 | 12.33 | 0.345 |
| 5 | 100 | 2105 | 23.75 | 12.30 | 0.346 |
| 10 | 100 | 2110 | 47.39 | 12.27 | 0.345 |
| 20 | 100 | 2120 | 94.34 | 12.22 | 0.343 |
| 30 | 100 | 2130 | 140.85 | 12.16 | 0.340 |
| 60 | 100 | 2160 | 277.78 | 11.99 | 0.335 |
| 100 | 100 | 2200 | 454.55 | 11.77 | 0.327 |
| 150 | 100 | 2250 | 666.67 | 11.51 | 0.316 |
| 250 | 100 | 2350 | 1063.83 | 11.02 | 0.313 |
| 350 | 100 | 2450 | 1428.57 | 10.57 | 0.303 |
| 450 | 100 | 2550 | 1764.71 | 10.16 | 0.294 |
| 550 | 100 | 2650 | 2075.47 | 9.77 | 0.291 |
| 650 | 100 | 2750 | 2363.64 | 9.42 | 0.285 |

**A55 UV-visible titrations for all compounds with DNA in presence of POSA**

**Table A55.97 UV-visible titration of 0.034 mM 5.1 at 443 nm upon addition of 0 – 1.5 mM DNA in presence 0.1 mM POSA in buffer (25 mM MOPS, pH 7.0, 50 mM NaCl), at 25 °C.$[DNA]_{stock}$ = 15.7 mM, $[5.1]_{stock}$ = 1.4 mM, [POSA] = 1.0 mM**

| Cumulative added volume DNA µL | Added volume 5.1 µL | Total volume POSA µL | Total volume µL | [DNA] µmol $dm^{-3}$ | [5.1] µmol $dm^{-3}$ | [POSA] µmol $dm^{-3}$ | $A_{443\ nm}$ |
|---|---|---|---|---|---|---|---|
| 0 | 0 | 0 | 2000 | 0.00 | 0.00 | 0.00 | 0.000 |
| 0 | 50 | 0 | 2050 | 0.00 | 34.12 | 0.00 | 0.546 |
| 0 | 50 | 250 | 2300 | 0.00 | 30.41 | 108.70 | 0.419 |
| 10 | 50 | 250 | 2310 | 67.97 | 30.28 | 108.23 | 0.432 |
| 20 | 50 | 250 | 2320 | 135.34 | 30.15 | 107.76 | 0.439 |
| 30 | 50 | 250 | 2330 | 202.15 | 30.02 | 107.30 | 0.444 |
| 40 | 50 | 250 | 2340 | 268.38 | 29.89 | 106.84 | 0.447 |
| 50 | 50 | 250 | 2350 | 334.04 | 29.77 | 106.38 | 0.450 |
| 60 | 50 | 250 | 2360 | 399.15 | 29.64 | 105.93 | 0.450 |
| 70 | 50 | 250 | 2370 | 463.71 | 29.51 | 105.49 | 0.451 |
| 100 | 50 | 250 | 2400 | 654.17 | 29.15 | 104.17 | 0.448 |
| 150 | 50 | 250 | 2450 | 961.22 | 28.55 | 102.04 | 0.442 |
| 200 | 50 | 250 | 2500 | 1256.00 | 27.98 | 100.00 | 0.436 |
| 250 | 50 | 250 | 2550 | 1539.22 | 27.43 | 98.04 | 0.430 |

**Table A55.98 UV-visible titration of 0.040 mM 5.2 at 450 nm upon addition of 0 – 1.9 mM DNA in presence 0.1 mM POSA in buffer (25 mM MOPS, pH 7.0, 50 mM NaCl), at 25 °C.$[DNA]_{stock}$ = 15.9 mM, $[5.2]_{stock}$ = 0.84 mM, [POSA] = 1.0 mM**

| Cumulative added volume DNA µL | Added volume 5.2 µL | Total volume POSA µL | Total volume µL | [DNA] µmol $dm^{-3}$ | [5.2] µmol $dm^{-3}$ | [POSA] µmol $dm^{-3}$ | $A_{450}$ nm |
|---|---|---|---|---|---|---|---|
| 0 | 0 | 0 | 2000 | 0.00 | 0.00 | 0.00 | 0.000 |
| 0 | 100 | 0 | 2100 | 0.00 | 40.00 | 0.00 | 0.672 |
| 0 | 100 | 250 | 2350 | 0.00 | 35.74 | 106.38 | 0.545 |
| 5 | 100 | 250 | 2355 | 33.76 | 35.67 | 106.16 | 0.554 |
| 10 | 100 | 250 | 2360 | 67.37 | 35.59 | 105.93 | 0.555 |
| 20 | 100 | 250 | 2370 | 134.18 | 35.44 | 105.49 | 0.552 |
| 50 | 100 | 250 | 2400 | 331.25 | 35.00 | 104.17 | 0.552 |
| 80 | 100 | 250 | 2430 | 523.46 | 34.57 | 102.88 | 0.553 |
| 130 | 100 | 250 | 2480 | 833.47 | 33.87 | 100.81 | 0.548 |
| 180 | 100 | 250 | 2530 | 1131.23 | 33.20 | 98.81 | 0.540 |
| 230 | 100 | 250 | 2580 | 1417.44 | 32.56 | 96.90 | 0.535 |
| 280 | 100 | 250 | 2630 | 1692.78 | 31.94 | 95.06 | 0.534 |
| 330 | 100 | 250 | 2680 | 1957.84 | 31.34 | 93.28 | 0.534 |

**Table A55.99 UV-visible titration of 0.076 mM 5.4 at 434 nm upon addition of 0 – 1.9 mM DNA in presence 0.1 mM POSA in buffer (25 mM MOPS, pH 7.0, 50 mM NaCl), at 25 °C.$[DNA]_{stock}$ = 15.0 mM, $[5.4]_{stock}$ = 1.0 mM, [POSA] = 1.0 mM**

| Cumulative added volume DNA µL | Added volume 5.4 µL | Total volume POSA µL | Total volume µL | [DNA] µmol $dm^{-3}$ | [5.4] µmol $dm^{-3}$ | [POSA] µmol $dm^{-3}$ | $A_{434}$ nm |
|---|---|---|---|---|---|---|---|
| 0 | 0 | 0 | 2000 | 0.00 | 0.00 | 0.00 | 0.000 |
| 0 | 150 | 0 | 2150 | 0.00 | 76.88 | 0.00 | 0.819 |
| 0 | 150 | 250 | 2400 | 0.00 | 68.88 | 104.17 | 0.604 |
| 5 | 150 | 250 | 2410 | 33.06 | 68.73 | 103.95 | 0.590 |
| 10 | 150 | 250 | 2420 | 65.98 | 68.59 | 103.73 | 0.577 |
| 20 | 150 | 250 | 2430 | 131.40 | 68.31 | 103.31 | 0.554 |
| 50 | 150 | 250 | 2440 | 324.49 | 67.47 | 102.04 | 0.501 |
| 80 | 150 | 250 | 2450 | 512.90 | 66.65 | 100.81 | 0.468 |
| 130 | 150 | 250 | 2460 | 817.00 | 65.34 | 98.81 | 0.439 |
| 180 | 150 | 250 | 2480 | 1109.30 | 64.07 | 96.90 | 0.424 |
| 230 | 150 | 250 | 2500 | 1390.49 | 62.85 | 95.06 | 0.415 |
| 280 | 150 | 250 | 2550 | 1661.19 | 61.68 | 93.28 | 0.408 |
| 330 | 150 | 250 | 2600 | 1921.98 | 60.55 | 91.58 | 0.401 |

**Table A55.100 UV-visible titration of 0.098 mM 5.5 at 444 nm upon addition of 0 – 1.7 mM DNA in presence 0.5 mM POSA in buffer (25 mM MOPS, pH 7.0, 50 mM NaCl), at 25 °C.$[DNA]_{stock}$ = 15.9 mM, $[5.5]_{stock}$ = 0.74 mM, [POSA] = 5.0 mM**

| Cumulative added volume DNA µL | Added volume 5.5 µL | Total volume POSA µL | Total volume µL | [DNA] µmol $dm^{-3}$ | [5.5] µmol $dm^{-3}$ | [POSA] µmol $dm^{-3}$ | $A_{444\ nm}$ |
|---|---|---|---|---|---|---|---|
| 0 | 0 | 0 | 2000 | 0.00 | 0.00 | 0.00 | 0.000 |
| 0 | 200 | 0 | 2200 | 0.00 | 98.36 | 0.00 | 0.710 |
| 0 | 200 | 250 | 2450 | 0.00 | 88.33 | 510.20 | 0.611 |
| 10 | 200 | 250 | 2460 | 64.63 | 87.97 | 508.13 | 0.601 |
| 20 | 200 | 250 | 2470 | 128.74 | 87.61 | 506.07 | 0.588 |
| 30 | 200 | 250 | 2480 | 192.34 | 87.26 | 504.03 | 0.569 |
| 50 | 200 | 250 | 2500 | 318.00 | 86.56 | 500.00 | 0.560 |
| 60 | 200 | 250 | 2510 | 380.08 | 86.22 | 498.01 | 0.554 |
| 100 | 200 | 250 | 2550 | 623.53 | 84.86 | 490.20 | 0.528 |
| 150 | 200 | 250 | 2600 | 917.31 | 83.23 | 480.77 | 0.511 |
| 200 | 200 | 250 | 2650 | 1200.00 | 81.66 | 471.70 | 0.497 |
| 250 | 200 | 250 | 2700 | 1472.22 | 80.15 | 462.96 | 0.484 |
| 300 | 200 | 250 | 2750 | 1734.55 | 78.69 | 454.55 | 0.476 |

**Table A55.101 UV-visible titration of 0.017 mM 5.7 at 339 nm upon addition of 0 – 1.7 mM DNA in presence 0.1 mM POSA in buffer (25 mM MOPS, pH 7.0, 50 mM NaCl), at 25 °C.$[DNA]_{stock}$ = 15.7 mM, $[5.7]_{stock}$ = 1.3 mM, [POSA] = 1.0 mM**

| Cumulative added volume DNA µL | Added volume 5.7 µL | Total volume POSA µL | Total volume µL | [DNA] µmol $dm^{-3}$ | [5.7] µmol $dm^{-3}$ | [POSA] µmol $dm^{-3}$ | $A_{339}$ nm |
|---|---|---|---|---|---|---|---|
| 0 | 0 | 0 | 2000 | 0.00 | 0.00 | 0.00 | 0.000 |
| 0 | 25 | 0 | 2025 | 0.00 | 17.04 | 0.00 | 0.565 |
| 0 | 25 | 250 | 2275 | 0.00 | 15.16 | 109.89 | 0.400 |
| 10 | 25 | 250 | 2285 | 68.71 | 15.10 | 109.41 | 0.413 |
| 20 | 25 | 250 | 2295 | 136.82 | 15.03 | 108.93 | 0.421 |
| 30 | 25 | 250 | 2305 | 204.34 | 14.97 | 108.46 | 0.423 |
| 40 | 25 | 250 | 2315 | 271.27 | 14.90 | 107.99 | 0.423 |
| 50 | 25 | 250 | 2325 | 337.63 | 14.84 | 107.53 | 0.423 |
| 100 | 25 | 250 | 2375 | 661.05 | 14.53 | 105.26 | 0.431 |
| 150 | 25 | 250 | 2425 | 971.13 | 14.23 | 103.09 | 0.424 |
| 200 | 25 | 250 | 2475 | 1268.69 | 13.94 | 101.01 | 0.419 |
| 250 | 25 | 250 | 2525 | 1554.46 | 13.66 | 99.01 | 0.420 |
| 300 | 25 | 250 | 2575 | 1829.13 | 13.40 | 97.09 | 0.416 |

