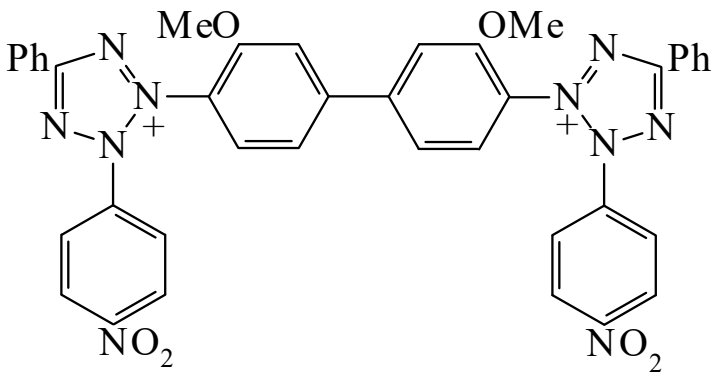
>>**Entry Name: Nitrotetrazolium blue**
Synonym(s): 3,3'-(3,3'-Dimethoxy[1,1'-biphenyl]-4,4'-diyl)bis[2-(4-nitrophenyl)-5-phenyl-2*H*-tetrazolium](2+)



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 4m*M* 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:

Aldrich Library of FT-IR Spectra, 1st edn., 1985, **2**, 634B, *(ir)*
Aldrich Library of NMR Spectra, 2nd edn., 1983, **2**, 502D, *(nmr)*
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)*