

## 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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# # 10026 - Column Application Note Characterization of Poly(phenyl acetylene)

Polyphenyl acetylene (PPA) has well-spread electron clouds resulting in large values of linear as well as nonlinear susceptibility. These polymers can be modified easily by doping with other materials and/or attaching appropriate side groups to the main chain. PPA are also used to create carbon nanotubes (CNT).

## 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(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)

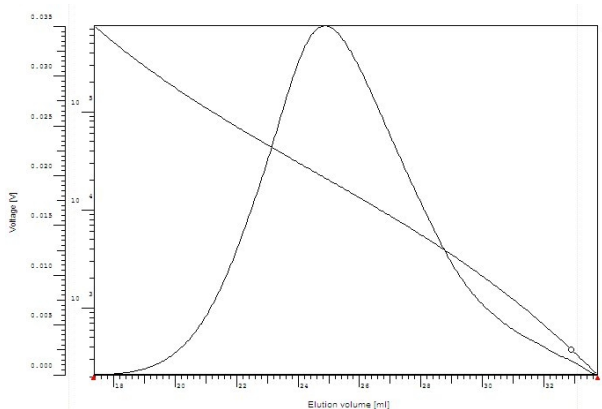
all molar masses:	3.0 - 5.0 g/L
Injection volume [ $\mu$ L]:	100



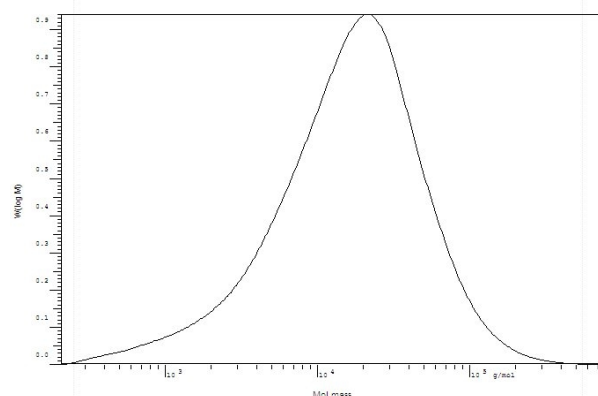
## Suitable Columns

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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DE47823629

5994-6273EN  
July 1, 2023