Data Collection on the SAXS

1. Mount sample holder only (e.g. fill capillary with water and mount)
2. Insert glassy carbon and run short (max 300 sec) data set. save results e.g. blank_gc.gfrm
3. Remove the glassy carbon and run a long data set. save results e.g. blank.gfrm
4. Move sample out of beam insert the glassy carbon and run a short (300 sec) "air" background. save results e.g. air_gc.gfrm
5. Remove glassy carbon and run long data set. save results e.g. air.gfrm
6. Dismount sample holder (capillary)
7. Mount sample (fill capillary with sample)
8. Insert glassy carbon and run short (max 300 sec) data set. save results e.g. sample_and_blank_gc.gfrm
9. Run long data set. save results e.g. sample_and_blank.gfrm
10. Use the transmission function (sample_and_blank_T_s) to calculate transmission factor for sample.
    in transmission mode

for	**standard**	put	air_gc.gfrm
	standard + sample	put	sample_and_blank_gc.gfrm
	sample	put	sample_and_blank.grfm
	air	put	air.gfrm

12. Calculate transmission factor for sample blank (blank_T_s).

for	**standard**	put	air_gc.gfrm
	standard + sample	put	blank_gc.gfrm
	sample	put	blank.grfm
	air	put	air.gfrm

note : for the quartz capillary and water the blank_T_s is about 0.3

13. Calculate T_s Ratio (T_{final} = sample_and_blank_T_s / blank_T_s)
    note : T_{final} should be less than one!
14. Load sample_and_blank.gfrm and use blank.gfrm as the background file. In the scale factor box input - T_{final} (the negative of T_{final}).
15. Integrate and save files in the PLOTSO format.
16. Option : use the program PLOTSO2Q to convert the (2theta, Intensity) of PLOTSO format to a (q and Intensity) format for the program PRIMUS (etc..)

$$particle\ size = R_g \times 2\sqrt{\frac{5}{3}} = R_g \times 2.581988897$$