Supporting Information

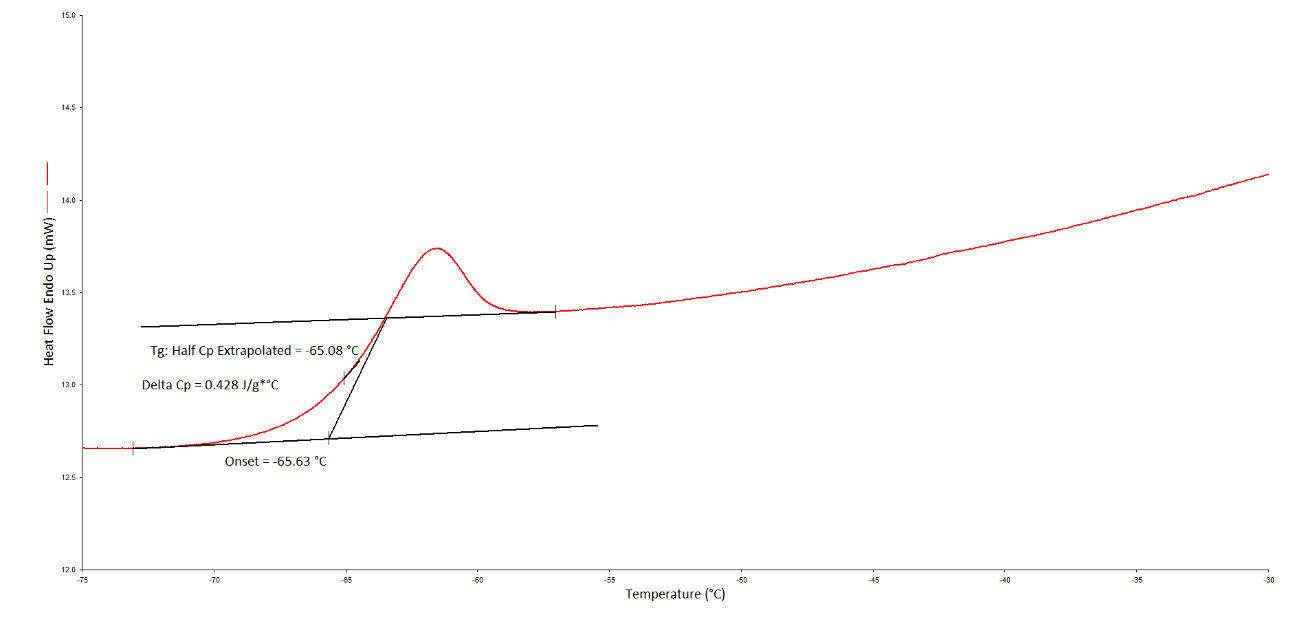
Water resistant surface modification of hydrophobic polymers with water soluble surfactant additives

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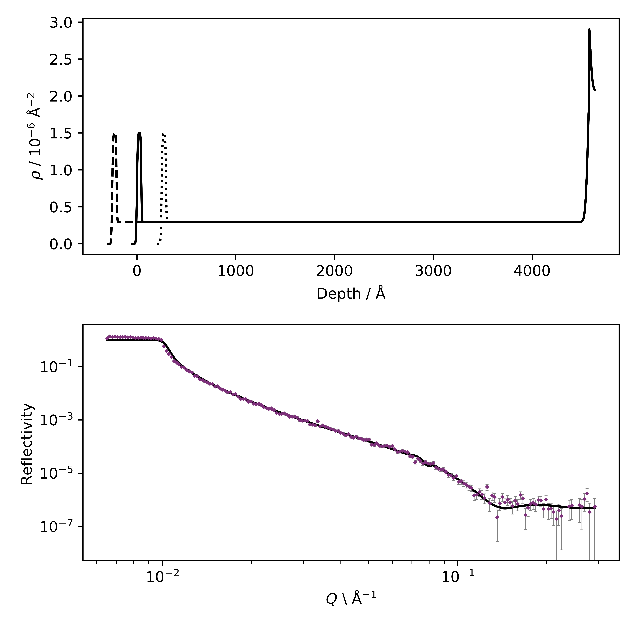
Chart, line chart

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**Figure S**. DSC Thermogram of cis-PI heated at 10 °C per min. The peak with a maximum at 24.38 °C shows the melting transition of the cis-PI.