**Table A55.102 UV-visible titration of 0.014 mM 5.8 at 663 nm upon addition of 0 – 2.7 mM DNA in presence 0.1 mM POSA in buffer (25 mM MOPS, pH 7.0, 50 mM NaCl), at 25 °C.$[DNA]_{stock}$ = 15.9 mM, $[5.8]_{stock}$ = 1.0 mM, [POSA] = 1.0 mM**

| Cumulative added volume DNA µL | Added volume 5.8 µL | Total volume POSA µL | Total volume µL | [DNA] µmol $dm^{-3}$ | [5.8] µmol $dm^{-3}$ | [POSA] µmol $dm^{-3}$ | $A_{663}$ nm |
|---|---|---|---|---|---|---|---|
| 0 | 0 | 0 | 2000 | 0.00 | 0.00 | 0.00 | 0.000 |
| 0 | 30 | 0 | 2030 | 0.00 | 14.78 | 0.00 | 0.945 |
| 0 | 30 | 250 | 2280 | 0.00 | 13.16 | 109.65 | 0.460 |
| 5 | 30 | 250 | 2285 | 34.79 | 13.13 | 109.41 | 0.519 |
| 10 | 30 | 250 | 2290 | 69.43 | 13.10 | 109.17 | 0.557 |
| 15 | 30 | 250 | 2295 | 103.92 | 13.07 | 108.93 | 0.582 |
| 20 | 30 | 250 | 2300 | 138.26 | 13.04 | 108.70 | 0.597 |
| 30 | 30 | 250 | 2310 | 206.49 | 12.99 | 108.23 | 0.612 |
| 40 | 30 | 250 | 2320 | 274.14 | 12.93 | 107.76 | 0.618 |
| 50 | 30 | 250 | 2330 | 341.20 | 12.88 | 107.30 | 0.624 |
| 75 | 30 | 250 | 2355 | 506.37 | 12.74 | 106.16 | 0.627 |
| 125 | 30 | 250 | 2405 | 826.40 | 12.47 | 103.95 | 0.627 |
| 175 | 30 | 250 | 2455 | 1133.40 | 12.22 | 101.83 | 0.618 |
| 275 | 30 | 250 | 2555 | 1711.35 | 11.74 | 97.85 | 0.604 |
| 375 | 30 | 250 | 2655 | 2245.76 | 11.30 | 94.16 | 0.587 |
| 475 | 30 | 250 | 2755 | 2741.38 | 10.89 | 90.74 | 0.567 |

**Table A55.103 UV-visible titration of 0.013 mM (5.10) at 411 and 425 nm upon addition of 0 – 1.5 mM DNA in presence 0.5 mM POSA in buffer (25 mM MOPS, pH 7.0, 50 mM NaCl), at 25 °C.$[DNA]_{stock}$ = 15.7 mM, $[5.10]_{stock}$ = 1.1 mM, [POSA] = 5.0 mM**

| Cumulative added volume DNA µL | Added volume 5.10 µL | Total volume POSA µL | Total volume µL | [DNA] µmol $dm^{-3}$ | [5.10] µmol $dm^{-3}$ | [POSA] µmol $dm^{-3}$ | A 411 nm | A 425 nm |
|---|---|---|---|---|---|---|---|---|
| 0 | 0 | 0 | 2000 | 0.00 | 0.00 | 0.00 | 0.000 | 0.000 |
| 0 | 25 | 0 | 2025 | 0.00 | 13.83 | 0.00 | 0.360 | 0.314 |
| 0 | 25 | 250 | 2275 | 0.00 | 12.31 | 549.45 | 0.300 | 0.326 |
| 5 | 25 | 250 | 2280 | 34.43 | 12.28 | 548.25 | 0.307 | 0.335 |
| 10 | 25 | 250 | 2285 | 68.71 | 12.25 | 547.05 | 0.291 | 0.322 |
| 20 | 25 | 250 | 2295 | 136.82 | 12.20 | 544.66 | 0.283 | 0.318 |
| 30 | 25 | 250 | 2305 | 204.34 | 12.15 | 542.30 | 0.288 | 0.326 |
| 40 | 25 | 250 | 2315 | 271.27 | 12.10 | 539.96 | 0.272 | 0.314 |
| 50 | 25 | 250 | 2325 | 337.63 | 12.04 | 537.63 | 0.267 | 0.311 |
| 100 | 25 | 250 | 2375 | 661.05 | 11.79 | 526.32 | 0.246 | 0.302 |
| 150 | 25 | 250 | 2425 | 971.13 | 11.55 | 515.46 | 0.228 | 0.291 |
| 200 | 25 | 250 | 2475 | 1268.69 | 11.31 | 505.05 | 0.215 | 0.284 |
| 250 | 25 | 250 | 2525 | 1554.46 | 11.09 | 495.05 | 0.205 | 0.276 |

**Table A55.104 UV-visible titration of 0.021 mM 5.11 at 343 and 375 nm upon ddition of 0 – 1.9 mM DNA in presence 0.1 mM POSA in buffer (25 mM MOPS, pH 7.0, 50 mM NaCl), at 25 °C.$[DNA]_{stock}$ = 14.4 mM, $[5.11]_{stock}$ = 0.44 mM, [POSA] = 5.0 mM**

| Cumulative added volume DNA µL | Added volume 5.11 µL | Total volume POSA µL | Total volume µL | [DNA] µmol $dm^{-3}$ | [5.11] µmol $dm^{-3}$ | [POSA] µmol $dm^{-3}$ | $A_{343}$ nm | $A_{375}$ nm |
|---|---|---|---|---|---|---|---|---|
| 0 | 0 | 0 | 2000 | 0.00 | 0.00 | 0.00 | 0.000 | 0.000 |
| 0 | 100 | 0 | 2100 | 0.00 | 21.29 | 0.00 | 0.613 | 0.084 |
| 0 | 100 | 250 | 2350 | 0.00 | 19.02 | 106.38 | 0.541 | 0.103 |
| 25 | 100 | 250 | 2375 | 155.79 | 18.82 | 105.26 | 0.494 | 0.123 |
| 50 | 100 | 250 | 2400 | 308.33 | 18.63 | 104.17 | 0.462 | 0.132 |
| 75 | 100 | 250 | 2425 | 457.73 | 18.43 | 103.09 | 0.443 | 0.140 |
| 100 | 100 | 250 | 2450 | 604.08 | 18.24 | 102.04 | 0.425 | 0.146 |
| 125 | 100 | 250 | 2475 | 747.47 | 18.06 | 101.01 | 0.429 | 0.155 |
| 150 | 100 | 250 | 2500 | 888.00 | 17.88 | 100.00 | 0.414 | 0.154 |
| 200 | 100 | 250 | 2550 | 1160.78 | 17.53 | 98.04 | 0.387 | 0.153 |
| 250 | 100 | 250 | 2600 | 1423.08 | 17.19 | 96.15 | 0.373 | 0.150 |
| 300 | 100 | 250 | 2650 | 1675.47 | 16.87 | 94.34 | 0.359 | 0.148 |
| 350 | 100 | 250 | 2700 | 1918.52 | 16.56 | 92.59 | 0.346 | 0.145 |

**Table A55.105 UV-visible titration of 0.023 mM 5.12 at 367 nm upon addition of 0 – 0.76 mM DNA in presence 0.1 mM POSA in buffer (25 mM MOPS, pH 7.0, 50 mM NaCl), at 25 °C.$[DNA]_{stock}$ = 5.0 mM, $[5.12]_{stock}$ = 0.11 mM, [POSA] = 5.0 mM,10% DNSO.**

| Cumulative added volume DNA µL | Added volume 5.12 µL | Total volume POSA µL | Total volume µL | [DNA] µmol $dm^{-3}$ | [5.12] µmol $dm^{-3}$ | [POSA] µmol $dm^{-3}$ | $A_{367\ nm}$ |
|---|---|---|---|---|---|---|---|
| 0 | 0 | 0 | 2000 | 0.00 | 0.00 | 0.00 | 0.000 |
| 0 | 500 | 0 | 2500 | 0.00 | 23.40 | 0.00 | 0.632 |
| 0 | 500 | 250 | 2750 | 0.00 | 21.27 | 454.55 | 0.496 |
| 5 | 500 | 250 | 2755 | 9.07 | 21.23 | 453.72 | 0.496 |
| 10 | 500 | 250 | 2760 | 18.12 | 21.20 | 452.90 | 0.497 |
| 20 | 500 | 250 | 2770 | 36.10 | 21.12 | 451.26 | 0.498 |
| 50 | 500 | 250 | 2800 | 89.29 | 20.89 | 446.43 | 0.494 |
| 100 | 500 | 250 | 2850 | 175.44 | 20.53 | 438.60 | 0.485 |
| 200 | 500 | 250 | 2950 | 338.98 | 19.83 | 423.73 | 0.469 |
| 300 | 500 | 250 | 3050 | 491.80 | 19.18 | 409.84 | 0.458 |
| 400 | 500 | 250 | 3150 | 634.92 | 18.57 | 396.83 | 0.445 |
| 500 | 500 | 250 | 3250 | 769.23 | 18.00 | 384.62 | 0.433 |

**A55 UV-visible titrations for all compounds with PAA**

| **Table A55.106 Absorbance for 0.026 mM 5.1 at 444nm upon addition of 0 – 0.056 mM PAA, in 25 mM MOPS, pH 7.0, 50 mM NaCl, at 25 °C. $[PAA]_{stock}$ = 0.54 mM, $[5.1]_{stock}$ = 0.29 mM** | | | | | |
|---|---|---|---|---|---|
| **Cumulative added volume PAA µL** | **Added volume 5.1 µL** | **Total volume µL** | **[PAA] µmol $dm^{-3}$** | **[5.1] µmol $dm^{-3}$** | **$A_{444\ nm}$** |
| 0 | 0 | 2000 | 0.00 | 0.00 | 0.000 |
| 0 | 200 | 2200 | 0.00 | 26.55 | 0.425 |
| 1 | 200 | 2201 | 0.23 | 26.53 | 0.388 |
| 2 | 200 | 2202 | 0.45 | 26.52 | 0.359 |
| 3 | 200 | 2203 | 0.68 | 26.51 | 0.340 |
| 4 | 200 | 2204 | 0.91 | 26.50 | 0.334 |
| 6 | 200 | 2206 | 1.36 | 26.47 | 0.315 |
| 8 | 200 | 2208 | 1.81 | 26.45 | 0.301 |
| 10 | 200 | 2210 | 2.26 | 26.43 | 0.290 |
| 12 | 200 | 2212 | 2.71 | 26.40 | 0.286 |
| 22 | 200 | 2222 | 4.93 | 26.28 | 0.267 |
| 32 | 200 | 2232 | 7.10 | 26.16 | 0.245 |
| 52 | 200 | 2252 | 11.39 | 25.93 | 0.218 |
| 82 | 200 | 2282 | 17.58 | 25.59 | 0.192 |
| 132 | 200 | 2332 | 27.71 | 25.04 | 0.178 |
| 182 | 200 | 2382 | 38.20 | 24.52 | 0.182 |
| 282 | 200 | 2482 | 56.81 | 23.53 | 0.161 |

