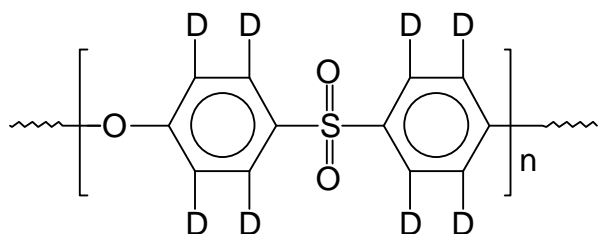


**Sample Name:** Deuterated Poly(Ether Sulfone), d8

**P3518-d8PSFE**

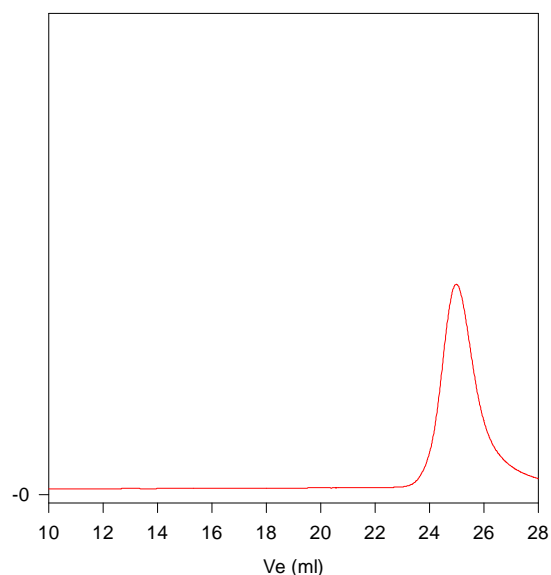
**Sample #** P3518-d8PSFE

**Structure:**



**Composition:**

$M_n \times 10^3$ (g/mol)	$M_w/M_n$
4.0	1.5

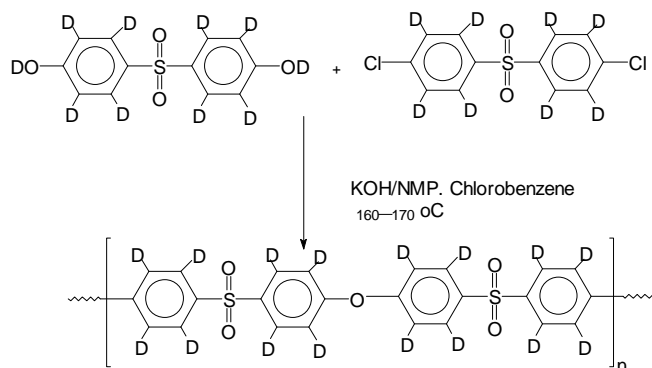


Size Exclusion Chromatograph Carried out in DMF at 65oC

$M_n=4,000$ ,  $M_w=6,000$ ,  $M_w/M_n=1.5$

**Synthesis:**

The fully deuterated polymer was prepared from the condensation of deuterated 4,4'-sulfonyl diphenol (d10) and deuterated 4-chlorophenylsulfone (d8).



**Characterization:**

Deuterated monomer was characterized by  $^2\text{H}$ -NMR spectroscopy which validated the target product.

Size exclusion chromatography (SEC) was carried out on a Varian liquid chromatograph equipped with a refractive detector. Three columns from Supelco (TSK G6000-4000-2000 HXL) were used with DMF as the eluent. The columns were calibrated with monodisperse polystyrene standards. The molecular weight and the polydispersity index ( $M_w/M_n$ ) were calculated.