**Figure S**. Raw DSC data of cis-PI, showing the glass transition at -65.08 °C, calculated from the extrapolated half Cp point.



(a)

(b)

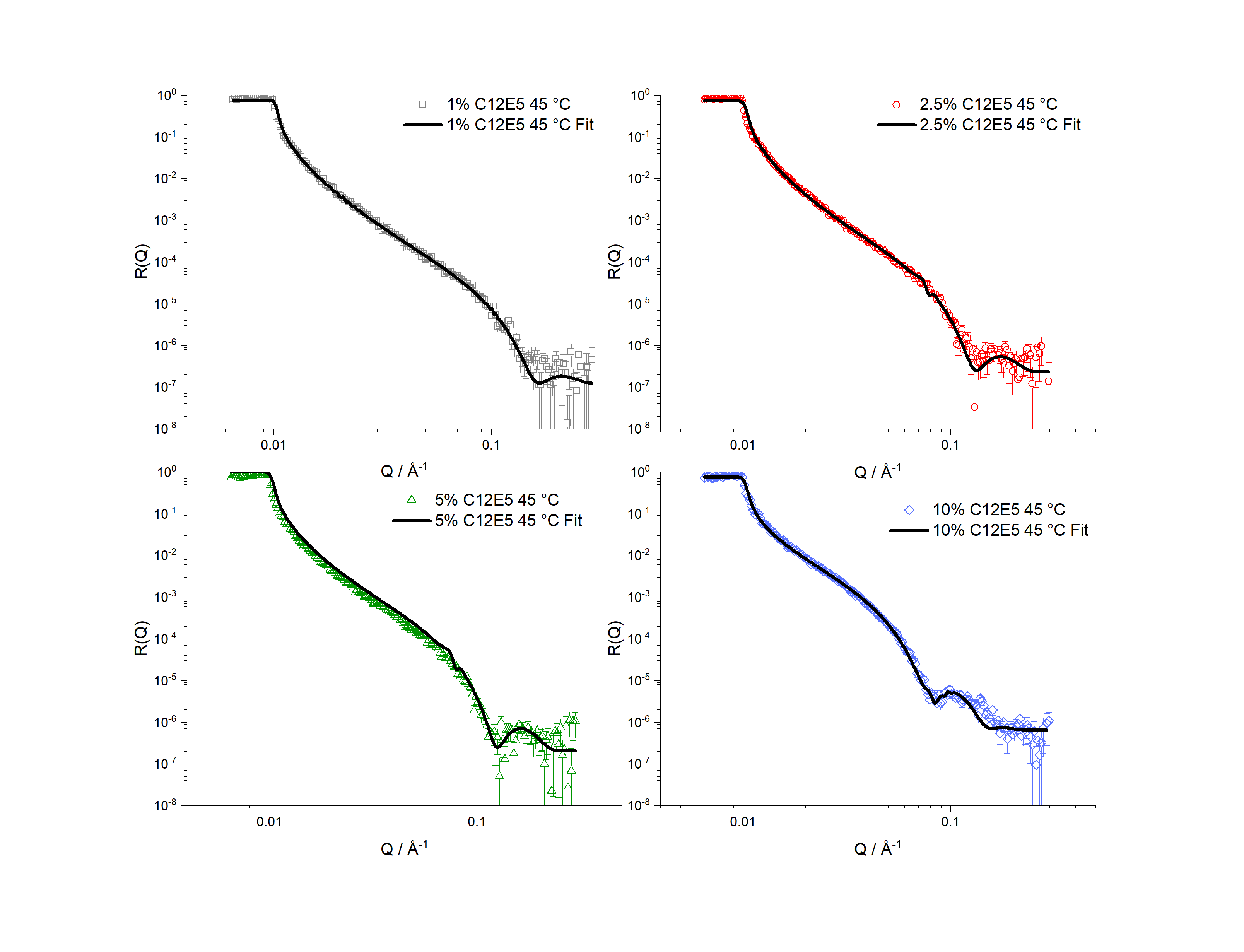
**Figure S**.(a) sld profile for 1% C12E5 in cis-PI at 20 °C illustrating how the data is fitted. The three sld profiles shown have different bulk layer thickness and the difference in thickness between each profile is 250 Å. (b) The averaged predicted reflectivity profile from each of these model sld profiles, which was fitted to the experimental data.



