# Oligosaccharide Analysis on Agilent PLgel with Gel Permeation Chromatography

Application Note

Materials Testing and Research, Polymers


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## Introduction

Oligosaccharides are naturally occurring saccharides, typically with three to 10 component sugars. They are usually linked to lipids or amino acid side chains in proteins, and have many functions, such as cell-to-cell recognition in animals.

These compounds are soluble in water and polar organic solvents such as N-methylpyrrolidone (NMP), which may be required for more polar oligosaccharides such as starches, as this application note demonstrates. Gel permeation chromatography of oligosaccharides with NMP is straightforward using Agilent PLgel 5 µm columns.

## Analysis of an Oligosaccharide

The viscosity of NMP is extremely high and operation at elevated temperature is recommended to reduce pressure and enhance resolution.

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## Conditions

| | |
|---|---|
| Column | Agilent PLgel 5 µm 500Å, 7.5 × 300 mm (p/n PL1110-6525) |
| Eluent | NMP |
| Flow rate | 1.0 mL/min |
| Temp | 80 °C |
| Detector | RI |

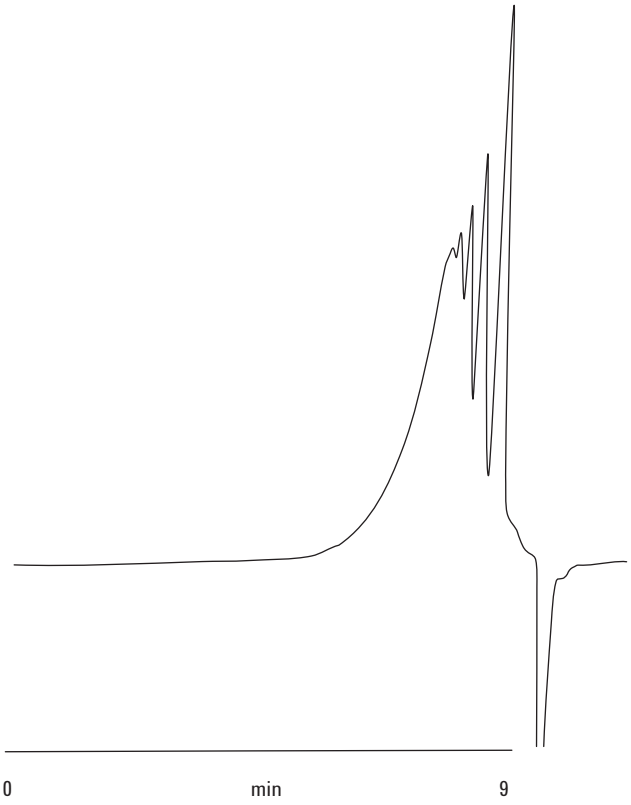


*Figure 1. Separation of oligosaccharide on an Agilent PLgel 5 µm column.*

## Conclusions

Agilent PLgel columns in a polar solvent such as N-methylpyrrolidone can be used to analyze oligosaccharides by gel permeation chromatography.

## For More Information

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