

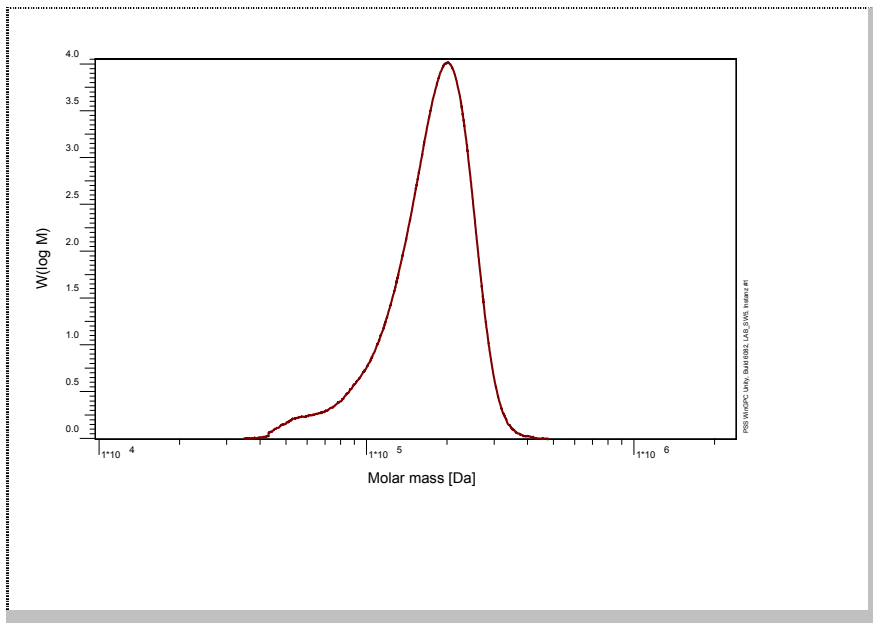
# Certificate of Analysis

Polymer type: Poly(styrene-d8-b-methyl methacrylate)

Part No: PSS-psdemm180k

Lot No: psd8mm260109

## Copolymer Analysis



■ Copolymer molecular weight distribution

### GPC/SEC – Conditions

Sample concentration	1,00 g/l	Inject volume	20 µl
Solvent	Tetrahydrofuran	Flow rate	1.00 ml/min
Temperature	23 °C		
Precolumn [8 x 50 mm]	PSS SDV 5µm		
Columns [analytical, each 8 x 300 mm]	PSS SDV 5µm 10e3Å / 10e5Å / 10e6Å		
Data Acquisition Software	PSS WinGPC	Operator	K. Oleschko

### GPC/SEC – Results\*

Detector	Mw (total) [Da]	Mn (total) [Da]	Mp (total) [Da]	PDI (total) [Mw/Mn]
Agilent RID	182 000	159 000	203 000	1.14

\* GPC/SEC – Results based on Copolymer Analysis Procedure

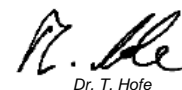
*t*-butyl methacrylate was used as coupling agent

Endgroups: *s*-Butyl (CH<sub>3</sub>CH<sub>2</sub>CH(CH<sub>3</sub>))- and Hydroxyl (OH)-groups

**Storage:** Store the tightly recapped polymer standard in a dry, dark, cool area; e.g. a refrigerator (4 °C).

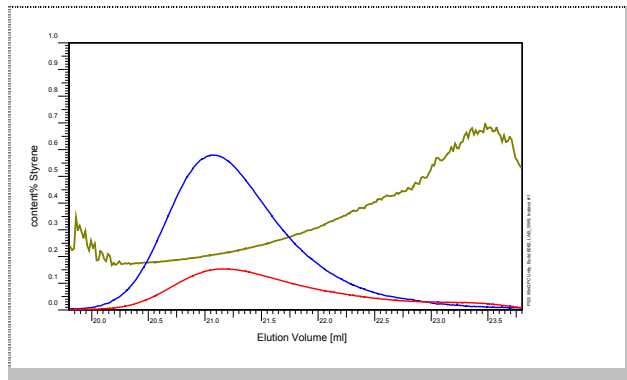
**Date of expiry:** See product label.

Manufacture and control according to PSS method of analysis



Dr. T. Hofe  
production director

## Copolymer Analysis



■ compositional drift    
 ■ measured concentration    
 ■ apparent concentration

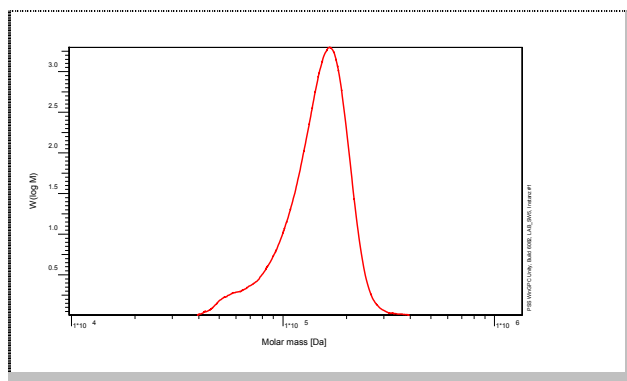
## GPC/SEC – Results\*

Detector	Mw (total) [Da]	Mw (psd8) [Da]	Mw (mm) [Da]	PDI (total) [Mw/Mn]
Agilent RID	182 000	47 000	135 000	1.14

\* GPC/SEC – Results based on Copolymer Analysis Procedure

Copolymer - Composition	[w %]
Poly(styrene-d8)	26
Poly(methyl methacrylate)	74

## Molar Mass Distribution



## GPC/SEC – Results\*

Detector	Mw (total) [Da]	Mw (psd8) [Da]	Mw (mm) [Da]	PDI (total) [Mw/Mn]
Agilent RID	150 000	47 000	103 000	1.13

\* GPC/SEC – Results based on Poly(styrene) calibration

Copolymer - Composition	[w %]
Poly(styrene-d8)	31
Poly(methyl methacrylate)	69

### Note:

Mw = Weight Average Molecular Weight  
 Mn = Number Average Molecular Weight  
 Mp = Molar Mass at the Peak Maximum  
 PDI = Polydispersity Index