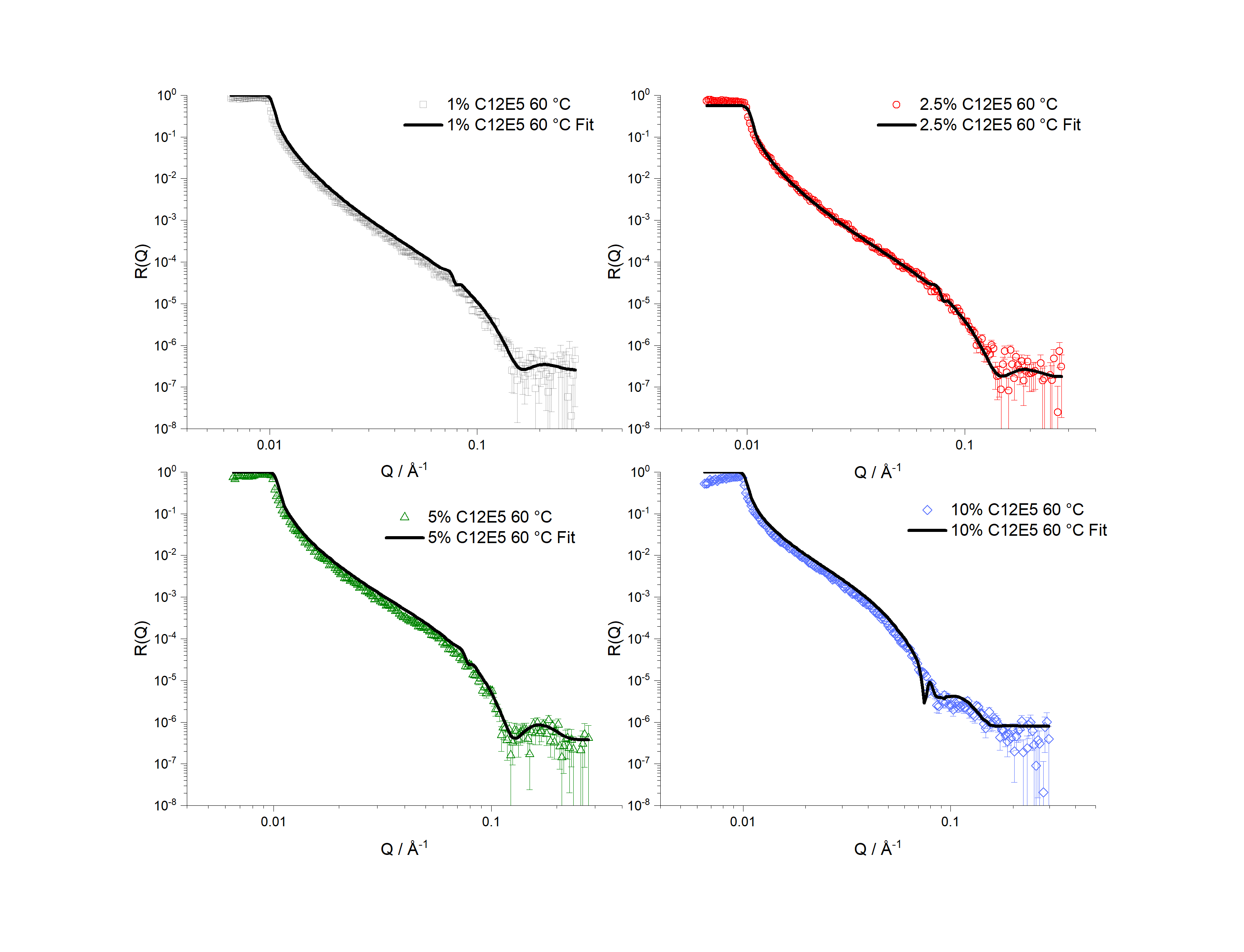
**Figure S4**. Nuclear reaction analysis depth profile of 10% d25-C12E5 in *cis*-PI showing a surface excess. Inset: Fitted NRA data used to obtain the depth profile.



