



GPC Application Note #6

Advanced GPC Analysis of Pullulan

Pullulan is an edible, tasteless polymer produced from starch. Commercially, it is used in various products as an edible film, such as breath freshener, or as a food additive. The fungus *A. Pullulans* uses pullulan to resist desiccation and predation, and to facilitate the diffusion of molecules. The purpose of this App Note is to demonstrate the repeatability of the HMJ Advanced GPC Method. The samples were analyzed using a Malvern Triple Detector system. The analysis conditions are listed below.

Solvent	0.05M Na ₂ SO ₄	Sample Conc	2 mg/mL
Columns	2 X Shodex SB-806M HQ	Dissolution Temp	25C
Flow Rate	1 mL/min	Dissolution Time	60 Minutes
Column Temp	30C	Sample Filtration	0.2 um Nylon

Figure 1: Triple Chromatogram of Pullulan 84K Sample

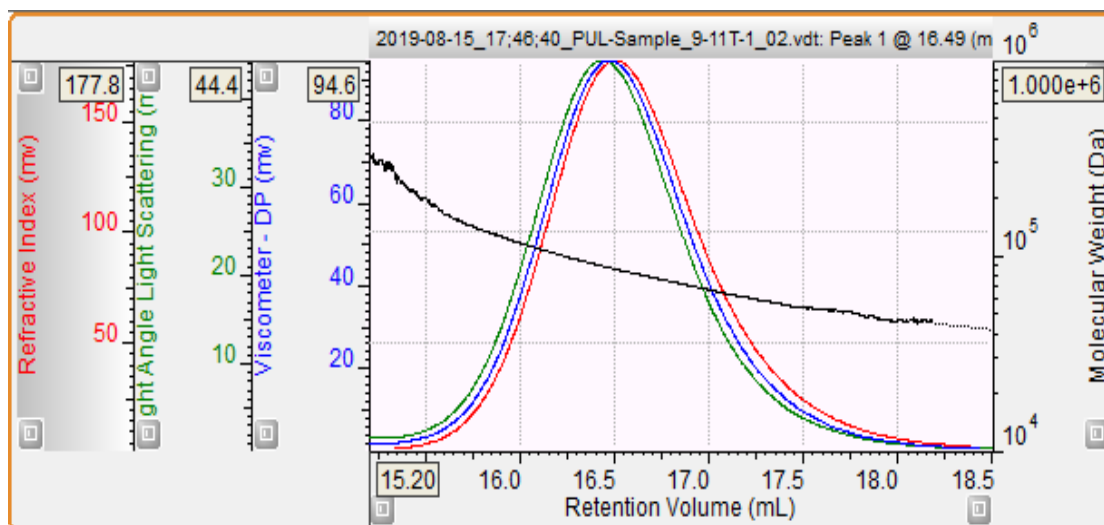


Table 2: Summary of Analysis of Pullulan 84K sample

Analytical Results	Runs	dn/dc	Mw	Mn	IV	mg/vial
PUL-84K AVG	6	0.147	84,409	79,385	0.383	4.38
SD			463	578	0.005	0.046
RSD			0.55%	0.73%	1.33%	1.06%

The results show consistent MWD and IV data for of a P84K sample.