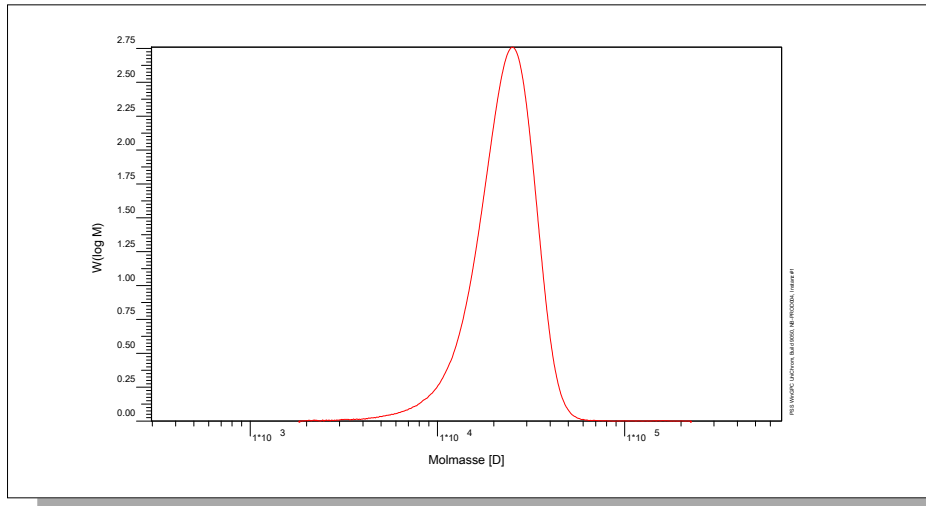


Certificate of Analysis

Polymer type: Poly(ethylene glycol)
 Part No: PSS-peg22k
 Lot No: peg161120

Molar Mass Distribution



GPC/SEC - Conditions

Sample concentration	1,00 g/l	Inject volume	20 µl
Solvent	Water, Sodium azide 0.5g/L	Flow rate	1,00 ml/min
Precolumn [8 x 50 mm]	PSS SUPREMA 5µm	Temperature	23 °C
Columns [analytical, each 8 x 300 mm]	PSS SUPREMA 5µm 100Å / 100Å / 100Å		
Data Acquisition Software	PSS WinGPC	Operator	A.Klein

GPC/SEC - Results

Detector	Mw [Da]	Mn [Da]	Mp [Da]	PDI [Mw/Mn]
PSS SECcurity RI	22500	19500	24200	1,15

Additional Methods - Results

Method	Mw [Da]
Light Scattering, on-line (SLD7x00)	20500

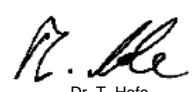
Mw = Weight average molecular weight
 Mn = Number average molecular weight
 Mp = Molar mass at the peak maximum
 PDI = Polydispersity Index

Light Scattering run on-line, based on Toluene Rayleigh Ratio $R = 1.404 \cdot 10^{-5} \text{ cm}^{-1}$ at 633 nm.
 System and instrument validation based on Pullulan Lot No: p-100-5.

Sample concentration	5,0563 g/L
Inject volume	100µL
Sample dn/dc	0.132mL/g

Storage: Store the tightly recapped polymer standard in a dry, dark, cool area; e.g. a refrigerator (4 °C).
Date of expiry: yyyy/mm/dd (See also product label.)
Date of approval: yyyy/mm/dd

Manufacture control according to PSS method of analysis



Dr. T. Hofe
production director