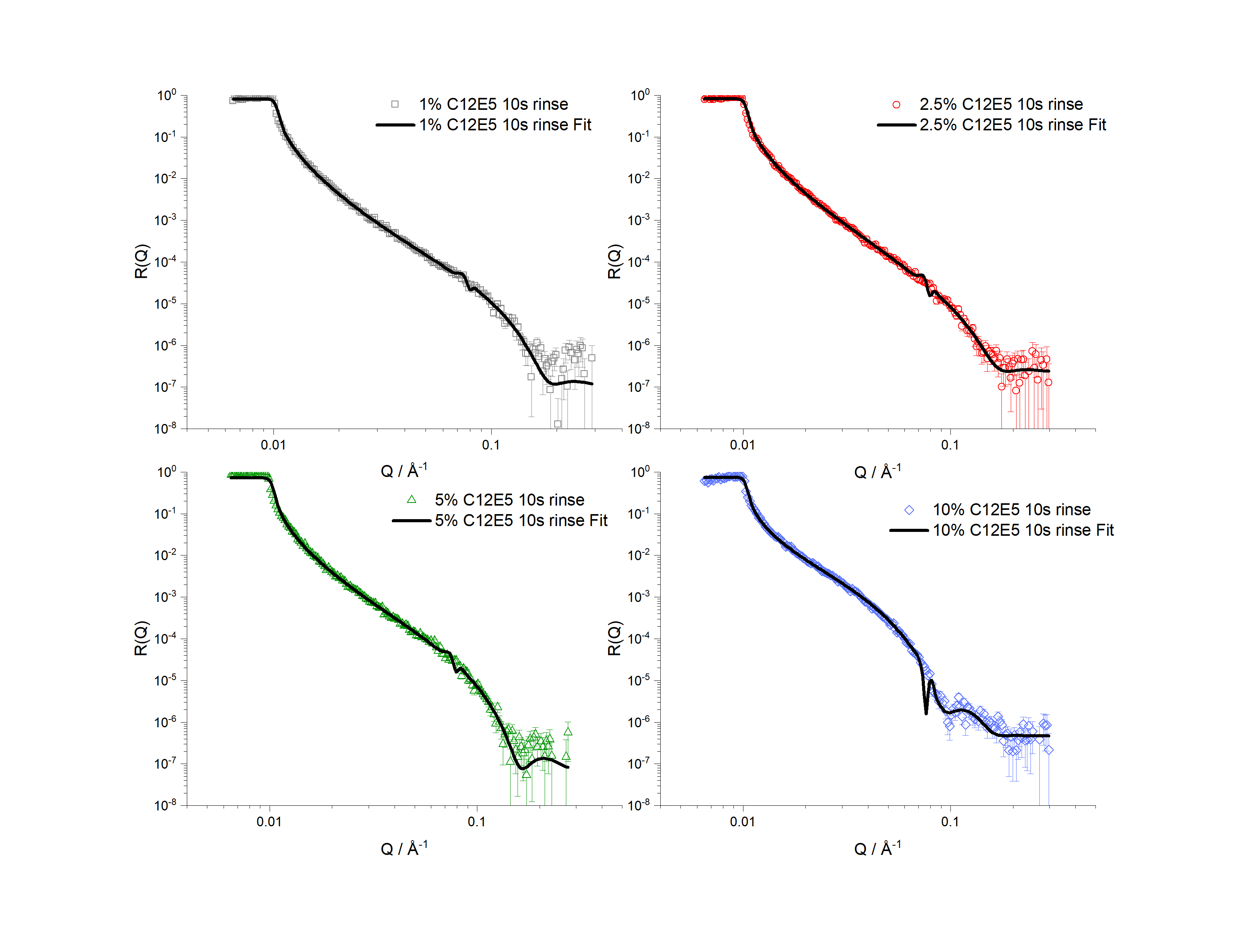
**Figure S5.** 2 successive measurements of contact angle on 2 distinct locations on a single 1% C12E5 / cis-PI sample, showing the variability of results.



