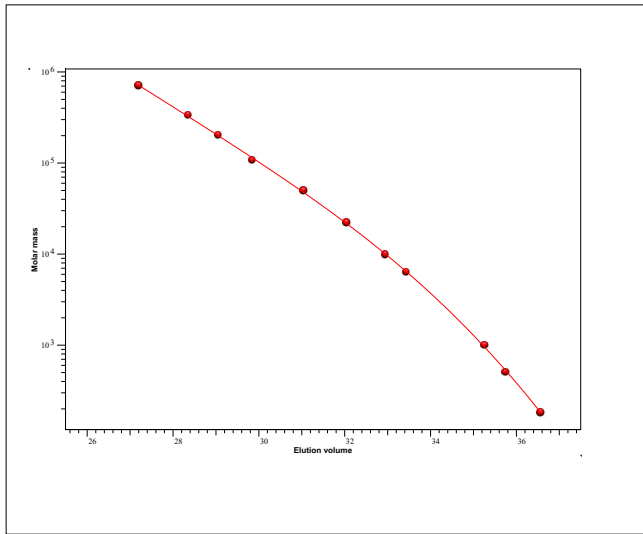


# Certificate of Analysis

Product: ReadyCal-Kit Pullulan  
 Part No: PSS-pulkitr1  
 Lot No: pulkitr1-09

## GPC/SEC - Calibration Curve



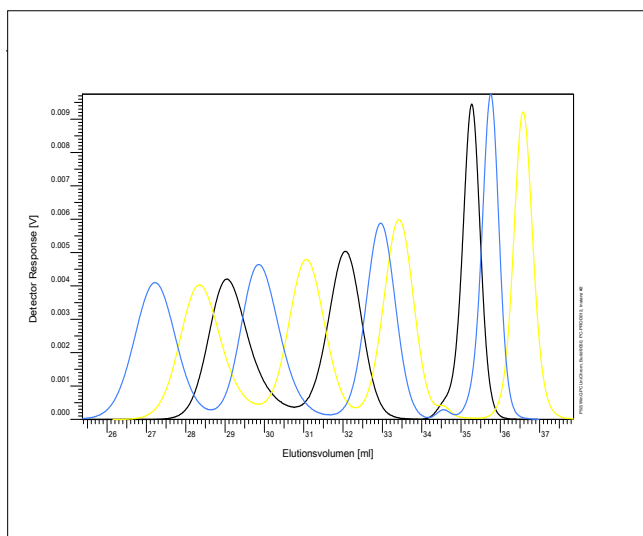
## GPC/SEC - Calibration Table

Elution volume [ml]	Mp [Da]	Polymer Lot No:
27,20	708000	p-800-2
28,36	334000	p-400-5
29,06	201000	p-200-4
29,85	107000	p-100-5
31,05	49400	p-50-3
32,05	22000	p-20-3
32,95	9800	p-10-3
33,44	6300	p-5-4
35,27	991	p-0.9
35,76	504	p-0.5
36,58	180	p-0.2

**Note:**

Mp = Molar mass at the peak maximum

## GPC/SEC - Polymer Overlay

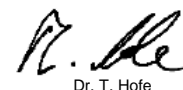


## GPC/SEC - Calibration Conditions

Solvent: Water, Sodium azide 0,05%  
 Flow rate: 1,00 ml/min  
 Precolumn [8 x 50 mm]: PSS SUPREMA 10µm  
 Columns [8 x 300 mm]: PSS SUPREMA 10µm ultrahigh / ultrahigh / ultrahigh  
 Temperature: 23 °C  
 Inject volume: 20 µl  
 Internal standard: Ethylene glycol at 38,26 ml  
 Data Acquisition Software: PSS WinGPC  
 Calibration by: J.Preis  
 Fit quality:  
 Fit-type: PSS Poly 5  
 R: 0,999914

Storage: Store the tightly recapped polymer standards 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

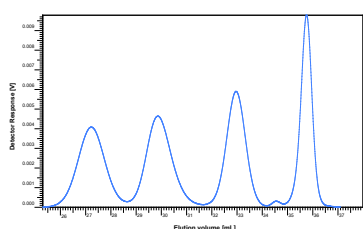
Manufacture and control according to PSS method of analysis



Dr. T. Hofe  
 production director

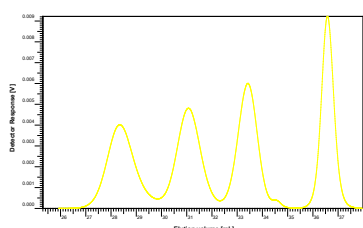
Product: ReadyCal-Kit Pullulan  
 Part No: PSS-pulkitr1  
 Lot No: pulkitr1-09

Colour code: Cap – light blue



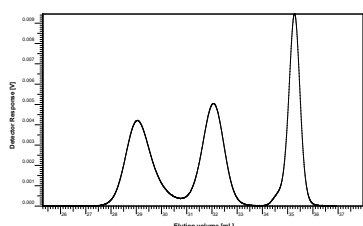
Mp [Da]	Mw [Da]	Mn [Da]	Mw (LS) <sup>a</sup> / Mn (NMR) <sup>b</sup> [Da]	Mass [mg]	Lot No:
708 000	805 000	636 000	855 000 <sup>a</sup>	1.50	p-800-2
107 000	110 000	98 000	112 000 <sup>a</sup>	1.50	p-100-5
9 800	9 900	9 300	10 600 <sup>a</sup>	1.50	p-10-3
504	504	504	504 <sup>b</sup>	1.50	p-0.5

Colour code: Cap – yellow



Mp [Da]	Mw [Da]	Mn [Da]	Mw (LS) <sup>a</sup> / Mn (NMR) <sup>b</sup> [Da]	Mass [mg]	Lot No:
334 000	343 000	264 000	364 000 <sup>a</sup>	1.50	p-400-5
49 400	50 600	46 600	50 400 <sup>a</sup>	1.50	p-50-3
6 300	6 600	6 000	6 700 <sup>a</sup>	1.50	p-5-4
180	180	180	180 <sup>b</sup>	1.50	p-0.2

Colour code: Cap – black



Mp [Da]	Mw [Da]	Mn [Da]	Mw (LS) <sup>a</sup> / Mn (NMR) <sup>b</sup> [Da]	Mass [mg]	Lot No:
201 000	202 000	154 000	210 000 <sup>a</sup>	1.50	p-200-4
22 000	23 000	21 300	22 700 <sup>a</sup>	1.50	p-20-3
991	991	991	991 <sup>b</sup>	1.50	p-0.9

Polymers stabilized with 2% sodium azide.

For exact determination of sample concentration, we recommend to add the solvent volume precisely.

Level of eluent	full	half	quarter
Volume of eluent	1.5 ml	0.75 ml	0.375 ml
Concentration	1 g/l	2 g/l	4 g/l