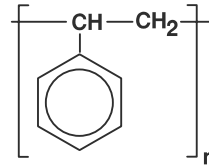
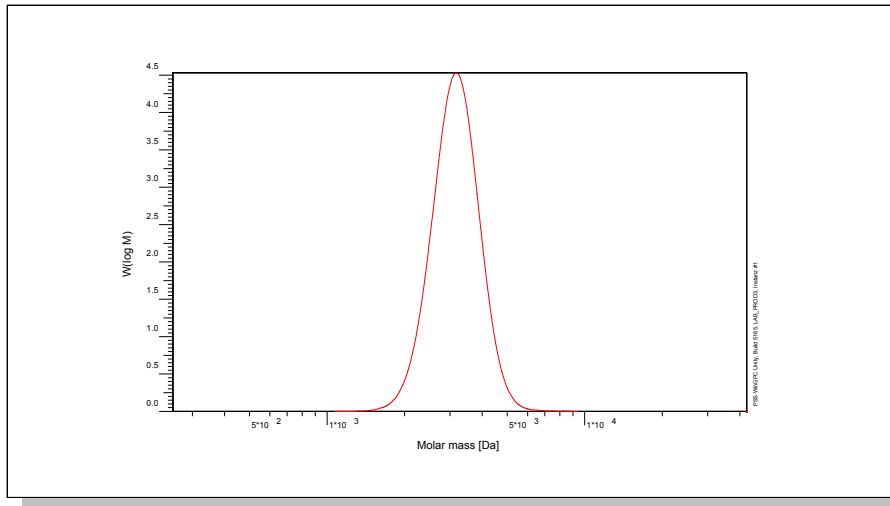


# Certificate of Analysis

Polymer type: DIN-Poly(styrene)  
 Part No: PSS-dps3.2k  
 Lot No: ps23012di



## Molar Mass Distribution



## GPC/SEC - Conditions

Sample concentration	1,00 g/l	Inject volume	20 µl
Solvent	THF	Flow rate	1,00 ml/min
Precolumn [8 x 50 mm]	PSS SDV 5µm	Temperature	23,0° C
Columns [analytical, each 8 x 300 mm]	PSS SDV 5µm 100Å / 1 000Å	Operator	S. Fugmann
Data Acquisition Software	PSS WinGPC		

## GPC/SEC - Results

Detector	Mw [Da]	Mn [Da]	Mp [Da]	PDI [Mw/Mn]
Shodex RI 71	3250	3100	3250	1,05

## Additional Methods - Results

Method	Mw [Da]	Mn [Da]
Light Scattering	-	-
Vapour Pressure Osmometry	-	3020
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).

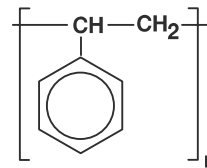
**Date of expiry:** See product label.

Manufacture and control according to PSS method of analysis



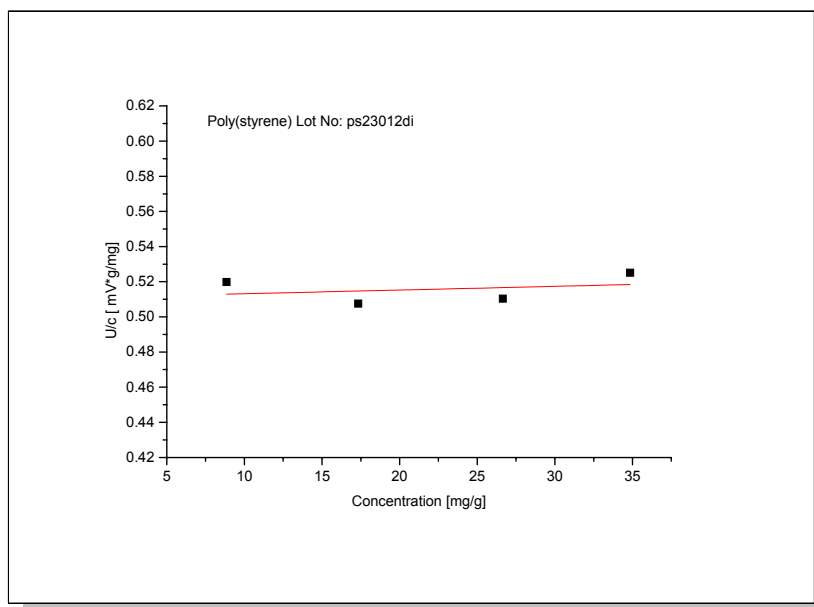
Dr. T. Hofe  
 production director

Polymer type: DIN-Poly(styrene)  
 Part No: PSS-dps3.2k  
 Lot No: ps23012di



### Vapor Pressure Osmometry - Conditions

Instrument: Knauer Vapour Pressure Osmometer  
 Calibration: Benzil p.A.  
 Solvent: Toluene for HPLC  
 Temperature: 70 °C  
 Sample: 4 sample concentrations between 5 - 35 mg/g



Linear Regression:  $Y = A + B * X$

Parameter	Value	Error
A	0.511046	0.011798
B	2.11114E-4	4.91624E-4

R	SD	N	P
0.290548	0.009601	4	0.709452