



>>Entry Name: Zephiramine

Synonym(s): Benzyldimethyltetradecylammonium(1+). *N,N*-Dimethyl-*N*-tetradecylbenzenemethanaminium(1+), 9Cl

Related CAS Registry Numbers(s): 139-08-2

$\text{H}_3\text{C}(\text{CH}_2)_{13}\text{N}^{(+)}\text{Me}_2\text{CH}_2\text{Ph}$

Molecular Formula: $\text{C}_{23}\text{H}_{42}\text{N}^{(+)}$

Molecular Weight: 332.591

Accurate Mass: 332.331724

Percentage Composition: C 83.06%; H 12.73%; N 4.21%

>>Derivative: Chloride

CAS Registry Number: 16287-71-1

Molecular Formula: $\text{C}_{23}\text{H}_{42}\text{ClN}$

Molecular Weight: 368.044

Accurate Mass: 367.300576

Percentage Composition: C 75.06%; H 11.50%; Cl 9.63%; N 3.81%

Use/Importance: Used as 0.2% aq. soln. to increase sensitivity in photometric detn. of metals (e.g. Al, Be, Ga, Th, Zr) with some chelating reagents (e.g. chromazurol S, phenylfluorone) (forms ternary complexes). Commercially available as dihydrate

Physical Description: Colourless or pale yellow powder

Melting Point: Mp 63-65° (dihydrate)

Solubility: Sol. H_2O , EtOH, Me_2CO

References:

Cheng, K.L. *et al.*, *Handbook of Organic Analytical Reagents*, CRC Press, Boca Raton, 1982, (use)

Sigma-Aldrich Library of Chemical Safety Data, 1988, **1**, 387