**Table A55.107 Absorbance for 0.040 mM 5.2 at 448 nm upon addition of 0 – 0.28 mM PAA, in 25 mM MOPS, pH 7.0, 50 mM NaCl, at 25 °C. $[PAA]_{stock}$ = 1.6 mM, $[5.2]_{stock}$ = 0.85 mM, 10% DMSO**

| Cumulative added volume PAA µL | Added volume 5.2 µL | Total volume µL | [PAA] µmol $dm^{-3}$ | [5.2] µmol $dm^{-3}$ | A 448 nm |
|---|---|---|---|---|---|
| 0 | 0 | 2000 | 0.00 | 0.00 | 0.000 |
| 0 | 100 | 2100 | 0.00 | 40.52 | 0.669 |
| 5 | 100 | 2105 | 3.80 | 40.43 | 0.644 |
| 10 | 100 | 2110 | 7.58 | 40.33 | 0.631 |
| 15 | 100 | 2115 | 11.35 | 40.24 | 0.590 |
| 20 | 100 | 2120 | 15.09 | 40.14 | 0.560 |
| 25 | 100 | 2125 | 18.82 | 40.05 | 0.529 |
| 30 | 100 | 2130 | 22.54 | 39.95 | 0.508 |
| 40 | 100 | 2140 | 29.91 | 39.77 | 0.482 |
| 60 | 100 | 2160 | 44.44 | 39.40 | 0.449 |
| 100 | 100 | 2200 | 72.73 | 38.68 | 0.427 |
| 150 | 100 | 2250 | 106.67 | 37.82 | 0.428 |
| 250 | 100 | 2350 | 170.21 | 36.21 | 0.384 |
| 350 | 100 | 2450 | 228.57 | 34.73 | 0.373 |
| 450 | 100 | 2550 | 282.35 | 33.37 | 0.352 |

**Table A55.108 Absorbance for 0.044 mM 5.4 at 434 nm upon addition of 0 – 0.37 mM PAA, in 25 mM MOPS, pH 7.0, 50 mM NaCl, at 25 °C. $[PAA]_{stock}$ = 1.6 mM, $[5.4]_{stock}$ = 0.94 mM, 10% DMSO**

| Cumulative added volume PAA µL | Added volume 5.4 µL | Total volume µL | [PAA] µmol $dm^{-3}$ | [5.4] µmol $dm^{-3}$ | A $_{434}$ nm |
|---|---|---|---|---|---|
| 0 | 0 | 2000 | 0.00 | 0.00 | 0.000 |
| 0 | 100 | 2100 | 0.00 | 44.90 | 0.485 |
| 5 | 100 | 2105 | 3.80 | 44.80 | 0.477 |
| 15 | 100 | 2115 | 11.35 | 44.59 | 0.475 |
| 50 | 100 | 2150 | 37.21 | 43.86 | 0.467 |
| 100 | 100 | 2200 | 72.73 | 42.86 | 0.455 |
| 150 | 100 | 2250 | 106.67 | 41.91 | 0.447 |
| 250 | 100 | 2350 | 170.21 | 40.13 | 0.428 |
| 350 | 100 | 2450 | 228.57 | 38.49 | 0.412 |
| 450 | 100 | 2550 | 282.35 | 36.98 | 0.396 |
| 550 | 100 | 2650 | 332.08 | 35.58 | 0.382 |
| 650 | 100 | 2750 | 378.18 | 34.29 | 0.372 |

**Table A55.109 Absorbance for 0.070 mM 5.5 at 444 nm upon addition of 0 – 1.2 mM PAA, in 25 mM MOPS, pH 7.0, 50 mM NaCl, at 25 °C.$[PAA]_{stock}$ = 7.3 mM, $[5.5]_{stock}$ = 1.8 mM**

| Cumulative added volume PAA µL | Added volume 5.5 µL | Total volume µL | [PAA] µmol $dm^{-3}$ | [5.5] µmol $dm^{-3}$ | A 444 nm |
|---|---|---|---|---|---|
| 0 | 2000 | 0 | 0.00 | 0.00 | 0.000 |
| 80 | 2080 | 80 | 0.00 | 70.77 | 0.760 |
| 80 | 2090 | 80 | 34.93 | 70.43 | 0.744 |
| 80 | 2100 | 80 | 69.52 | 70.10 | 0.733 |
| 80 | 2150 | 80 | 237.67 | 68.47 | 0.709 |
| 80 | 2200 | 80 | 398.18 | 66.91 | 0.688 |
| 80 | 2250 | 80 | 551.56 | 65.42 | 0.671 |
| 80 | 2300 | 80 | 698.26 | 64.00 | 0.656 |
| 80 | 2400 | 80 | 973.33 | 61.33 | 0.643 |
| 80 | 2450 | 80 | 1102.45 | 60.08 | 0.631 |
| 80 | 2500 | 80 | 1226.40 | 58.88 | 0.620 |

**Table A55.110 Absorbance for 0.011 mM 5.7 at 339 and 390 nm upon addition of 0 – 0.13 mM PAA, in 25 mM MOPS, pH 7.0, 50 mM NaCl, at 25 °C. $[PAA]_{stock}$ = 1.2 mM, $[5.7]_{stock}$ = 0.81 mM, 10% DMSO**

| Cumulative added volume PAA µL | Added volume 5.7 µL | Total volume µL | [PAA] µmol $dm^{-3}$ | [5.7] µmol $dm^{-3}$ | A $_{339}$ nm | A $_{390}$ nm |
|---|---|---|---|---|---|---|
| 0 | 0 | 2000 | 0.00 | 0.00 | 0.000 | 0.000 |
| 0 | 30 | 2030 | 0.00 | 11.97 | 0.405 | 0.013 |
| 5 | 30 | 2035 | 2.97 | 11.94 | 0.385 | 0.015 |
| 10 | 30 | 2040 | 5.93 | 11.91 | 0.376 | 0.018 |
| 15 | 30 | 2045 | 8.88 | 11.88 | 0.367 | 0.025 |
| 25 | 30 | 2055 | 14.72 | 11.82 | 0.348 | 0.023 |
| 35 | 30 | 2065 | 20.51 | 11.77 | 0.331 | 0.027 |
| 60 | 30 | 2090 | 34.74 | 11.63 | 0.304 | 0.034 |
| 100 | 30 | 2130 | 56.81 | 11.41 | 0.281 | 0.035 |
| 150 | 30 | 2180 | 83.26 | 11.15 | 0.261 | 0.046 |
| 200 | 30 | 2230 | 108.52 | 10.90 | 0.244 | 0.043 |
| 250 | 30 | 2280 | 132.68 | 10.66 | 0.234 | 0.045 |

**Table A55.111 Absorbance for 0.0060 mM 5.8 at 663 nm upon addition of 0 – 1.8 mM PAA, in 25 mM MOPS, pH 7.0, 50 mM NaCl, at 25 °C. $[PAA]_{stock}$ = 10.0 mM, $[5.8]_{stock}$ = 0.60 mM**

| Cumulative added volume PAA µL | Added volume 5.8 µL | Total volume µL | [PAA] µmol $dm^{-3}$ | [5.8] µmol $dm^{-3}$ | A $_{663}$ nm |
|---|---|---|---|---|---|
| 0 | 0 | 2000 | 0.00 | 0.00 | 0.000 |
| 0 | 20 | 2020 | 0.00 | 6.03 | 0.404 |
| 5 | 20 | 2025 | 24.69 | 6.02 | 0.354 |
| 10 | 20 | 2030 | 49.26 | 6.00 | 0.323 |
| 15 | 20 | 2035 | 73.71 | 5.99 | 0.311 |
| 20 | 20 | 2040 | 98.04 | 5.97 | 0.301 |
| 30 | 20 | 2050 | 146.34 | 5.94 | 0.300 |
| 40 | 20 | 2060 | 194.17 | 5.91 | 0.287 |
| 60 | 20 | 2080 | 288.46 | 5.86 | 0.284 |
| 100 | 20 | 2120 | 471.70 | 5.75 | 0.273 |
| 150 | 20 | 2170 | 691.24 | 5.61 | 0.275 |
| 250 | 20 | 2270 | 1101.32 | 5.37 | 0.261 |
| 350 | 20 | 2370 | 1476.79 | 5.14 | 0.248 |
| 450 | 20 | 2470 | 1821.86 | 4.93 | 0.238 |

**Table A55.112 Absorbance for 0.027 mM 5.10 at 411 nm upon addition of 0 – 0.25 mM PAA, in 25 mM MOPS, pH 7.0, 50 mM NaCl, at 25 °C. $[PAA]_{stock}$ = 9.7 mM, $[5.10]_{stock}$ = 1.8 mM**

| Cumulative added volume PAA µL | Added volume 5.10 µL | Total volume µL | [PAA] µmol $dm^{-3}$ | [5.10] µmol $dm^{-3}$ | $A_{411\ nm}$ |
|---|---|---|---|---|---|
| 0 | 0 | 2000 | 0.00 | 0.00 | 0.000 |
| 0 | 30 | 2030 | 0.00 | 27.13 | 0.703 |
| 30 | 30 | 2060 | 14.24 | 26.74 | 0.698 |
| 60 | 30 | 2090 | 28.08 | 26.35 | 0.687 |
| 100 | 30 | 2130 | 45.92 | 25.86 | 0.671 |
| 150 | 30 | 2180 | 67.30 | 25.27 | 0.656 |
| 200 | 30 | 2230 | 87.72 | 24.70 | 0.641 |
| 300 | 30 | 2330 | 125.94 | 23.64 | 0.613 |
| 400 | 30 | 2430 | 161.00 | 22.67 | 0.588 |
| 500 | 30 | 2530 | 193.30 | 21.77 | 0.565 |
| 600 | 30 | 2630 | 223.14 | 20.94 | 0.543 |
| 700 | 30 | 2730 | 250.79 | 20.18 | 0.522 |

**Table A55.113 Absorbance for 0.010 mM 5.11 at 342 nm upon addition of 0 – 0.28 mM PAA, in 25 mM MOPS, pH 7.0, 50 mM NaCl, at 25 °C. $[PAA]_{stock}$ = 1.6 mM, $[5.11]_{stock}$ = 0.046 mM**

| Cumulative added volume PAA µL | Added volume 5.11 µL | Total volume µL | [PAA] µmol $dm^{-3}$ | [5.11] µmol $dm^{-3}$ | A 342 nm |
|---|---|---|---|---|---|
| 0 | 0 | 2000 | 0.00 | 0.00 | 0.000 |
| 0 | 100 | 2100 | 0.00 | 10.14 | 0.294 |
| 5 | 100 | 2105 | 23.75 | 10.12 | 0.302 |
| 10 | 100 | 2110 | 47.39 | 10.09 | 0.303 |
| 20 | 100 | 2120 | 94.34 | 10.05 | 0.305 |
| 50 | 100 | 2150 | 232.56 | 9.91 | 0.300 |
| 100 | 100 | 2200 | 454.55 | 9.68 | 0.291 |
| 200 | 100 | 2300 | 869.57 | 9.26 | 0.269 |
| 300 | 100 | 2400 | 1250.00 | 8.88 | 0.265 |
| 400 | 100 | 2500 | 1600.00 | 8.52 | 0.256 |
| 600 | 100 | 2700 | 2222.22 | 7.89 | 0.232 |
| 800 | 100 | 2900 | 2758.62 | 7.34 | 0.225 |
| 1000 | 100 | 3100 | 3225.81 | 6.87 | 0.202 |
| 1200 | 100 | 3300 | 3636.36 | 6.45 | 0.192 |