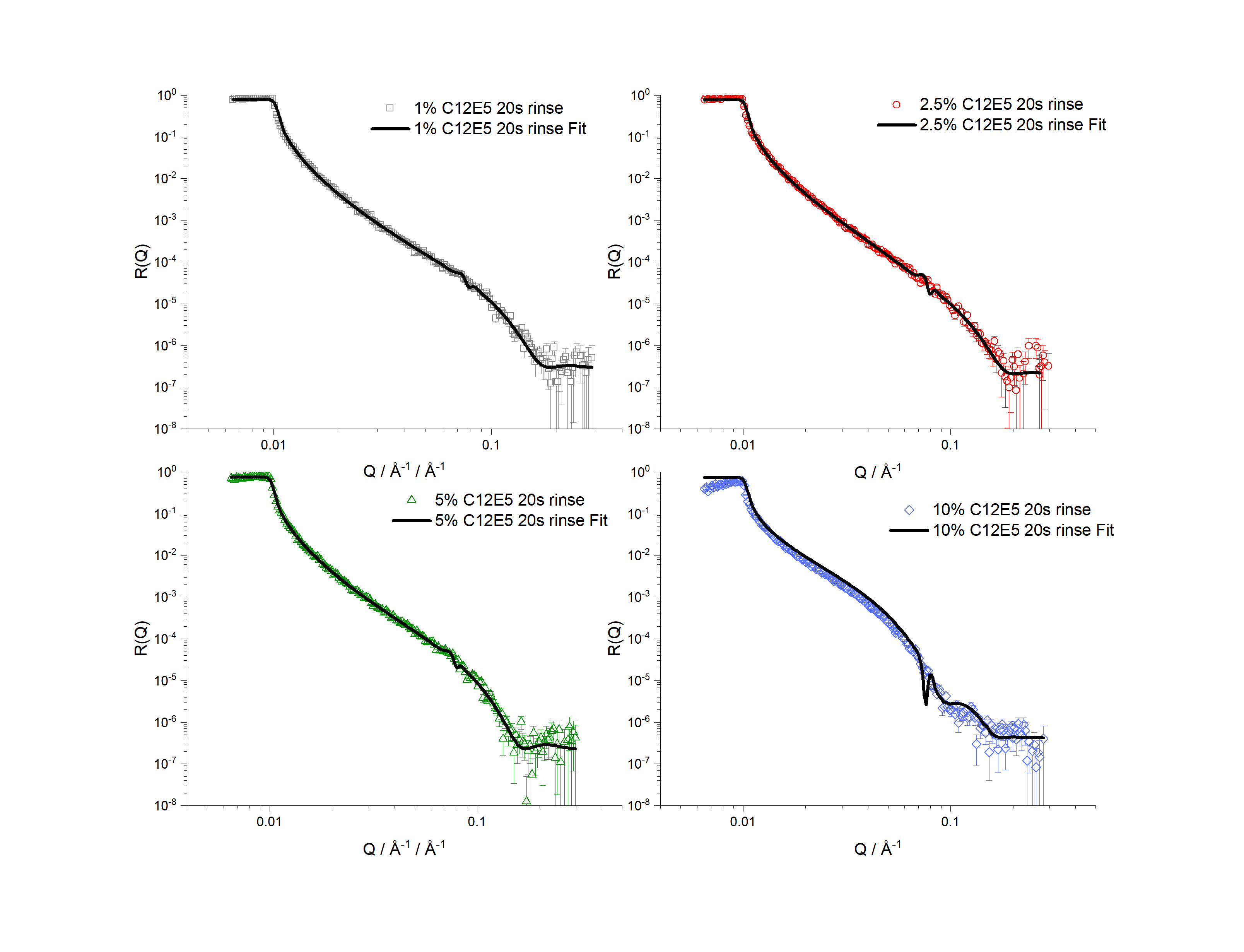
**Figure S6.** NR data and fits for 1 to 10% d25-C12E5 in *cis*-PI at 45 °C.



**Figure S7.** NR data and fits for 1 to 10% d25-C12E5 in *cis*-PI at 60 °C.



**Figure S8.** NR data and fits for 1 to 10% d25-C12E5 in cis-PI after a 10s rinse.



**Figure S9.** NR data and fits for 1 to 10% d25-C12E5 in cis-PI after a 20s rinse.



**Figure S.** 2 successive measurements of contact angle on 2 distinct locations on a single 1% C12E5 / cis-PI sample, showing the variability of results.