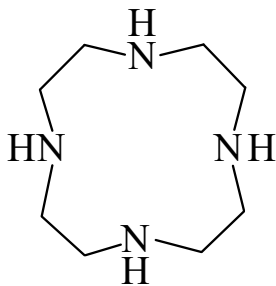




>>Entry Name: 1,4,7,10-Tetraazacyclododecane, 9CI

Synonym(s): Tetraaza-12-crown-4. Cyclen



CAS Registry Number: 294-90-6

Molecular Formula:  $C_8H_{20}N_4$

Molecular Weight: 172.273

Accurate Mass: 172.168796

Percentage Composition: C 55.78%; H 11.70%; N 32.52%

Use/Importance: Complexing agent

Physical Description: Solid by subl.

Melting Point: Mp 103-107°. Mp 119-120°

Other Data: Varying Mps have been reported

Aldrich: 33965-2

Fluka: 86726

>>Derivative: Hydrochloride (1:4)

CAS Registry Number: 10045-25-7

Physical Description: Cryst. (HCl)

Melting Point: Mp 255-259°

Aldrich: 43334-9

>>Derivative: Sulfate (1:2)

CAS Registry Number: 112193-77-8

Melting Point: Mp 240 dec.°

Aldrich: 40262-1

Sigma: T9293

>>Derivative: Tetra-*N*-Me

CAS Registry Number: 76282-33-2

Molecular Formula:  $C_{12}H_{28}N_4$

Molecular Weight: 228.38

Accurate Mass: 228.231396

Percentage Composition: C 63.11%; H 12.36%; N 24.53%

Use/Importance: Complexing agent

Physical Description: Viscous liq.

Boiling Point: Bp<sub>0.1</sub> 90°

>>Derivative: Tetra-*N*-benzyl

CAS Registry Number: 18084-64-5

Molecular Formula:  $C_{36}H_{44}N_4$

Molecular Weight: 532.77

Accurate Mass: 532.356596

Percentage Composition: C 81.16%; H 8.32%; N 10.52%

Physical Description: Cryst. (EtOH)

Melting Point: Mp 143-144°