**Table A55.114 Absorbance for 0.015 mM 5.12 at 369 nm upon addition of 0 – 0.28 mM PAA, in 25 mM MOPS, pH 7.0, 50 mM NaCl, at 25 °C. $[PAA]_{stock}$ = 1.6 mM, $[5.12]_{stock}$ = 0.046 mM, 10% DMSO**

| Cumulative added volume PAA µL | Added volume 5.12 µL | Total volume µL | [PAA] µmol $dm^{-3}$ | [5.12] µmol $dm^{-3}$ | $A_{369\ nm}$ |
|---|---|---|---|---|---|
| 0 | 0 | 2000 | 0.00 | 0.00 | 0.000 |
| 0 | 1000 | 3000 | 0.00 | 15.53 | 0.418 |
| 10 | 1000 | 3010 | 5.32 | 15.48 | 0.402 |
| 20 | 1000 | 3020 | 10.60 | 15.43 | 0.406 |
| 30 | 1000 | 3030 | 15.84 | 15.38 | 0.391 |
| 40 | 1000 | 3040 | 21.05 | 15.33 | 0.398 |
| 100 | 1000 | 3100 | 51.61 | 15.03 | 0.398 |
| 150 | 1000 | 3150 | 76.19 | 14.79 | 0.379 |
| 200 | 1000 | 3200 | 100.00 | 14.56 | 0.381 |
| 250 | 1000 | 3250 | 123.08 | 14.34 | 0.365 |
| 350 | 1000 | 3350 | 167.16 | 13.91 | 0.361 |
| 450 | 1000 | 3450 | 208.70 | 13.50 | 0.337 |
| 550 | 1000 | 3550 | 247.89 | 13.12 | 0.325 |
| 650 | 1000 | 3650 | 284.93 | 12.76 | 0.323 |

**A55 UV-visible titrations for all compounds with DNA in presence of PAA**

**Table A55.115 UV-visible titration of 0.063 mM 5.1 at 444 nm upon addition of 0 – 1.5 mM DNA in presence 0.5 mM PAA in buffer (25 mM MOPS, pH 7.0, 50 mM NaCl, at 25 °C.$[DNA]_{stock}$ = 15.2 mM, $[5.1]_{stock}$ = 1.3 mM, [PAA] = 5.0 mM**

| Cumulative added volume DNA µL | Added volume 5.1 µL | Total volume PAA µL | Total volume µL | [DNA] µmol $dm^{-3}$ | [5.1] µmol $dm^{-3}$ | [PAA] µmol $dm^{-3}$ | $A_{444}$ nm |
|---|---|---|---|---|---|---|---|
| 0 | 0 | 0 | 2000 | 0.00 | 0.00 | 0.00 | 0.000 |
| 0 | 100 | 0 | 2100 | 0.00 | 63.33 | 0.00 | 1.014 |
| 0 | 100 | 250 | 2350 | 0.00 | 56.60 | 531.91 | 0.613 |
| 10 | 100 | 250 | 2360 | 66.53 | 56.36 | 529.66 | 0.700 |
| 20 | 100 | 250 | 2370 | 132.49 | 56.12 | 527.43 | 0.736 |
| 30 | 100 | 250 | 2380 | 197.90 | 55.88 | 525.21 | 0.769 |
| 40 | 100 | 250 | 2390 | 262.76 | 55.65 | 523.01 | 0.798 |
| 50 | 100 | 250 | 2400 | 327.08 | 55.42 | 520.83 | 0.817 |
| 60 | 100 | 250 | 2410 | 390.87 | 55.19 | 518.67 | 0.817 |
| 70 | 100 | 250 | 2420 | 454.13 | 54.96 | 516.53 | 0.828 |
| 100 | 100 | 250 | 2450 | 640.82 | 54.29 | 510.20 | 0.833 |
| 150 | 100 | 250 | 2500 | 942.00 | 53.20 | 500.00 | 0.830 |
| 200 | 100 | 250 | 2550 | 1231.37 | 52.16 | 490.20 | 0.821 |
| 250 | 100 | 250 | 2600 | 1509.62 | 51.15 | 480.77 | 0.811 |

**Table A55.116 UV-visible titration of 0.022 mM 5.2 at 451 nm upon addition of 0 – 1.5 mM DNA in presence 0.7 mM PAA in buffer (25 mM MOPS, pH 7.0, 50 mM NaCl, at 25 °C.$[DNA]_{stock}$ = 15.7 mM, $[5.2]_{stock}$ = 0.92 mM, [PAA] = 7.0 mM**

| Cumulative added volume DNA µL | Added volume 5.2 µL | Total volume PAA µL | Total volume µL | [DNA] µmol $dm^{-3}$ | [5.2] µmol $dm^{-3}$ | [PAA] µmol $dm^{-3}$ | A $_{451}$ nm |
|---|---|---|---|---|---|---|---|
| 0 | 0 | 0 | 2000 | 0.00 | 0.00 | 0.00 | 0.000 |
| 0 | 50 | 0 | 2050 | 0.00 | 22.54 | 0.00 | 0.371 |
| 0 | 50 | 250 | 2300 | 0.00 | 20.09 | 760.87 | 0.228 |
| 5 | 50 | 250 | 2305 | 34.06 | 20.04 | 759.22 | 0.246 |
| 10 | 50 | 250 | 2310 | 67.97 | 20.00 | 757.58 | 0.258 |
| 20 | 50 | 250 | 2320 | 135.34 | 19.91 | 754.31 | 0.269 |
| 30 | 50 | 250 | 2330 | 202.15 | 19.83 | 751.07 | 0.275 |
| 60 | 50 | 250 | 2360 | 399.15 | 19.58 | 741.53 | 0.279 |
| 100 | 50 | 250 | 2400 | 654.17 | 19.25 | 729.17 | 0.282 |
| 150 | 50 | 250 | 2450 | 961.22 | 18.86 | 714.29 | 0.283 |
| 200 | 50 | 250 | 2500 | 1256.00 | 18.48 | 700.00 | 0.281 |
| 250 | 50 | 250 | 2550 | 1539.22 | 18.12 | 686.27 | 0.278 |

**Table A55.117 UV-visible titration of 0.055 mM 5.4 at 434 nm upon addition of 0 – 1.5 mM DNA in presence 0.7 mM PAA in buffer (25 mM MOPS, pH 7.0, 50 mM NaCl, at 25 °C.$[DNA]_{stock}$ = 15.7 mM, $[5.4]_{stock}$ = 1.17 mM, [PAA] = 7.0 mM**

| Cumulative added volume DNA µL | Added volume 5.4 µL | Total volume PAA µL | Total volume µL | [DNA] µmol $dm^{-3}$ | [5.4] µmol $dm^{-3}$ | [PAA] µmol $dm^{-3}$ | $A_{434\ nm}$ |
|---|---|---|---|---|---|---|---|
| 0 | 0 | 0 | 2000 | 0.00 | 0.00 | 0.00 | 0.000 |
| 0 | 100 | 0 | 2100 | 0.00 | 55.71 | 0.00 | 0.605 |
| 0 | 100 | 250 | 2350 | 0.00 | 49.79 | 744.68 | 0.541 |
| 5 | 100 | 250 | 2355 | 33.33 | 49.68 | 743.10 | 0.501 |
| 10 | 100 | 250 | 2360 | 66.53 | 49.58 | 741.53 | 0.470 |
| 20 | 100 | 250 | 2370 | 132.49 | 49.37 | 738.40 | 0.423 |
| 30 | 100 | 250 | 2380 | 197.90 | 49.16 | 735.29 | 0.390 |
| 40 | 100 | 250 | 2390 | 262.76 | 48.95 | 732.22 | 0.370 |
| 50 | 100 | 250 | 2400 | 327.08 | 48.75 | 729.17 | 0.357 |
| 100 | 100 | 250 | 2450 | 640.82 | 47.76 | 714.29 | 0.336 |
| 150 | 100 | 250 | 2500 | 942.00 | 46.80 | 700.00 | 0.319 |
| 200 | 100 | 250 | 2550 | 1231.37 | 45.88 | 686.27 | 0.307 |
| 250 | 100 | 250 | 2600 | 1509.62 | 45.00 | 673.08 | 0.299 |

**Table A55.118 UV-visible titration of 0.036 mM 5.5 at 444 nm upon addition of 0 – 1.7 mM DNA in presence 0.1 mM PAA in buffer (25 mM MOPS, pH 7.0, 50 mM NaCl, at 25 °C.$[DNA]_{stock}$ = 15.7 mM, $[5.5]_{stock}$ = 0.74 mM, [PAA] = 1.0 mM**

| Cumulative added volume DNA µL | Added volume 5.5 µL | Total volume PAA µL | Total volume µL | [DNA] µmol $dm^{-3}$ | [5.5] µmol $dm^{-3}$ | [PAA] µmol $dm^{-3}$ | A $_{444}$ nm |
|---|---|---|---|---|---|---|---|
| 0 | 0 | 0 | 2000 | 0.00 | 0.00 | 0.00 | 0.000 |
| 0 | 100 | 0 | 2100 | 0.00 | 36.00 | 0.00 | 0.389 |
| 0 | 100 | 250 | 2350 | 0.00 | 32.17 | 106.38 | 0.349 |
| 10 | 100 | 250 | 2360 | 66.53 | 32.03 | 105.93 | 0.322 |
| 20 | 100 | 250 | 2370 | 132.49 | 31.90 | 105.49 | 0.310 |
| 30 | 100 | 250 | 2380 | 197.90 | 31.76 | 105.04 | 0.302 |
| 40 | 100 | 250 | 2390 | 262.76 | 31.63 | 104.60 | 0.292 |
| 50 | 100 | 250 | 2400 | 327.08 | 31.50 | 104.17 | 0.289 |
| 100 | 100 | 250 | 2450 | 640.82 | 30.86 | 102.04 | 0.278 |
| 150 | 100 | 250 | 2500 | 942.00 | 30.24 | 100.00 | 0.268 |
| 200 | 100 | 250 | 2550 | 1231.37 | 29.65 | 98.04 | 0.263 |
| 250 | 100 | 250 | 2600 | 1509.62 | 29.08 | 96.15 | 0.255 |
| 300 | 100 | 250 | 2650 | 1777.36 | 28.53 | 94.34 | 0.250 |

**Table A55.119 UV-visible titration of 0.019 mM 5.7 at 339 nm upon addition of 0 – 2.2 mM DNA in presence 0.1 mM PAA in buffer (25 mM MOPS, pH 7.0, 50 mM NaCl, at 25 °C.$[DNA]_{stock}$ = 17.7 mM, $[5.7]_{stock}$ = 1.5 mM, [PAA] = 1.1 mM**

| Cumulative added volume DNA µL | Added volume 5.7 µL | Total volume PAA µL | Total volume µL | [DNA] µmol $dm^{-3}$ | [5.7] µmol $dm^{-3}$ | [PAA] µmol $dm^{-3}$ | A $_{339}$ nm |
|---|---|---|---|---|---|---|---|
| 0 | 25 | 0 | 2025 | 0.00 | 19.63 | 0.00 | 0.663 |
| 0 | 25 | 250 | 2025 | 0.00 | 19.63 | 135.80 | 0.639 |
| 10 | 25 | 250 | 2285 | 74.40 | 17.40 | 120.35 | 0.413 |
| 20 | 25 | 250 | 2295 | 148.15 | 17.32 | 119.83 | 0.424 |
| 30 | 25 | 250 | 2305 | 221.26 | 17.25 | 119.31 | 0.435 |
| 40 | 25 | 250 | 2315 | 293.74 | 17.17 | 118.79 | 0.447 |
| 50 | 25 | 250 | 2325 | 365.59 | 17.10 | 118.28 | 0.457 |
| 100 | 25 | 250 | 2375 | 715.79 | 16.74 | 115.79 | 0.466 |
| 150 | 25 | 250 | 2425 | 1051.55 | 16.39 | 113.40 | 0.474 |
| 200 | 25 | 250 | 2475 | 1373.74 | 16.06 | 111.11 | 0.483 |
| 250 | 25 | 250 | 2525 | 1683.17 | 15.74 | 108.91 | 0.489 |
| 300 | 25 | 250 | 2575 | 1980.58 | 15.44 | 106.80 | 0.486 |
| 350 | 25 | 250 | 2625 | 2266.67 | 15.14 | 104.76 | 0.490 |

