



>>Entry Name: 3,6,9,12,15,18,21-Heptaoxatricosane-1,23-diol, 9CI

Synonym(s): Octaethylene glycol

CAS Registry Number: 5117-19-1

HOCH₂CH₂O(CH₂CH₂O)₆CH₂CH₂OH

Molecular Formula: C₁₆H₃₄O₉

Molecular Weight: 370.439

Accurate Mass: 370.220285

Percentage Composition: C 51.88%; H 9.25%; O 38.87%

Use/Importance: Intermed. in synth. of crown ethers

Physical Description: Yellow oil

Boiling Point: Bp_{0.07} 225°

>>Derivative: Mono-Me ether

Synonym(s): 2,5,8,11,14,17,20,23-Octaoxapentacosan-25-ol, 9CI

CAS Registry Number: 25990-96-9

Molecular Formula: C₁₇H₃₆O₉

Molecular Weight: 384.466

Accurate Mass: 384.235935

Percentage Composition: C 53.11%; H 9.44%; O 37.45%

Physical Description: Oil

Boiling Point: Bp_{0.1} 165°

>>Derivative: Monododecyl ether

Synonym(s): 3,6,9,12,15,18,21,24-Octaoxahexatriacontan-1-ol, 9CI

CAS Registry Number: 3055-98-9

Molecular Formula: C₂₈H₅₈O₉

Molecular Weight: 538.761

Accurate Mass: 538.408085

Percentage Composition: C 62.42%; H 10.85%; O 26.73%

Use/Importance: Nonionic surfactant

Melting Point: Mp 30.5-31°. Mp 27-28°

References:

U.K. Pat., 1957, 788 100; CA, **52**, 11928e, (deriv)

Abe, Y. et al., *Fette, Seifen, Anstrichm.*, 1972, **74**, 534-537; CA, **78**, 45398n, (monododecyl ether, synth)

Ribeiro, A.A. et al., *J. Phys. Chem.*, 1977, **81**, 957-963, (dodecyl ether, pmr, cmr)

Coudert, G. et al., *Synth. Commun.*, 1986, **16**, 19, (synth)

Matsuura, M. et al., *J. Phys. Chem.*, 1987, **91**, 6139-6148, (dodecyl ether, raman, conformation)

Nakutsuji, Y. et al., *Synthesis*, 1987, 280, (synth)

Campbell, C. et al., *J. Phys. Chem.*, 1991, **95**, 4647, (synth, Raman, deriv)