>>**Entry Name: Dodecyltrimethylammonium(1+)**
Synonym(s): *N,N,N*-Trimethyl-1-dodecanaminium(1+), 9Cl. Lauryltrimethylammonium(1+)

CAS Registry Number: 10182-91-9
$H_3C(CH_2)_{11}N^{(+)}Me_3$

Molecular Formula: $C_{15}H_{34}N^{(+)}$
Molecular Weight: 228.44
Accurate Mass: 228.269124
Percentage Composition: C 78.87%; H 15.00%; N 6.13%

>>**Derivative:** Bromide

CAS Registry Number: 1119-94-4
Type of Compound Code(s): PS7700 PM7050 PA4900 PA2450 PA0600 PS8300
Molecular Formula: $C_{15}H_{34}BrN$
Molecular Weight: 308.344
Accurate Mass: 307.20746
Percentage Composition: C 58.43%; H 11.11%; Br 25.91%; N 4.54%
Use/Importance: Forms extractable ion-pairs with anionic complexes of transition metals; used for extraction-photometric detn. of Nb, V; flotation separation of Cd(*II*). Commercially available
Physical Description: Hygroscopic off-white cryst. (HBr aq.)
Melting Point: Mp 246 dec.°
Solubility: Sol. H_2O
Hazard & Toxicity: Eye and skin irritant

Aldrich: 26876-3
Fluka: 44240
Rare Chemicals Library: S40380-6
Sigma: D5047

>>**Derivative:** Chloride

CAS Registry Number: 112-00-5
Molecular Formula: $C_{15}H_{34}ClN$
Molecular Weight: 263.893
Accurate Mass: 263.237976
Percentage Composition: C 68.27%; H 12.99%; Cl 13.43%; N 5.31%
Physical Description: Cryst. (dil. HCl aq.)
Solubility: Sol. H_2O
Fluka: 44242

>>**Derivative:** Tetraphenylborate

CAS Registry Number: 40638-32-2
Molecular Formula: $C_{39}H_{54}BN$
Molecular Weight: 547.673
Accurate Mass: 547.434929
Percentage Composition: C 85.53%; H 9.94%; B 1.97%; N 2.56%
Use/Importance: Used in analysis to set up interfacial impedance between two immiscible solvs.

References:

Seta, P. *et al.*, *C. R. Hebd. Seances Acad. Sci. Ser. C*, 1972, **275**, 1231, *(tetraphenylborate)*
Nardillo, A.M. *et al.*, *Anal. Chim. Acta*, 1973, **66**, 359, *(detn, Nb)*
Lessing, J.G.V. *et al.*, *J. Inorg. Nucl. Chem.*, 1973, **35**, 2009, *(detn, Ni, Zn, Ir, Os, Ag, Pt)*
Nardillo, A.M. *et al.*, *Anal. Chim. Acta*, 1975, **74**, 85, *(detn, V)*
Kobayashi, K.*, Bull. Chem. Soc. Jpn.*, 1975, **48**, 1745, *(detn, Cd)*
Schuhmann, D. *et al.*, *CA*, 1980, **92**, 205953j, *(use, tetraphenylborate)*
Sigma-Aldrich Library of Chemical Safety Data, 1988, **2**, 1496B, *(haz)*