**Table 55.120 UV-visible titration of 0.012 mM 5.8 at 664 nm upon addition of 0 – 1.8 mM DNA in presence 0.5 mM PAA in buffer (25 mM MOPS, pH 7.0, 50 mM NaCl, at 25 °C.$[DNA]_{stock}$ = 15.9 mM, $[5.8]_{stock}$ = 0.83 mM, [PAA] = 5.0 mM**

| Cumulative added volume DNA µL | Added volume 5.8 µL | Total volume PAA µL | Total volume µL | [DNA] µmol $dm^{-3}$ | [5.8] µmol $dm^{-3}$ | [PAA] µmol $dm^{-3}$ | A 664 nm |
|---|---|---|---|---|---|---|---|
| 0 | 0 | 0 | 2000 | 0.00 | 0.00 | 0.00 | 0.000 |
| 0 | 25 | 0 | 2030 | 0.00 | 12.37 | 0.00 | 0.870 |
| 0 | 25 | 250 | 2280 | 0.00 | 11.01 | 548.25 | 0.777 |
| 5 | 25 | 250 | 2285 | 34.79 | 10.99 | 547.05 | 0.692 |
| 10 | 25 | 250 | 2290 | 69.43 | 10.97 | 545.85 | 0.648 |
| 15 | 25 | 250 | 2295 | 103.92 | 10.94 | 544.66 | 0.624 |
| 20 | 25 | 250 | 2300 | 138.26 | 10.92 | 543.48 | 0.609 |
| 30 | 25 | 250 | 2310 | 206.49 | 10.87 | 541.13 | 0.597 |
| 50 | 25 | 250 | 2330 | 341.20 | 10.78 | 536.48 | 0.581 |
| 80 | 25 | 250 | 2360 | 538.98 | 10.64 | 529.66 | 0.573 |
| 130 | 25 | 250 | 2410 | 857.68 | 10.42 | 518.67 | 0.564 |
| 200 | 25 | 250 | 2480 | 1282.26 | 10.13 | 504.03 | 0.553 |
| 300 | 25 | 250 | 2580 | 1848.84 | 9.73 | 484.50 | 0.531 |

**Table A55.121 UV-visible titration of 0.026 mM 5.10 at 411 and 432 nm upon ddition of 0 – 1.8 mM DNA in presence 0.1 mM PAA in buffer (25 mM MOPS, pH 7.0, 50 mM NaCl), at 25 °C.$[DNA]_{stock}$ = 15.7 mM, $[5.10]_{stock}$ = 1.09 mM, [PAA] = 1.0 mM**

| Cumulative added volume DNA µL | Added volume 5.10 µL | Total volume PAA µL | Total volume µL | [DNA] µmol $dm^{-3}$ | [5.10] µmol $dm^{-3}$ | [PAA] µmol $dm^{-3}$ | $A_{411}$ nm | $A_{432}$ nm |
|---|---|---|---|---|---|---|---|---|
| 0 | 0 | 0 | 2000 | 0.00 | 0.00 | 0.00 | 0.000 | 0.000 |
| 0 | 50 | 0 | 2050 | 0.00 | 26.59 | 0.00 | 0.697 | 0.491 |
| 0 | 50 | 250 | 2300 | 0.00 | 23.70 | 108.70 | 0.627 | 0.441 |
| 10 | 50 | 250 | 2310 | 67.97 | 23.59 | 108.23 | 0.595 | 0.473 |
| 20 | 50 | 250 | 2320 | 135.34 | 23.49 | 107.76 | 0.571 | 0.497 |
| 30 | 50 | 250 | 2330 | 202.15 | 23.39 | 107.30 | 0.549 | 0.513 |
| 40 | 50 | 250 | 2340 | 268.38 | 23.29 | 106.84 | 0.530 | 0.525 |
| 50 | 50 | 250 | 2350 | 334.04 | 23.19 | 106.38 | 0.515 | 0.535 |
| 100 | 50 | 250 | 2400 | 654.17 | 22.71 | 104.17 | 0.466 | 0.560 |
| 150 | 50 | 250 | 2450 | 961.22 | 22.24 | 102.04 | 0.438 | 0.570 |
| 200 | 50 | 250 | 2500 | 1256.00 | 21.80 | 100.00 | 0.416 | 0.569 |
| 250 | 50 | 250 | 2550 | 1539.22 | 21.37 | 98.04 | 0.402 | 0.565 |
| 300 | 50 | 250 | 2600 | 1811.54 | 20.96 | 96.15 | 0.389 | 0.560 |

**Table A55.122 UV-visible titration of 0.022 mM 5.11 at 343 and 375 nm upon ddition of 0 – 1.9 mM DNA in presence 0.1 mM PAA in buffer (25 mM MOPS, pH 7.0, 50 mM NaCl), at 25 °C.$[DNA]_{stock}$ = 14.8 mM, $[5.11]_{stock}$ = 0.47 mM, [PAA] = 1.6 mM**

| Cumulative added volume DNA µL | Added volume 5.11 µL | Total volume PAA µL | Total volume µL | [DNA] µmol $dm^{-3}$ | [5.11] µmol $dm^{-3}$ | [PAA] µmol $dm^{-3}$ | $A_{343}$ nm | $A_{375}$ nm |
|---|---|---|---|---|---|---|---|---|
| 0 | 0 | 0 | 2000 | 0.00 | 0.00 | 0.00 | 0.000 | 0.000 |
| 0 | 100 | 0 | 2100 | 0.00 | 22.71 | 0.00 | 0.614 | 0.074 |
| 0 | 100 | 250 | 2350 | 0.00 | 20.30 | 106.38 | 0.566 | 0.072 |
| 25 | 100 | 250 | 2375 | 155.79 | 20.08 | 105.26 | 0.487 | 0.106 |
| 50 | 100 | 250 | 2400 | 308.33 | 19.88 | 104.17 | 0.451 | 0.121 |
| 75 | 100 | 250 | 2425 | 457.73 | 19.67 | 103.09 | 0.435 | 0.130 |
| 100 | 100 | 250 | 2450 | 604.08 | 19.47 | 102.04 | 0.419 | 0.136 |
| 125 | 100 | 250 | 2475 | 747.47 | 19.27 | 101.01 | 0.414 | 0.140 |
| 150 | 100 | 250 | 2500 | 888.00 | 19.08 | 100.00 | 0.398 | 0.141 |
| 200 | 100 | 250 | 2550 | 1160.78 | 18.71 | 98.04 | 0.391 | 0.143 |
| 250 | 100 | 250 | 2600 | 1423.08 | 18.35 | 96.15 | 0.382 | 0.141 |
| 300 | 100 | 250 | 2650 | 1675.47 | 18.00 | 94.34 | 0.375 | 0.142 |
| 350 | 100 | 250 | 2700 | 1918.52 | 17.67 | 92.59 | 0.373 | 0.142 |

**Table A55.123 UV-visible titration of 0.014 mM 5.12 at 343 and 375 nm upon ddition of 0 – 0.68 mM DNA in presence 0.5 mM PAA in buffer (25 mM MOPS, pH 7.0, 50 mM NaCl), at 25 °C.$[DNA]_{stock}$ = 5.0 mM, $[5.12]_{stock}$ = 0.14 mM, [PAA] = 5.0 mM**

| Cumulative added volume DNA µL | Added volume 5.12 µL | Total volume PAA µL | Total volume µL | [DNA] µmol $dm^{-3}$ | [5.12] µmol $dm^{-3}$ | [PAA] µmol $dm^{-3}$ | $A_{367}$ nm | $A_{430}$ nm |
|---|---|---|---|---|---|---|---|---|
| 0 | 0 | 0 | 2000 | 0.00 | 0.00 | 0.00 | 0.000 | 0.000 |
| 0 | 250 | 0 | 2250 | 0.00 | 14.22 | 0.00 | 0.345 | 0.071 |
| 0 | 250 | 250 | 2500 | 0.00 | 12.80 | 500.00 | 0.294 | 0.061 |
| 10 | 250 | 250 | 2510 | 19.92 | 12.75 | 498.01 | 0.244 | 0.109 |
| 20 | 250 | 250 | 2520 | 39.68 | 12.70 | 496.03 | 0.218 | 0.133 |
| 30 | 250 | 250 | 2530 | 59.29 | 12.65 | 494.07 | 0.210 | 0.146 |
| 40 | 250 | 250 | 2540 | 78.74 | 12.60 | 492.13 | 0.203 | 0.153 |
| 50 | 250 | 250 | 2550 | 98.04 | 12.55 | 490.20 | 0.201 | 0.158 |
| 75 | 250 | 250 | 2575 | 145.63 | 12.43 | 485.44 | 0.199 | 0.165 |
| 100 | 250 | 250 | 2600 | 192.31 | 12.31 | 480.77 | 0.198 | 0.168 |
| 150 | 250 | 250 | 2650 | 283.02 | 12.08 | 471.70 | 0.194 | 0.171 |
| 200 | 250 | 250 | 2700 | 370.37 | 11.85 | 462.96 | 0.189 | 0.172 |
| 300 | 250 | 250 | 2800 | 535.71 | 11.43 | 446.43 | 0.187 | 0.174 |
| 350 | 250 | 250 | 2900 | 689.66 | 11.03 | 431.03 | 0.183 | 0.175 |

**Table A55.124 Absorbance for 0.031 mM 6.1 at 444nm upon addition of 0 – 0.28 mM SDS, in 25 mM MOPS, pH 7.0, 50 mM NaCl, at 25 °C.$[SDS]_{stock}$ = 1.1 mM, $[6.1]_{stock}$ = 0.65mM, 10%DMSO**

| Cumulative added volume SDS µL | Added volume 6.1 µL | Total volume µL | [SDS] µmol $dm^{-3}$ | [6.1] µmol $dm^{-3}$ | A $_{444}$ nm |
|---|---|---|---|---|---|
| 0 | 0 | 2000 | 0 | 0.00 | 0.00 |
| 0 | 100 | 2100 | 0 | 0.0 | 0.48 |
| 10 | 100 | 2110 | 5.6 | 31.1 | 0.45 |
| 20 | 100 | 2120 | 11.1 | 30.9 | 0.42 |
| 30 | 100 | 2130 | 16.6 | 30.8 | 0.39 |
| 40 | 100 | 2140 | 22.1 | 30.7 | 0.37 |
| 50 | 100 | 2150 | 27.4 | 30.5 | 0.35 |
| 60 | 100 | 2160 | 32.8 | 30.4 | 0.33 |
| 80 | 100 | 2180 | 43.3 | 30.2 | 0.30 |
| 120 | 100 | 2220 | 63.8 | 30.0 | 0.27 |
| 180 | 100 | 2280 | 93.2 | 29.4 | 0.25 |
| 240 | 100 | 2340 | 121.0 | 28.6 | 0.23 |
| 300 | 100 | 2400 | 147.5 | 27.9 | 0.22 |
| 360 | 100 | 2460 | 172.7 | 27.2 | 0.21 |
| 460 | 100 | 2560 | 212.0 | 26.5 | 0.20 |
| 560 | 100 | 2660 | 248.4 | 25.5 | 0.19 |
| 660 | 100 | 2760 | 282.2 | 24.5 | 0.18 |

