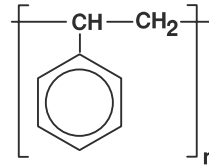
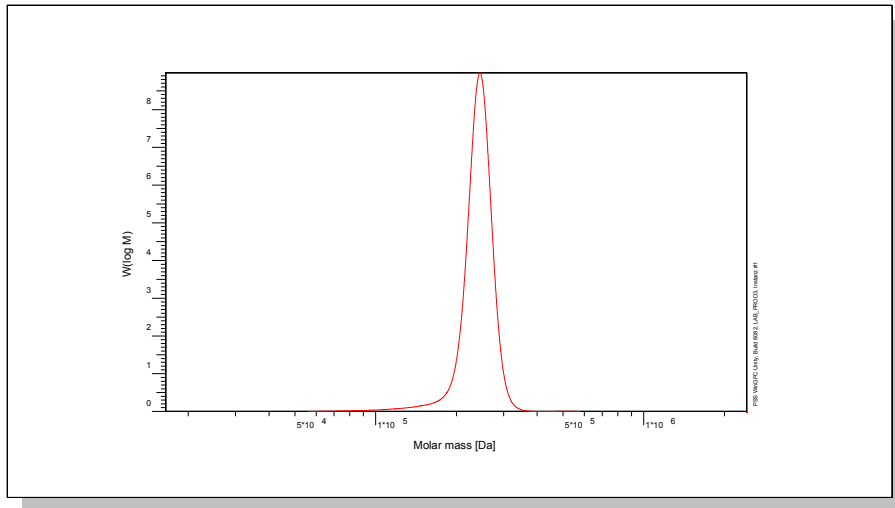


Certificate of Analysis

Polymer type: DIN-Poly(styrene)
 Part No: PSS-dps250k
 Lot No: ps27048di



Molar Mass Distribution



GPC/SEC - Conditions

Sample concentration	1,00 g/l	Inject volume	20 µl
Solvent	Tetrahydrofuran	Flow rate	1,00 ml/min
Precolumn [8 x 50 mm]	PSS SDV 5µm	Temperature	25,0 °C
Columns [analytical, each 8 x 300 mm]	PSS SDV 5µm 10e3Å / 10e5Å / 10e6Å		
Data Acquisition Software	PSS WinGPC	Operator	S. Fugmann

GPC/SEC - Results

Detector	Mw [Da]	Mn [Da]	Mp [Da]	PDI [Mw/Mn]
Shodex RI 71	243000	236000	250000	1,03

Additional Methods - Results

Method	Mw [Da]	Mn [Da]
Light Scattering	247 000	-
Vapour Pressure Osmometry	-	-
Nuclear Magnetic Resonance	-	-

Note:

Mw = Weight average molecular weight
 Mn = Number average molecular weight
 Mp = Molar mass at the peak maximum
 PDI = Polydispersity Index

All analysis run according to ISO EN 13885 and DIN 55672

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

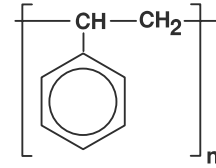
Date of expiry: See product label.

Manufacture and control according to PSS method of analysis



Dr. T. Hofe
production director

Polymer type: DIN-Poly(styrene)
 Part No: PSS-dps250k
 Lot No: ps27048di



Light Scattering - Conditions

Light Scattering run on-line, based on Toluene Rayleigh Ratio $R_{\theta} = 1.404 \cdot 10^{-5} \text{ cm}^{-1}$ at 633 nm.

System and instrument validation based on Certified Reference Materials Poly(styrene) Lot No: BAM-P001.

Instrument:	Wyatt Tech DAWN-F, 488 nm (using 11 angles: 61°, 70°, 80°, 90°, 99°, 109°, 119°, 129°, 138°, 147°, 155°)
Solvent:	Tetrahydrofuran
Temperature:	25 °C
Flow rate:	1,00 ml/min
Precolumn [8 x 50 mmm]:	PSS SDV Lux 5µm
Columns [analytical, each 8 x 300mm]:	PSS SDV Lux 5µm 10e3Å / 10e5Å / 10e6Å
Sample concentration:	1,086 g/l
Inject volume:	100 µl
Sample dn/dc:	0.200 ml/g

Light Scattering - Zimm Plot

