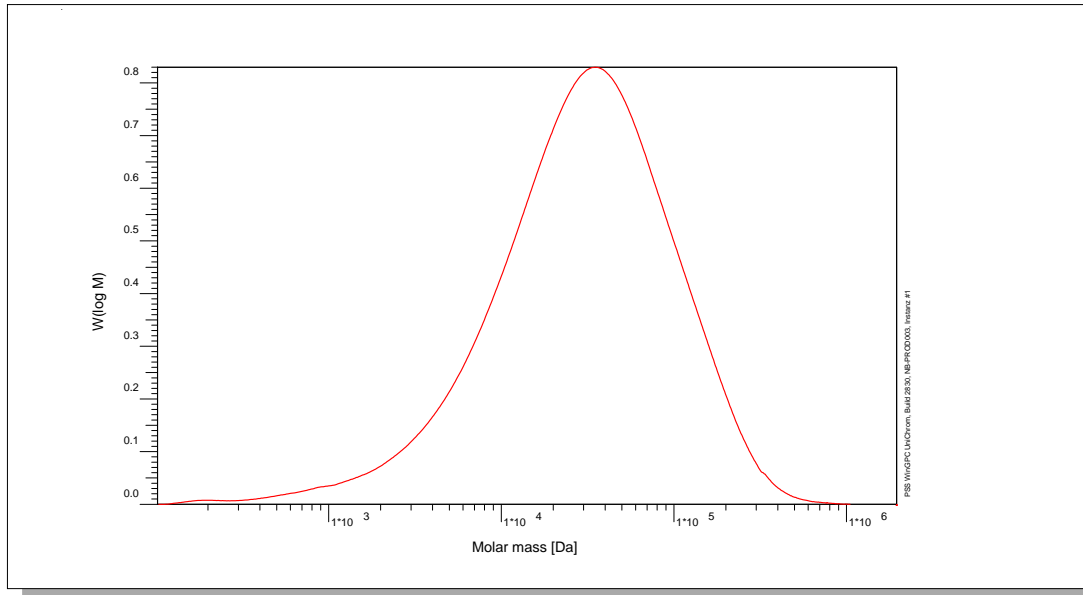


Certificate of Analysis

Polymer type: Poly(vinyl pyrrolidone) broad
 Part No: PSS-vprb50k
 Lot No: vpr220515

Molar Mass Distribution



GPC/SEC - Conditions

Sample concentration	3,00 g/l	Inject volume	50 µl
Flow rate	1,00 ml/min	Temperature	23 °C
Solvent	0.1M NaNO ₃ , 20Vol% MeOH		
Precolumn [8 x 50 mm]	PSS SUPREMA 10µm		
Columns [analytical, each 8 x 300 mm]	PSS SUPREMA 10µm ultrahigh / ultrahigh / ultrahigh		
Data Acquisition Software	PSS WinGPC	Operator	J.Preis

GPC/SEC - Results

Detector	Mw [Da]	Mn [Da]	Mp [Da]	PDI [Mw/Mn]
Agilent RID	51300	11300	-	4,53

Note:

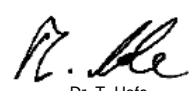
Light Scattering - Result: Mw [Da] = 47 100

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

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 control according to PSS method of analysis


 Dr. T. Hofe
 production director