**Table A55.125 Absorbance for 0.044 mM 6.2 at 447 and 558 nm upon addition of 0 – 0.32 mM SDS, in 25 mM MOPS, pH 7.0, 50 mM NaCl, at 25 °C. $[SDS]_{stock}$ = 1.2 mM, $[6.2]_{stock}$ = 0.93 mM**

| Cumulative added volume SDS µL | Added volume 6.2 µL | Total volumeµL | [SDS] µmol $dm^{-3}$ | [6.2] µmol $dm^{-3}$ | $A_{447}$ nm | $A_{558}$ nm |
|---|---|---|---|---|---|---|
| 0 | 0 | 2000 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0 | 100 | 2100 | 0.00 | 44.71 | 0.74 | 0.01 |
| 30 | 100 | 2130 | 17.04 | 44.08 | 0.69 | 0.01 |
| 60 | 100 | 2160 | 33.61 | 43.47 | 0.67 | 0.01 |
| 90 | 100 | 2190 | 49.73 | 42.88 | 0.66 | 0.02 |
| 120 | 100 | 2220 | 65.41 | 42.30 | 0.64 | 0.05 |
| 150 | 100 | 2250 | 80.67 | 41.73 | 0.61 | 0.11 |
| 180 | 100 | 2280 | 95.53 | 41.18 | 0.58 | 0.16 |
| 220 | 100 | 2320 | 114.74 | 40.47 | 0.54 | 0.20 |
| 280 | 100 | 2380 | 142.35 | 39.45 | 0.50 | 0.22 |
| 360 | 100 | 2460 | 177.07 | 38.17 | 0.47 | 0.23 |
| 460 | 100 | 2560 | 217.42 | 36.68 | 0.45 | 0.23 |
| 560 | 100 | 2660 | 254.74 | 35.30 | 0.43 | 0.23 |
| 660 | 100 | 2760 | 289.35 | 34.02 | 0.42 | 0.22 |
| 760 | 100 | 2860 | 321.54 | 32.83 | 0.41 | 0.21 |

**Table A55.126 Absorbance for 0.022 mM 6.4 at 436 nm upon addition of 0 – 0.45 mM SDS, in 25 mM MOPS, pH 7.0, 50 mM NaCl, at 25 °C. $[SDS]_{stock}$ = 1.1 mM, $[6.4]_{stock}$ = 0.46 mM, %10DMSO**

| Cumulative added volume SDS µL | Added volume 6.4 µL | Total volume µL | [SDS] µmol $dm^{-3}$ | [6.4] µmol $dm^{-3}$ | A $_{436}$ nm |
|---|---|---|---|---|---|
| 0 | 0 | 2000 | 0.00 | 0.00 | 0.00 |
| 0 | 100 | 2100 | 0.00 | 22.05 | 0.24 |
| 30 | 100 | 2130 | 16.62 | 21.74 | 0.24 |
| 60 | 100 | 2160 | 32.78 | 21.44 | 0.24 |
| 90 | 100 | 2190 | 48.49 | 21.14 | 0.25 |
| 120 | 100 | 2220 | 63.78 | 20.86 | 0.24 |
| 150 | 100 | 2250 | 78.67 | 20.58 | 0.24 |
| 200 | 100 | 2300 | 102.61 | 20.13 | 0.24 |
| 300 | 100 | 2400 | 147.50 | 19.29 | 0.23 |
| 400 | 100 | 2500 | 188.80 | 18.52 | 0.22 |
| 500 | 100 | 2600 | 226.92 | 17.81 | 0.21 |
| 600 | 100 | 2700 | 262.22 | 17.15 | 0.21 |
| 700 | 100 | 2800 | 295.00 | 16.54 | 0.20 |
| 800 | 100 | 2900 | 325.52 | 15.97 | 0.20 |
| 900 | 100 | 3000 | 354.00 | 15.43 | 0.19 |
| 1000 | 100 | 3100 | 380.65 | 14.94 | 0.18 |
| 1100 | 100 | 3200 | 405.63 | 14.47 | 0.18 |

**Table A55.127 Absorbance for 0.071 mM 6.5 at 444 nm upon addition of 0 – 0.36 mM SDS, in 25 mM MOPS, pH 7.0, 50 mM NaCl, at 25 °C. $[SDS]_{stock}$ = 1.1 mM, $[6.5]_{stock}$ = 1.8 mM,10%DMSO**

| Cumulative added volume SDS µL | Added volume 6.5 µL | Total volume µL | [SDS] µmol $dm^{-3}$ | [6.5] µmol $dm^{-3}$ | A 444 nm |
|---|---|---|---|---|---|
| 0 | 0 | 2000 | 0.00 | 0.00 | 0.00 |
| 0 | 80 | 2080 | 0.00 | 71.92 | 0.78 |
| 10 | 80 | 2090 | 5.65 | 71.58 | 0.76 |
| 20 | 80 | 2100 | 11.24 | 71.24 | 0.75 |
| 50 | 80 | 2130 | 27.70 | 70.23 | 0.74 |
| 100 | 80 | 2180 | 54.13 | 68.62 | 0.72 |
| 150 | 80 | 2230 | 79.37 | 67.09 | 0.70 |
| 200 | 80 | 2280 | 103.51 | 65.61 | 0.69 |
| 300 | 80 | 2380 | 148.74 | 62.86 | 0.66 |
| 400 | 80 | 2480 | 190.32 | 60.32 | 0.63 |
| 500 | 80 | 2580 | 228.68 | 57.98 | 0.61 |
| 600 | 80 | 2680 | 264.18 | 55.82 | 0.59 |
| 700 | 80 | 2780 | 297.12 | 53.81 | 0.57 |
| 800 | 80 | 2880 | 327.78 | 51.94 | 0.55 |
| 900 | 80 | 2980 | 356.38 | 50.20 | 0.53 |

**Table A55.128 Absorbance for 0.026 mM 6.7 at 339 and 415 nm upon addition of 0 – 0.15 mM SDS, in 25 mM MOPS, pH 7.0, 50 mM NaCl, at 25 °C. $[SDS]_{stock}$ = 1.1 mM, $[6.7]_{stock}$ = 1.09 mM**

| Cumulative added volume SDS µL | Added volume 6.7 µL | Total volume µL | [SDS] µmol $dm^{-3}$ | [6.7] µmol $dm^{-3}$ | A 339 nm | A 415 nm |
|---|---|---|---|---|---|---|
| 0 | 0 | 2000 | 0.00 | 0.00 | 0.00 | 0.000 |
| 0 | 50 | 2050 | 0.00 | 26.51 | 0.69 | 0.007 |
| 10 | 50 | 2060 | 5.73 | 26.38 | 0.64 | 0.010 |
| 20 | 50 | 2070 | 11.40 | 26.26 | 0.60 | 0.007 |
| 30 | 50 | 2080 | 17.02 | 26.13 | 0.55 | 0.011 |
| 40 | 50 | 2090 | 22.58 | 26.00 | 0.54 | 0.013 |
| 50 | 50 | 2100 | 28.10 | 25.88 | 0.52 | 0.018 |
| 100 | 50 | 2150 | 54.88 | 25.28 | 0.47 | 0.044 |
| 150 | 50 | 2200 | 80.45 | 24.70 | 0.40 | 0.080 |
| 200 | 50 | 2250 | 104.89 | 24.16 | 0.34 | 0.114 |
| 250 | 50 | 2300 | 128.26 | 23.63 | 0.29 | 0.148 |
| 300 | 50 | 2350 | 150.64 | 23.13 | 0.26 | 0.171 |

**Table A55.129 Absorbance for 0.012 mM 6.8 at 665 nm upon addition of 0 – 0.36 mM SDS, in 25 mM MOPS, pH 7.0, 50 mM NaCl, at 25 °C. $[SDS]_{stock}$ = 1.1 mM, $[6.8]_{stock}$ = 0.89 mM, 10%DMSO**

| Cumulative added volume SDS µL | Added volume 6.8 µL | Total volume µL | [SDS] µmol $dm^{-3}$ | [6.8] µmol $dm^{-3}$ | $A_{665\ nm}$ |
|---|---|---|---|---|---|
| 0 | 0 | 2000 | 0.00 | 0.00 | 0.00 |
| 0 | 30 | 2030 | 0.00 | 12.69 | 0.85 |
| 30 | 30 | 2060 | 17.18 | 12.51 | 0.82 |
| 60 | 30 | 2090 | 33.88 | 12.33 | 0.80 |
| 100 | 30 | 2130 | 55.40 | 12.10 | 0.77 |
| 150 | 30 | 2180 | 81.19 | 11.82 | 0.75 |
| 200 | 30 | 2230 | 105.83 | 11.56 | 0.73 |
| 300 | 30 | 2330 | 151.93 | 11.06 | 0.70 |
| 400 | 30 | 2430 | 194.24 | 10.60 | 0.67 |
| 500 | 30 | 2530 | 233.20 | 10.19 | 0.64 |
| 600 | 30 | 2630 | 269.20 | 9.80 | 0.62 |
| 700 | 30 | 2730 | 302.56 | 9.44 | 0.59 |
| 800 | 30 | 2830 | 333.57 | 9.11 | 0.57 |
| 900 | 30 | 2930 | 362.46 | 8.80 | 0.55 |

**Table A55.130 Absorbance for 0.0039 mM 6.10 at 411 nm upon addition of 0 – 0.36 mM SDS, in 25 mM MOPS, pH 7.0, 50 mM NaCl, at 25 °C. $[SDS]_{stock}$ = 1.1 mM, $[6.10]_{stock}$ =0.25 mM, 10%DMSO**

| Cumulative added volume SDS µL | Added volume 6.10 µL | Total volume µL | [SDS] µmol $dm^{-3}$ | [6.10] µmol $dm^{-3}$ | $A_{411nm}$ |
|---|---|---|---|---|---|
| 0 | 0 | 2000 | 0.00 | 0.00 | 0.000 |
| 0 | 30 | 2030 | 0.00 | 3.69 | 0.701 |
| 25 | 30 | 2055 | 14.36 | 3.65 | 0.689 |
| 50 | 30 | 2080 | 28.37 | 3.61 | 0.678 |
| 100 | 30 | 2130 | 55.40 | 3.52 | 0.659 |
| 150 | 30 | 2180 | 81.19 | 3.44 | 0.641 |
| 200 | 30 | 2230 | 105.83 | 3.36 | 0.624 |
| 300 | 30 | 2330 | 151.93 | 3.22 | 0.595 |
| 400 | 30 | 2430 | 194.24 | 3.09 | 0.569 |
| 500 | 30 | 2530 | 233.20 | 2.96 | 0.547 |
| 600 | 30 | 2630 | 269.20 | 2.85 | 0.524 |
| 700 | 30 | 2730 | 302.56 | 2.75 | 0.506 |

**Table A55.131 Absorbance for 0.026 mM 6.11 at 344 nm upon addition of 0 – 0.34 mM SDS, in 25 mM MOPS, pH 7.0, 50 mM NaCl, at 25 °C. $[SDS]_{stock}$ = 1.1 mM, $[6.11]_{stock}$ = 0.41 mM, 10%DMSO**

| Cumulative added volume SDS µL | Added volume 6.11 µL | Total volume µL | [SDS] µmol $dm^{-3}$ | [6.11] µmol $dm^{-3}$ | $A_{344\ nm}$ |
|---|---|---|---|---|---|
| 0 | 0 | 2000 | 0.00 | 0.00 | 0.000 |
| 0 | 200 | 2200 | 0.00 | 37.45 | 1.011 |
| 50 | 200 | 2250 | 26.22 | 36.62 | 0.983 |
| 100 | 200 | 2300 | 51.30 | 35.83 | 0.960 |
| 150 | 200 | 2350 | 75.32 | 35.06 | 0.934 |
| 200 | 200 | 2400 | 98.33 | 34.33 | 0.908 |
| 300 | 200 | 2500 | 141.60 | 32.96 | 0.871 |
| 400 | 200 | 2600 | 181.54 | 31.69 | 0.843 |
| 500 | 200 | 2700 | 218.52 | 30.52 | 0.811 |
| 600 | 200 | 2800 | 252.86 | 29.43 | 0.779 |
| 700 | 200 | 2900 | 284.83 | 28.41 | 0.755 |
| 800 | 200 | 3000 | 314.67 | 27.47 | 0.722 |
| 900 | 200 | 3100 | 342.58 | 26.58 | 0.700 |

