

Characterizing a Polysaccharide by Aqueous SEC

Agilent PL aquagel-OH 40 8 μm Columns

Technical Overview

Introduction

PL aquagel-OH 40 8 μm high performance columns are ideal for medium molecular weight separations of polysaccharides because they combine high pore volume and high column efficiency for maximum resolution.

A commercial polysaccharide containing residual mono-/disaccharides was analyzed using a two column set to optimize the resolution over the molecular size range of the sample. Calibration was done using Agilent pullulan polysaccharide standards (Figure 1). Figure 2 shows the raw data chromatogram for the sample, and Figure 3 the calculated molecular weight.



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Conditions

Columns: 2 x PL aquagel-OH 40 8 μ m
(part number PL1149-6840)
Eluent: 0.05M NaH_2PO_4 + 0.25M NaCl at pH 7
Flow Rate: 1 mL/min
Detector: RI

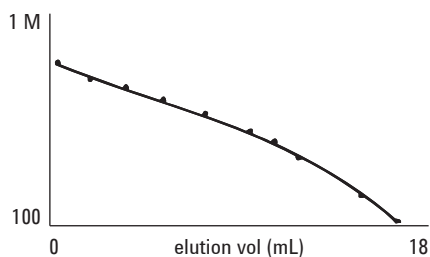


Figure 1. Calibration curve using pullulan standards

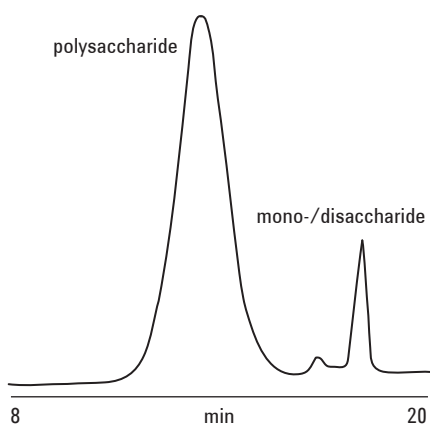


Figure 2. Raw data chromatogram of a commercial polysaccharide

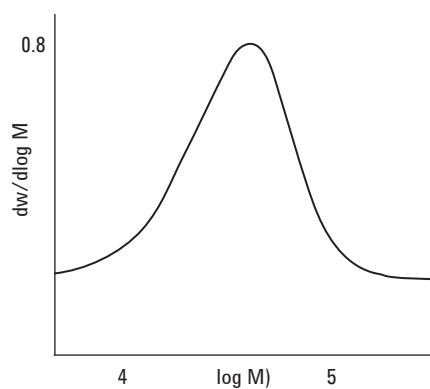


Figure 3. Molecular weight of a commercial polysaccharide ($M_p = 82,100$; $M_n = 55,700$; $M_w = 85,300$; $d = 1.53$)

These data represent typical results. For further information, contact your local Agilent Sales Office.

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