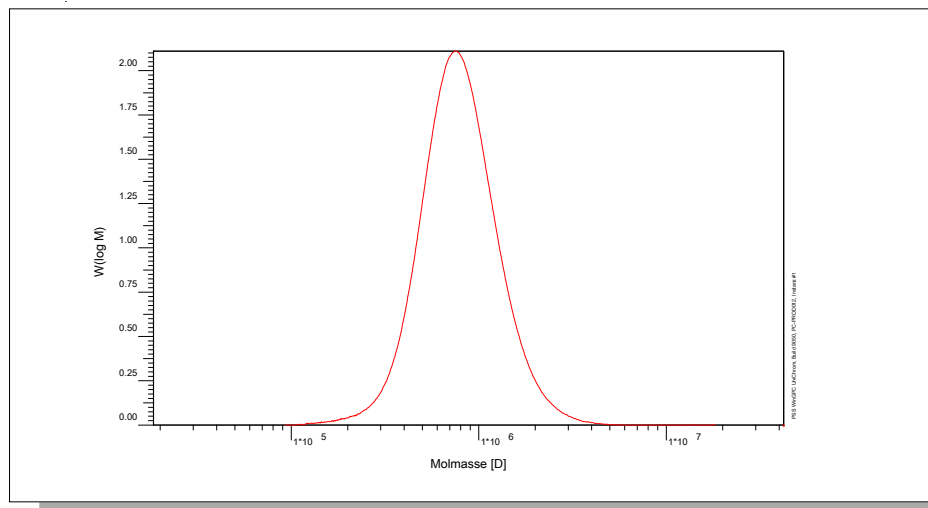


# Certificate of Analysis

Polymer type: Pullulan  
 Part No: PSS-pul800k  
 Lot No: p-800-4

## 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 10µm	Temperature	23 °C
Columns [analytical, each 8 x 300 mm]	PSS SUPREMA 10µm ultrahigh / ultrahigh / ultrahigh		
Data Acquisition Software	PSS WinGPC	Operator	A.Klein

## GPC/SEC - Results

Detector	Mw [Da]	Mn [Da]	Mp [Da]	PDI [Mw/Mn]
PSS SECcurity RI	894000	722000	739000	1,24

## Additional Methods - Results

Method	Mw [Da]
Light Scattering, on-line (SLD7x00)	847000

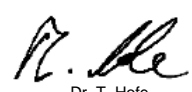
Mw = Weight average molecular weight  
 Mn = Number average molecular weight  
 Mp = Molar mass at the peak maximum  
 PDI = Polydispersity Index

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	0.9984 g/L
Inject volume	100µL
Sample dn/dc	0.149mL/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