**Table A55.132 Absorbance for 0.019 mM 6.12 at 370 and 404 nm upon addition of 0 – 0.22 mM SDS, in 25 mM MOPS, pH 7.0, 50 mM NaCl, at 25 °C. $[SDS]_{stock}$ = 1.2 mM, $[6.12]_{stock}$ = 0.13 mM, 10%DMSO**

| Cumulative added volume SDS µL | Added volume 6.12 µL | Total volume µL | [SDS] µmol $dm^{-3}$ | [6.12] µmol $dm^{-3}$ | A 370 nm | A 404 nm |
|---|---|---|---|---|---|---|
| 0 | 0 | 1750 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0 | 300 | 2050 | 0.00 | 19.61 | 0.53 | 0.30 |
| 30 | 300 | 2080 | 17.45 | 19.33 | 0.51 | 0.31 |
| 60 | 300 | 2110 | 34.41 | 19.05 | 0.49 | 0.37 |
| 90 | 300 | 2140 | 50.89 | 18.79 | 0.46 | 0.42 |
| 120 | 300 | 2170 | 66.91 | 18.53 | 0.45 | 0.44 |
| 150 | 300 | 2200 | 82.50 | 18.27 | 0.44 | 0.44 |
| 180 | 300 | 2230 | 97.67 | 18.03 | 0.43 | 0.44 |
| 220 | 300 | 2270 | 117.27 | 17.71 | 0.43 | 0.44 |
| 280 | 300 | 2330 | 145.41 | 17.25 | 0.42 | 0.43 |
| 360 | 300 | 2410 | 180.75 | 16.68 | 0.41 | 0.41 |
| 460 | 300 | 2510 | 221.75 | 16.02 | 0.40 | 0.40 |

| **Table A55.133 Absorbance for 0.033 mM 6.1at 443 nm upon addition of 0 – 0.265 mM CTAB in 25 mM MOPS, pH 7.0, 50 mM NaCl, at 25 °C.$[CTAB]_{stock}$ = 1.6 mM, $[6.1]_{stock}$ = 0.74 mM, 10%DMSO** | | | | | |
|---|---|---|---|---|---|
| **Cumulative added volume CTAB µL** | **Added volume 6.1 µL** | **Total volume µL** | **[CTAB] µmol $dm^{-3}$** | **[6.1] µmol $dm^{-3}$** | **$A_{443\ nm}$** |
| 0 | 0 | 2000 | 0.00 | 0.00 | 0.000 |
| 0 | 100 | 2100 | 0.00 | 33.62 | 0.538 |
| 20 | 100 | 2120 | 15.66 | 33.30 | 0.525 |
| 30 | 100 | 2130 | 23.38 | 33.15 | 0.521 |
| 50 | 100 | 2150 | 38.60 | 32.84 | 0.515 |
| 100 | 100 | 2200 | 75.45 | 32.09 | 0.512 |
| 150 | 100 | 2250 | 110.67 | 31.38 | 0.504 |
| 200 | 100 | 2300 | 144.35 | 30.70 | 0.497 |
| 300 | 100 | 2400 | 207.50 | 29.42 | 0.485 |
| 400 | 100 | 2500 | 265.60 | 28.24 | 0.463 |

**Table A55.134 Absorbance for 0.049 mM 6.2 at 449 nm upon addition of 0 – 0.265 mM CTAB in 25 mM MOPS, pH 7.0, 50 mM NaCl, at 25 °C.$[CTAB]_{stock}$ = 1.6 mM, $[6.2]_{stock}$ = 1.03 mM, 10%DMSO**

| Cumulative added volume CTAB µL | Added volume 6.2 µL | Total volume µL | [CTAB] µmol $dm^{-3}$ | [6.2] µmol $dm^{-3}$ | $A_{449\ nm}$ |
|---|---|---|---|---|---|
| 0 | 0 | 2000 | 0.00 | 0.00 | 0.000 |
| 0 | 100 | 2100 | 0.00 | 49.05 | 0.814 |
| 50 | 100 | 2150 | 38.60 | 47.91 | 0.797 |
| 150 | 100 | 2250 | 110.67 | 45.78 | 0.781 |
| 200 | 100 | 2300 | 144.35 | 44.78 | 0.770 |
| 300 | 100 | 2400 | 207.50 | 42.92 | 0.761 |
| 400 | 100 | 2500 | 265.60 | 41.20 | 0.739 |
| 500 | 100 | 2600 | 319.23 | 39.62 | 0.716 |
| 600 | 100 | 2700 | 368.89 | 38.15 | 0.672 |
| 700 | 100 | 2800 | 415.00 | 36.79 | 0.651 |
| 800 | 100 | 2900 | 457.93 | 35.52 | 0.623 |

**Table A55.135 Absorbance for 0.010 mM 6.4 at 436 nm upon addition of 0 – 0.42 mM CTAB in 25 mM MOPS, pH 7.0, 50 mM NaCl, at 25 °C.$[CTAB]_{stock}$ = 1.6 mM, $[6.4]_{stock}$ = 0.43 mM, 10%DMSO**

| Cumulative added volume CTAB µL | Added volume 6.4 µL | Total volume µL | [CTAB] µmol $dm^{-3}$ | [6.4] µmol $dm^{-3}$ | $A_{436\ nm}$ |
|---|---|---|---|---|---|
| 0 | 0 | 2000 | 0.00 | 0.00 | 0.000 |
| 0 | 50 | 2050 | 0.00 | 10.51 | 0.113 |
| 50 | 50 | 2100 | 39.52 | 10.26 | 0.116 |
| 100 | 50 | 2150 | 77.21 | 10.02 | 0.117 |
| 150 | 50 | 2200 | 113.18 | 9.80 | 0.120 |
| 200 | 50 | 2250 | 147.56 | 9.58 | 0.117 |
| 250 | 50 | 2300 | 180.43 | 9.37 | 0.115 |
| 300 | 50 | 2350 | 211.91 | 9.17 | 0.114 |
| 400 | 50 | 2450 | 271.02 | 8.80 | 0.109 |
| 500 | 50 | 2550 | 325.49 | 8.45 | 0.103 |
| 600 | 50 | 2650 | 375.85 | 8.13 | 0.100 |
| 700 | 50 | 2750 | 422.55 | 7.84 | 0.096 |

**Table A55.136 Absorbance for 0.048 mM 6.5 at 444 nm upon addition of 0 – 0.37 mM CTAB in 25 mM MOPS, pH 7.0, 50 mM NaCl, at 25 °C.[CTAB] $_{stock}$ = 1.6 mM, [6.5] $_{stock}$ = 1.1 mM, 10%DMSO**

| Cumulative added volume CTAB µL | Added volume 6.5 µL | Total volume µL | [CTAB] µmol dm$^{-3}$ | [6.5] µmol dm$^{-3}$ | A $_{444\ nm}$ |
|---|---|---|---|---|---|
| 0 | 0 | 2000 | 0.00 | 0.00 | 0.000 |
| 0 | 100 | 2100 | 0.00 | 48.10 | 0.772 |
| 25 | 100 | 2125 | 19.53 | 47.53 | 0.755 |
| 50 | 100 | 2150 | 38.60 | 46.98 | 0.749 |
| 100 | 100 | 2200 | 75.45 | 45.91 | 0.756 |
| 150 | 100 | 2250 | 110.67 | 44.89 | 0.758 |
| 200 | 100 | 2300 | 144.35 | 43.91 | 0.746 |
| 250 | 100 | 2350 | 176.60 | 42.98 | 0.730 |
| 300 | 100 | 2400 | 207.50 | 42.08 | 0.718 |
| 350 | 100 | 2450 | 237.14 | 41.22 | 0.696 |
| 400 | 100 | 2500 | 265.60 | 40.40 | 0.675 |
| 450 | 100 | 2550 | 292.94 | 39.61 | 0.651 |
| 500 | 100 | 2600 | 319.23 | 38.85 | 0.633 |
| 550 | 100 | 2650 | 344.53 | 38.11 | 0.611 |
| 600 | 100 | 2700 | 368.89 | 37.41 | 0.588 |

**Table A55.137 Absorbance for 0.013 mM 6.8 at 665 nm upon addition of 0 – 0.51 mM CTAB in 25 mM MOPS, pH 7.0, 50 mM NaCl, at 25 °C. $[CTAB]_{stock}$ = 1.6 mM, $[6.8]_{stock}$ = 0.93 mM, 10%DMSO**

| Cumulative added volume CTAB µL | Added volume 6.8 µL | Total volume µL | [CTAB] µmol $dm^{-3}$ | [6.8] µmol $dm^{-3}$ | A 665 nm |
|---|---|---|---|---|---|
| 0 | 0 | 2000 | 0.00 | 0.00 | 0.000 |
| 0 | 30 | 2030 | 0.00 | 13.88 | 0.930 |
| 50 | 30 | 2080 | 39.90 | 13.54 | 0.911 |
| 100 | 30 | 2130 | 77.93 | 13.23 | 0.894 |
| 150 | 30 | 2180 | 114.22 | 12.92 | 0.840 |
| 200 | 30 | 2230 | 148.88 | 12.63 | 0.805 |
| 300 | 30 | 2330 | 213.73 | 12.09 | 0.775 |
| 400 | 30 | 2430 | 273.25 | 11.59 | 0.745 |
| 500 | 30 | 2530 | 328.06 | 11.13 | 0.719 |
| 600 | 30 | 2630 | 378.71 | 10.71 | 0.694 |
| 700 | 30 | 2730 | 425.64 | 10.32 | 0.671 |
| 800 | 30 | 2830 | 453.24 | 9.61 | 0.648 |
| 900 | 30 | 2930 | 509.90 | 9.61 | 0.628 |

| **Table A55.138 Absorbance for 0.031 mM 6.9 at 489 and 500 nm upon addition of 0 – 0.27 mM CTAB in 25 mM MOPS, pH 7.0, 50 mM NaCl, at 25 °C. [CTAB]stock = 1.1 mM, [6.9] stock = 0.1 mM, 10%DMSO** | | | | | | |
|---|---|---|---|---|---|---|
| **Cumulative added volume CTAB µL** | **Added volume 6.9 µL** | **Total volume µL** | **[CTAB] µmol $dm^{-3}$** | **[6.9] µmol $dm^{-3}$** | **$A_{489}$ nm** | **$A_{500}$ nm** |
| 0 | 0 | 2000 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0 | 130 | 2130 | 0.00 | 6.10 | 0.31 | 0.23 |
| 50 | 130 | 2180 | 27.06 | 5.96 | 0.30 | 0.23 |
| 100 | 130 | 2230 | 52.91 | 5.83 | 0.29 | 0.23 |
| 150 | 130 | 2280 | 77.63 | 5.70 | 0.27 | 0.26 |
| 200 | 130 | 2330 | 101.29 | 5.58 | 0.25 | 0.29 |
| 250 | 130 | 2380 | 123.95 | 5.46 | 0.25 | 0.30 |
| 300 | 130 | 2430 | 145.68 | 5.35 | 0.24 | 0.31 |
| 350 | 130 | 2480 | 166.53 | 5.24 | 0.24 | 0.31 |
| 400 | 130 | 2530 | 186.56 | 5.14 | 0.24 | 0.31 |
| 450 | 130 | 2580 | 205.81 | 5.04 | 0.23 | 0.30 |
| 550 | 130 | 2680 | 242.16 | 4.85 | 0.22 | 0.30 |
| 650 | 130 | 2780 | 275.90 | 4.68 | 0.22 | 0.29 |

