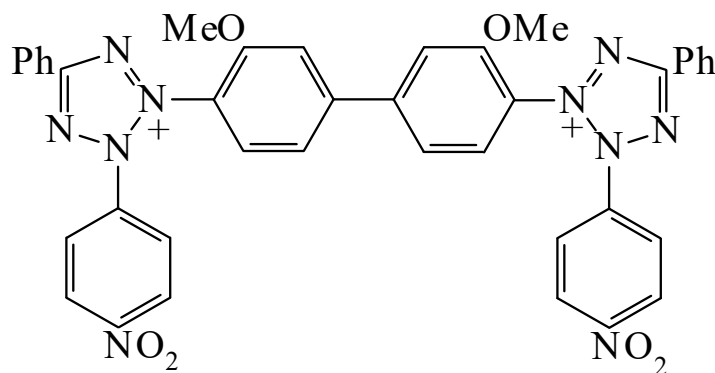




>>Entry Name: Nitrotetrazolium blue

Synonym(s): 3,3'-(3,3'-Dimethoxy[1,1'-biphenyl]-4,4'-diyl)bis[2-(4-nitrophenyl)-5-phenyl-2H-tetrazolium](2+)



Molecular Formula: $C_{40}H_{30}N_{10}O_6^{2(+)}$

Molecular Weight: 746.74

Accurate Mass: 746.23498

Percentage Composition: C 64.34%; H 4.05%; N 18.76%; O 12.86%

>>Derivative: Dichloride

Synonym(s): Nitro TB

CAS Registry Number: 298-83-9

Molecular Formula: $C_{40}H_{30}Cl_2N_{10}O_6$

Molecular Weight: 817.646

Accurate Mass: 816.172684

Percentage Composition: C 58.76%; H 3.70%; Cl 8.67%; N 17.13%; O 11.74%

Use/Importance: Used as a 1% aq. soln. for photometric detn. of various dehydrogenases; as 4mM soln. for extraction-photometric detn. of Re(VII) (ϵ 60000, $CHCl_3$)

Physical Description: Pale yellow cryst. (MeOH)

Melting Point: Mp 222-223°

Solubility: Sol. EtOH, H_2O

Aldrich: N1540-5

Fluka: 74032

Sigma: N1020

References:

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Sigma-Aldrich Library of Stains, Dyes and Indicators, 523

Nachlas, M.M. *et al.*, *J.A.C.S.*, 1956, **78**, 6139, (synth)

Cheng, K.L. *et al.*, *Handbook of Organic Analytical Reagents*, CRC Press, Boca Raton, 1983, (detn, dehydrogenases)

Plastinina, E.I. *et al.*, *Zh. Anal. Khim.*, 1989, **44**, 2211, (detn, Re)