



Errata Notice

This document contains references to PSS or Polymer Standards Service. Please note that PSS is now Agilent. This document will be republished as an Agilent document in the future.



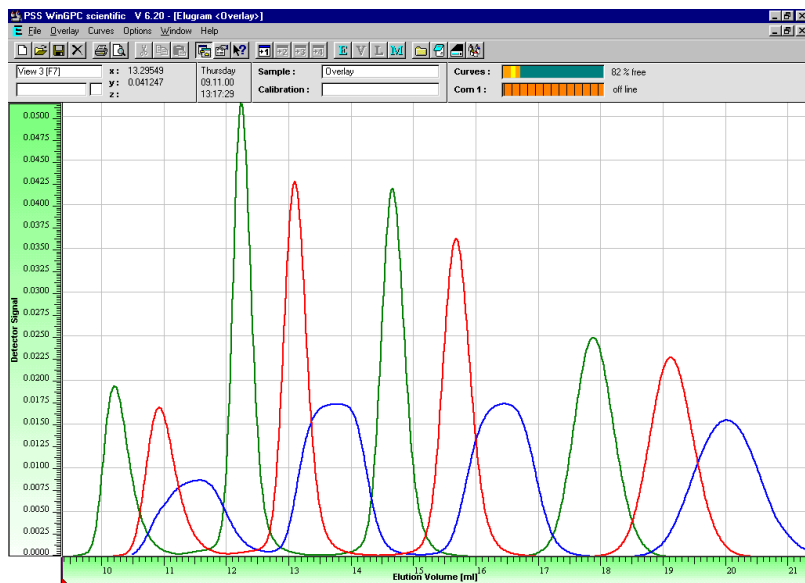
Monitoring Long-Term Column Performance with PSS WINGPC

PSS WINGPC Application Note #7:

PSS WINGPC allows easy monitoring of the long term column performance using the overlay feature. The chromatogram of a reference sample (better: mixture of standards) can be stored and reloaded in order to overlay with the chromatogram of the reference sample acquired at a later date. Slight differences of the overlaid peaks are visible immediately and can be used to trace the long term column performance. The overlaid chromatograms can be stored again for further comparisons.

To store the elugram of a sample that will be used for monitoring long term column performance, select [Overlay][Include Curve] in PSS WINGPC's elugram window. Select [Overlay][Save as..] to write the overlay file to disk. If you later want to compare new data with old ones, first load the overlay file into the elugram by selecting [Overlay][Load]. Now select the sample you would like to compare with the former one, and add it to the overlay using [Overlay][Include curve]. Enter the overlay mode again ([Overlay][Overlay]). If you wish, you can save the new overlay now and overwrite the existing overlay file with the current one containing both curves.

The example below shows three injects of the same polystyrene mixture. It is obvious, that the peaks are shifted towards higher elution volumes with increasing usage of the column. Also the peaks become broader, indicating loss in resolution with prolonged column use.



This method is best for a visual inspection of peak positions, peak shapes and spacing (a relative measure of resolution) within a lab on given instrument. If comparisons between labs or instruments have to be done, a quantitative method using the system test (see PSS WINGPC Application #6)

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Application Note



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