**Table A55.139 Absorbance for 0.015 mM 6.10 at 411 nm upon addition of 0 – 0.48 mM CTAB in 25 mM MOPS, pH 7.0, 50 mM NaCl, at 25 °C. $[CTAB]_{stock}$ = 1.6 mM, $[6.10]_{stock}$ = 1.03 mM, 10%DMSO**

| Cumulative added volume CTAB µL | Added volume 6.10 µL | Total volume µL | [CTAB] µmol $dm^{-3}$ | [6.10] µmol $dm^{-3}$ | $A_{411\ nm}$ |
|---|---|---|---|---|---|
| 0 | 0 | 2000 | 0.00 | 0.00 | 0.000 |
| 0 | 30 | 2030 | 0.00 | 15.22 | 0.598 |
| 50 | 30 | 2080 | 39.90 | 14.86 | 0.581 |
| 100 | 30 | 2130 | 77.93 | 14.51 | 0.567 |
| 150 | 30 | 2180 | 114.22 | 14.17 | 0.553 |
| 250 | 30 | 2280 | 182.02 | 13.55 | 0.540 |
| 350 | 30 | 2380 | 244.12 | 12.98 | 0.528 |
| 450 | 30 | 2480 | 301.21 | 12.46 | 0.505 |
| 550 | 30 | 2580 | 353.88 | 11.98 | 0.484 |
| 650 | 30 | 2680 | 402.61 | 11.53 | 0.465 |
| 750 | 30 | 2780 | 447.84 | 11.12 | 0.448 |
| 850 | 30 | 2880 | 489.93 | 10.73 | 0.431 |

| **Table A55.140 Absorbance for 0.019 mM 6.11 at 345 nm upon addition of 0 – 0.53 mM CTAB in 25 mM MOPS, pH 7.0, 50 mM NaCl, at 25 °C. $[CTAB]_{stock}$ = 1.6 mM, $[6.11]_{stock}$ = 0.41 mM, 10%DMSO** | | | | | |
|---|---|---|---|---|---|
| **Cumulative added volume CTAB µL** | **Added volume 6.11 µL** | **Total volume µL** | **[CTAB] µmol $dm^{-3}$** | **[6.11] µmol $dm^{-3}$** | **$A_{345\ nm}$** |
| 0 | 0 | 2000 | 0.00 | 0.00 | 0.000 |
| 0 | 100 | 2100 | 0.00 | 19.71 | 0.533 |
| 100 | 100 | 2200 | 75.45 | 18.82 | 0.509 |
| 200 | 100 | 2300 | 144.35 | 18.00 | 0.487 |
| 300 | 100 | 2400 | 207.50 | 17.25 | 0.451 |
| 400 | 100 | 2500 | 265.60 | 16.56 | 0.434 |
| 500 | 100 | 2600 | 319.23 | 15.92 | 0.419 |
| 600 | 100 | 2700 | 368.89 | 15.33 | 0.404 |
| 700 | 100 | 2800 | 415.00 | 14.79 | 0.391 |
| 800 | 100 | 2900 | 457.93 | 14.28 | 0.378 |
| 900 | 100 | 3000 | 498.00 | 13.80 | 0.367 |
| 1000 | 100 | 3100 | 535.48 | 13.35 | 0.357 |

**Table A55.141 Absorbance for *0.020 mM 6.12 at 367 nm upon addition of 0 – 0.40 mM CTAB in 25 mM MOPS, pH 7.0, 50 mM NaCl, at 25 °C*** **. $[CTAB]_{stock}$ = 1.6 mM, $[6.12]_{stock}$ = 1.1 mM, 10%DMSO**

| Cumulative added volume CTAB µL | Added volume 6.12 µL | Total volume µL | [CTAB] µmol $dm^{-3}$ | [6.12] µmol $dm^{-3}$ | $A_{367\ nm}$ |
|---|---|---|---|---|---|
| 0 | 0 | 2000 | 0.00 | 0.00 | 0.000 |
| 0 | 500 | 2500 | 0.00 | 202.00 | 0.697 |
| 50 | 500 | 2550 | 32.55 | 198.04 | 0.689 |
| 100 | 500 | 2600 | 63.85 | 194.23 | 0.670 |
| 150 | 500 | 2650 | 93.96 | 190.57 | 0.663 |
| 200 | 500 | 2700 | 122.96 | 187.04 | 0.651 |
| 300 | 500 | 2800 | 177.86 | 180.36 | 0.629 |
| 400 | 500 | 2900 | 228.97 | 174.14 | 0.609 |
| 500 | 500 | 3000 | 276.67 | 168.33 | 0.588 |
| 600 | 500 | 3100 | 321.29 | 162.90 | 0.571 |
| 700 | 500 | 3200 | 363.13 | 157.81 | 0.555 |
| 800 | 500 | 3300 | 402.42 | 153.03 | 0.538 |

**Table A55.142 Absorbance for 0.067 mM 6.14 at 442 nm upon addition of 0 – 0.53 mM CTAB in 25 mM MOPS, pH 7.0, 50 mM NaCl, at 25 °C. $[CTAB]_{stock}$ = 1.6 mM, $[6.14]_{stock}$ =1.4 mM, 10%DMSO**

| Cumulative added volume CTAB µL | Added volume 6.14 µL | Total volume µL | [CTAB] µmol $dm^{-3}$ | [6.14] µmol $dm^{-3}$ | A $_{442}$ nm |
|---|---|---|---|---|---|
| 0 | 0 | 2000 | 0.00 | 0.00 | 0.00 |
| 0 | 100 | 2100 | 0.00 | 67.62 | 0.60 |
| 50 | 100 | 2150 | 38.60 | 66.05 | 0.57 |
| 100 | 100 | 2200 | 75.45 | 64.55 | 0.52 |
| 150 | 100 | 2250 | 110.67 | 63.11 | 0.49 |
| 200 | 100 | 2300 | 144.35 | 61.74 | 0.49 |
| 250 | 100 | 2350 | 176.60 | 60.43 | 0.49 |
| 300 | 100 | 2400 | 207.50 | 59.17 | 0.49 |
| 400 | 100 | 2500 | 265.60 | 56.80 | 0.48 |
| 500 | 100 | 2600 | 319.23 | 54.62 | 0.48 |
| 600 | 100 | 2700 | 368.89 | 52.59 | 0.47 |
| 700 | 100 | 2800 | 415.00 | 50.71 | 0.46 |
| 800 | 100 | 2900 | 457.93 | 48.97 | 0.44 |
| 900 | 100 | 3000 | 498.00 | 47.33 | 0.43 |
| 1000 | 100 | 3100 | 535.48 | 45.81 | 0.42 |

**Table A55.143 Absorbance for 0.024 mM 6.12 at 367and 430 nm upon addition of 0 – 1.4 mM DNA in presence of Tween-20, at 25 °C.25 mM MOPS, pH 7.0, 50 mM NaCl. [DNA] $_{stock}$ = 15.5 mM, [6.12] $_{stock}$ =0.12 mM, 1%Tween 20**

| Cumulative added volume DNA µL | Added volume 6.12 µL | Total volume µL | [DNA] µmol dm$^{-3}$ | [6.12] µmol dm$^{-3}$ | A $_{368}$ nm | A $_{430}$ nm |
|---|---|---|---|---|---|---|
| 0 | 0 | 2000 | 0.00 | 0.00 | 0.000 | 0.000 |
| 0 | 500 | 2500 | 0.00 | 24.20 | 0.654 | 0.225 |
| 2 | 500 | 2502 | 12.39 | 24.18 | 0.638 | 0.241 |
| 4 | 500 | 2504 | 24.76 | 24.16 | 0.619 | 0.251 |
| 10 | 500 | 2510 | 61.75 | 24.10 | 0.581 | 0.285 |
| 20 | 500 | 2520 | 123.02 | 24.01 | 0.536 | 0.324 |
| 30 | 500 | 2530 | 183.79 | 23.91 | 0.505 | 0.351 |
| 40 | 500 | 2540 | 244.09 | 23.82 | 0.484 | 0.369 |
| 60 | 500 | 2560 | 363.28 | 23.63 | 0.457 | 0.391 |
| 100 | 500 | 2600 | 596.15 | 23.27 | 0.430 | 0.407 |
| 150 | 500 | 2650 | 877.36 | 22.83 | 0.412 | 0.412 |
| 200 | 500 | 2700 | 1148.15 | 22.41 | 0.401 | 0.410 |
| 250 | 500 | 2750 | 1409.09 | 22.00 | 0.390 | 0.407 |

**Table A55.144 Absorbance for 0.036 mM 6.13 at 446 nm upon addition of 0 – 2.5mM DNA in presence of Tween-20, in 25 mM MOPS, pH 7.0, 50 mM NaCl, at 25 °C,1 vol.% Tween-20. $[DNA]_{stock}$ = 15.5 mM, $[6.13]_{stock}$ = 1.6 mM**

| Cumulative added volume DNA µL | Added volume 6.13 µL | Total volume µL | [DNA] µmol $dm^{-3}$ | [6.13] µmol $dm^{-3}$ | A $_{446}$ nm |
|---|---|---|---|---|---|
| 0 | 0 | 2000 | 0.00 | 0.00 | 0.000 |
| 0 | 45 | 2045 | 0.00 | 36.35 | 0.785 |
| 10 | 45 | 2055 | 75.57 | 36.18 | 0.750 |
| 30 | 45 | 2075 | 224.53 | 35.83 | 0.718 |
| 60 | 45 | 2105 | 442.66 | 35.32 | 0.687 |
| 100 | 45 | 2145 | 724.01 | 34.66 | 0.644 |
| 150 | 45 | 2195 | 1061.28 | 33.87 | 0.607 |
| 200 | 45 | 2245 | 1383.52 | 33.11 | 0.573 |
| 250 | 45 | 2295 | 1691.72 | 32.39 | 0.550 |
| 300 | 45 | 2345 | 1986.78 | 31.70 | 0.521 |
| 350 | 45 | 2395 | 2269.52 | 31.04 | 0.510 |
| 400 | 45 | 2445 | 2540.70 | 30.40 | 0.500 |

**Table A55.145 Absorbance for 0.021 mM 6.15 at 446 nm upon addition of 0 – 2.0 mM DNA in presence of Tween-20, in 25 mM MOPS, pH 7.0, 50 mM NaCl, at 25 °C,1 vol.% Tween-20. $[DNA]_{stock}$ = 15.5 mM, $[6.15]_{stock}$ = 0.16 mM**

| Cumulative added volume DNA µL | Added volume 6.15 µL | Total volume µL | [DNA] µmol $dm^{-3}$ | [6.15] µmol $dm^{-3}$ | A $_{446}$ nm |
|---|---|---|---|---|---|
| 0 | 0 | 2000 | 0.00 | 0.00 | 0.000 |
| 0 | 300 | 2300 | 0.00 | 21.91 | 0.237 |
| 10 | 300 | 2310 | 67.10 | 21.82 | 0.237 |
| 20 | 300 | 2320 | 133.62 | 21.72 | 0.231 |
| 30 | 300 | 2330 | 199.57 | 21.63 | 0.226 |
| 60 | 300 | 2360 | 394.07 | 21.36 | 0.219 |
| 90 | 300 | 2390 | 583.68 | 21.09 | 0.213 |
| 120 | 300 | 2420 | 768.60 | 20.83 | 0.205 |
| 150 | 300 | 2450 | 948.98 | 20.57 | 0.201 |
| 200 | 300 | 2500 | 1240.00 | 20.16 | 0.194 |
| 250 | 300 | 2550 | 1519.61 | 19.76 | 0.185 |
| 350 | 300 | 2650 | 2047.17 | 19.02 | 0.174 |