

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.



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10002 - Column Application Note Characterization of Bitumen

Bitumen is made from mineral oil and contains high molecular weight hydrocarbon mixtures. It is mainly used for protection of buildings (roofing and waterproofing), for street construction materials and in roofing paper.

Experimental Setup

Mobile Phase:	Tetrahydrofuran
Stationary Phase:	PSS SDV
Flow rate [mL/min]:	1,00
Temperature [°C]:	35
Detection:	Shodex-RI71
Calibration:	ReadyCal-Kit Poly(styrene)
Data processing:	PSS WinGPC

Recommendations for Sample Concentration

narrow PDI

M 100 Da - 10 000 Da:	2 g/L
M 10 000 Da - 1 000 000 Da:	1-2 g/L
M > 1 000 000 Da:	0.5 g/L or less

broad PDI (>1.5)

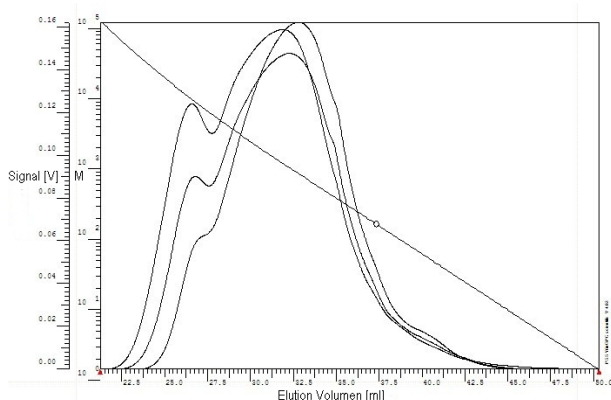
all molar masses:	3.0 - 5.0 g/L
Injection volume [µL]:	30



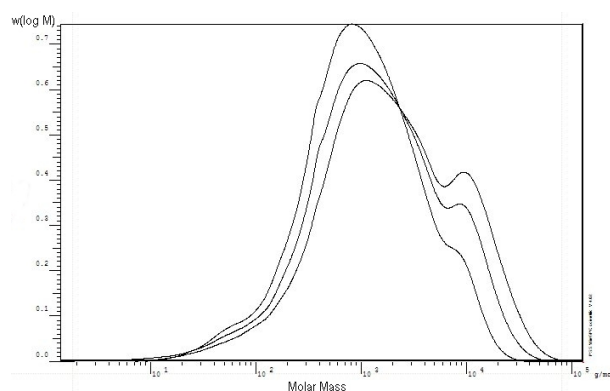
Suitable Columns

low molecular weights:	P/N 201-0001 (set of 3) OR sda083003lis (1 linear)
medium molecular weights:	P/N 201-0002 (set of 2) OR sda083005lim (1 linear)
high molecular weights:	P/N 201-0003 (set of 3) OR sda083005lxl (1 linear)
ultrahigh molecular weights:	P/N 202-0001 (set of 3)

Elugram and Calibration separation on PSS SDV



Molar Mass Distribution separation on PSS SDV



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