

10271 - Characterization of Gelatin

Gelatin is a polypeptide that is produced from hydrolysis of collagenes in skin and bones. It is obtained from acidic or from basic hydrolysis and contains polyaminoacids. Gelatin is used in food, beverage and in pharmaceutical industry as stabilizer for tablets and many other applications.

Sample Preparation

The sample was dissolved for 12 hours. The sample solution was filtered through a 0.45 µm membrane filter to protect the columns.

Analytical Conditions for Measurement

Eluent:	Phosphate buffer pH 6.6 Sodium chloride 0.3M
Column material:	PSS PROTEEMA 5 µm
Columns:	PSS PROTEEMA 5 µm 8 X 300 mm 300
Temperature:	25 °C
Flow rate:	1,00 ml/min
Concentration:	3,00 g/l
Injection volume:	20 µl
Detection:	GPC1100 Refractive index
Calibration:	Kit Pullulan
Data processing:	PSS WinGPC

Recommended Column Combination

low molecular weights:	precolum, 100 Å, 100 Å 5 µm 8 X 300 mm each
medium molecular weights:	precolum, 300 Å, 300 Å 5 µm 8 X 300 mm each
high molecular weights:	precolum, 100 Å, 1 000 Å 5 µm 8 X 300 mm each

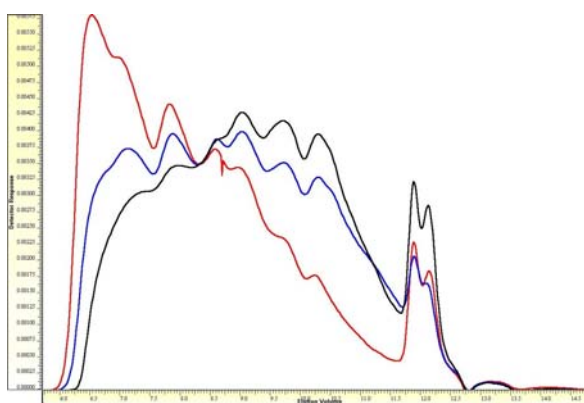
Recommended Sample Concentration

1-2 mg/ml:	100 Da - 100 000 Da
1-2 mg/ml:	100 000 Da - 1 000 000 Da
0.5 mg/ml or less:	> 1 000 000 Da
4.0 - 5.0 mg/ml:	broad molecular weight distribution samples

Result

Measurement of 3 different Gelatins. The isoelectric point of the basic produced gelatine is between 4.7 and 5.2, the acidic produced gelatine has an isoelectrical point of 7.5 to 9.3. For measurements with pH>=7 we recommend PSS SUPREMA Columns.

Elugram



Molar Mass Distribution

