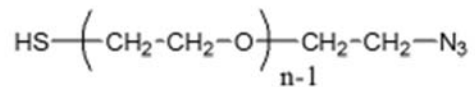


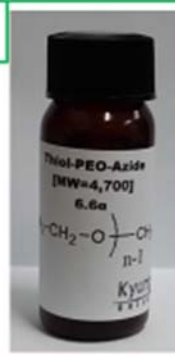
# No. AE10 Certificate of Analysis

Azide-Poly(ethylene glycol)-thiol (5000Da) heterobifunctional polymer  
(Lot#150512JAK)

K-HS-PEO-N<sub>3</sub>-4.7K : HS-PEO-N<sub>3</sub>

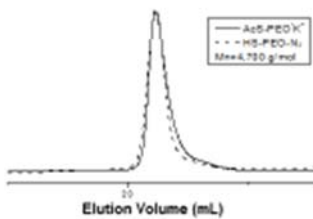
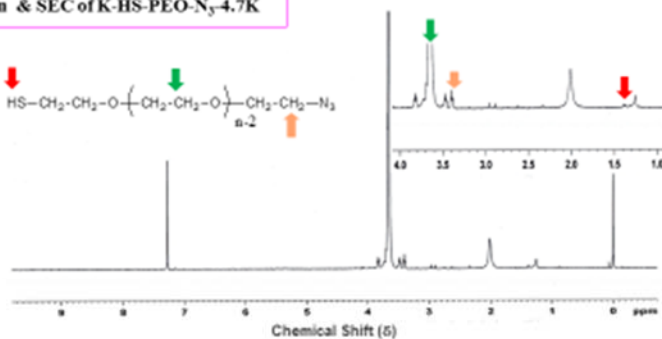


$M_n = 4,700 \text{ g/mol}$



<sup>1</sup>H-NMR spectrum & SEC of K-HS-PEO-N<sub>3</sub>-4.7K

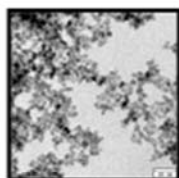
Bruker 400 MHz spectrometer (Model: Avance 400 (400 MHz))  
In CDCl<sub>3</sub>



SEC Analysis: SEC analyses were performed at a flow rate of 1 mL/min in THF at 30°C using the Water 515 HPLC component system with four ultra- $\mu$ -Styragel® columns (10<sup>5</sup>, 10<sup>4</sup>, 10<sup>3</sup>, and 500Å) equipped with a Water 2410 Refractive Index Detection system

### Applications of K-HS-PEO-N<sub>3</sub>-4.7K

1. Nanoparticles: Fe<sub>3</sub>O<sub>4</sub> in aqueous media



2. Water-soluble nano-sized Au particles

