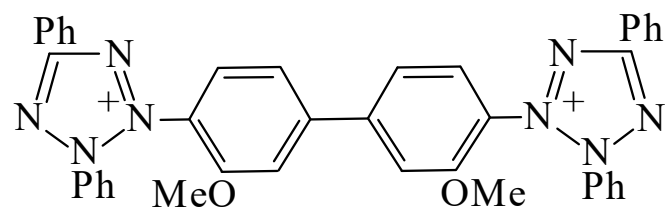




>>Entry Name: Tetrazolium blue

Synonym(s): 3,3'-(3,3'-Dimethoxy[1,1'-biphenyl]-4,4'-diyl)bis[2,5-diphenyl-2*H*-tetrazolium](2+), 9Cl. Blue tetrazolium



CAS Registry Number: 7703-11-9

Molecular Formula: $C_{40}H_{32}N_8O_2^{2(+)}$

Molecular Weight: 656.745

Accurate Mass: 656.264822

Percentage Composition: C 73.15%; H 4.91%; N 17.06%; O 4.87%

>>Derivative: Dichloride

CAS Registry Number: 1871-22-3

Molecular Formula: $C_{40}H_{32}Cl_2N_8O_2$

Molecular Weight: 727.651

Accurate Mass: 726.202526

Percentage Composition: C 66.03%; H 4.43%; Cl 9.74%; N 15.40%; O 4.40%

Use/Importance: Bacterial stain. Anal. reagent for corticosteroids. Used in the assay of reducing sugars. Used as 2mM aq. soln. for photometric detn. of As ($\lambda_{\max}$ 620 nm, redn. of As(*V*) to arsine with KBH_4) and various dehydrogenases. Used in oxidation of steroid enones

Physical Description: Pale-yellow solid (MeOH)

Melting Point: Mp 244 dec.°

Solubility: Sol. H_2O , EtOH

Aldrich: B5480-0

Fluka: 88190

Sigma: T4375

References:

- Aldrich Library of FT-IR Spectra*, 1st edn., 1985, **2**, 633A, (*ir*)
Aldrich Library of NMR Spectra, 2nd edn., 1983, **2**, 501B, (*nmr*)
Sigma-Aldrich Library of Stains, Dyes and Indicators, 146
Rutenburg, A.M. *et al.*, *Cancer Res.*, 1950, **10**, 113, (*synth*)
Ried, W. *et al.*, *Annalen*, 1953, **581**, 16, (*purifn*)
Cheronis, N.D. *et al.*, *J. Chem. Educ.*, 1956, **33**, 120
Fieser and Fieser's Reagents for Organic Synthesis, Wiley, 1967, **1**, 61; 1990, **15**, 43, (*use*)
Landis, J.B., *Anal. Chim. Acta*, 1980, **114**, 155, (*use*)
Robin, J.P. *et al.*, *Sci. Aliments*, 1981, **1**, 233, (*detn, sugars*)
Cheng, K.L. *et al.*, *Handbook of Organic Analytical Reagents*, CRC. Press, Boca Raton., 1983
Kolesnikova, A.M. *et al.*, *Zh. Anal. Khim.*, 1987, **42**, 1270, (*detn, As*)
Jasiczak, J., *J.C.S. Perkin 1*, 1988, 2687, (*use*)