

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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10044 - Column Application Note Characterization of Poly(ethylene glycol) I

Poly (ethylene glycol) (PEG) or Poly(ethylene oxide) (PEO) refers to an oligomer or polymers of ethylene oxide. The two names are chemically synonymous, but historically PEG refers to lower molecular weights, PEO to higher molecular weights. PEGs with molecular weights below 25 000 Da are liquids, higher molecular weight PEOs are solid. Poly(ethylene glycol) is non-toxic and is used in a variety of products.

Experimental Setup

Mobile Phase:	Tetrahydrofuran
Stationary Phase:	PSS SDV
Flow rate [mL/min]:	1,00
Temperature [°C]:	25
Detection:	Shodex-RI71
Calibration:	ReadyCal-Kit Poly(ethylene glycol)
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

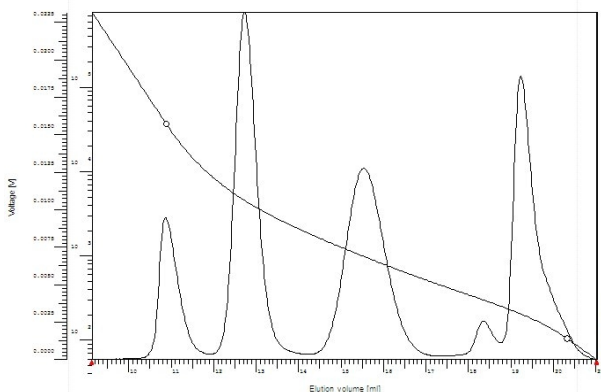
broad PDI (>1.5)

all molar masses:	3.0 - 5.0 g/L
Injection volume [μ L]:	100

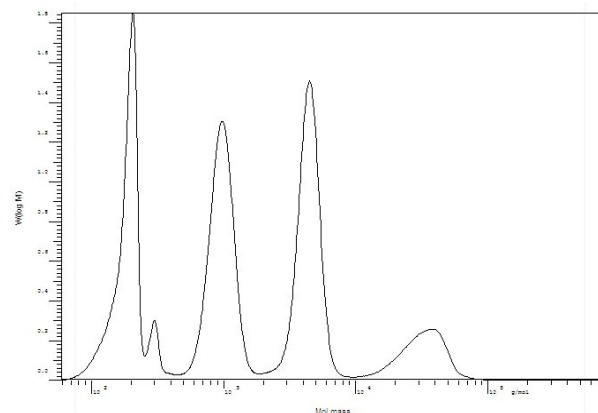
Suitable Columns

low molecular weights:	P/N 201-0001 (set of 3) OR sda083003lis (1 linear)
medium molecular weights:	-
high molecular weights:	-
ultrahigh molecular weights:	-

Elugram and Calibration separation on PSS SDV



Molar mass Distribution separation on PSS SDV



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