



>>Entry Name: Tris(2-hydroxyethyl)amine

Synonym(s): 2,2',2''-Nitrilotrisethanol, 9Cl. 2,2',2''-Nitritotriethanol, 8Cl. 2,2',2''-Trihydroxytriethylamine. Triethanolamine. Tricolamine. **Trolamine**, USAN. Alkanolamine 244. Daltogen. Sting-Kill. TEA

CAS Registry Number: 102-71-6

Related CAS Registry Numbers(s): 2224-49-9 2717-15-9 27323-41-7 41669-40-3

$\text{N}(\text{CH}_2\text{CH}_2\text{OH})_3$

Molecular Formula: $\text{C}_6\text{H}_{15}\text{NO}_3$

Molecular Weight: 149.189

Accurate Mass: 149.105194

Percentage Composition: C 48.31%; H 10.13%; N 9.39%; O 32.17%

Source/Synthesis: Manuf. by reaction of Oxirane [CWG30-E](#) with ammonia

Use/Importance: Emulsifying agent in pharmaceutical formulations. Catalyst for condensation reacns. Used as 10% aq. soln. of chloride salt for photometric detn. of CS_2 ; as a masking agent for Fe(III) , Al. Used in manuf. of detergents

Physical Description: Hygroscopic, viscous liq.

Melting Point: Mp 21.6°

Boiling Point: Bp 335.4°

Solubility: Misc. H_2O , MeOH, Me_2CO

pKa Value: $\text{p}K_a$ 7.76 (25°)

Calculated Log P Data: Log P -1.51 (calc)

Other Data: Not volatile in steam. Darkens in air

Hazard & Toxicity: Skin and eye irritant. LD_{50} (rat, orl) 8000 mg/kg. Fl. p. 179°

Aldrich: T5830-0

Fluka: 90279

Sigma: T1377

>>Derivative: Hydrochloride

CAS Registry Number: 637-39-8

Physical Description: Cryst. (EtOH)

Melting Point: Mp 177°

Solubility: Spar. sol. H_2O , EtOH

Aldrich: 15891-7

Fluka: 90290

Sigma: T9534

>>Derivative: Hydrobromide

CAS Registry Number: 25114-70-9

Physical Description: Cryst. (EtOH)

Melting Point: Mp 196-197°

>>Derivative: Octadecanoate salt

CAS Registry Number: 4568-28-9

Melting Point: Mp 42-44°

>>Derivative: Phosphate salt

CAS Registry Number: 10017-56-8

Physical Description: Cryst.

Melting Point: Mp 106-107°

>>Derivative: Dodecylsulfonium salt

CAS Registry Number: 139-96-8

Use/Importance: Surfactant

Physical Description: Cryst.

Melting Point: Mp 72-74°