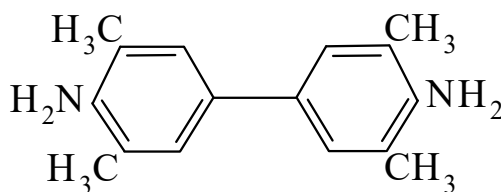




>>Entry Name: 4,4'-Diamino-3,3',5,5'-tetramethylbiphenyl

Synonym(s): 3,3',5,5'-Tetramethyl[1,1'-biphenyl]-4,4'-diamine, 9CI. 3,3',5,5'-Tetramethylbenzidine. TMBZ



CAS Registry Number: 54827-17-7

Molecular Formula: $C_{16}H_{20}N_2$

Molecular Weight: 240.347

Accurate Mass: 240.162648

Percentage Composition: C 79.96%; H 8.39%; N 11.66%

Use/Importance: Reagent for the detn. of blood. More sensitive and less carcinogenic than 4,4'-Diaminobiphenyl [DVM42-R](#). Chromogenic substrate used in conjunction with horseradish peroxidase. Monomer for polyimides

Physical Description: Fine needles (MeOH)

Melting Point: Mp 168-169.5°

Solubility: Prac. insol. H_2O ; v. sol. MeOH

Hazard & Toxicity: Mutagenic props.

Aldrich: 86033-6

Fluka: 87748

Sigma: T2885

References:

Aldrich Library of ^{13}C and 1H FT NMR Spectra, 1992, **2**, 529B, (*nmr*)

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Holland, V.R. *et al.*, *Tetrahedron*, 1974, **30**, 3299, (*synth, uv, ir, pmr*)

Thomas, P.E. *et al.*, *Anal. Biochem.*, 1976, **75**, 168, (*use*)

Pinkus, J.L. *et al.*, *J. Chem. Educ.*, 1977, **54**, 380, (*synth, use*)

Bomfield, P. *et al.*, *Synthesis*, 1978, 537, (*synth*)

Jaffe, R.M. *et al.*, *J. Lab. Clin. Med.*, 1979, **93**, 879, (*use*)

Wallace, J.S. *et al.*, *Polymer*, 1990, **31**, 2411, (*polyimides*)

Lewis, R.J., *Sax's Dangerous Properties of Industrial Materials*, 8th edn., Van Nostrand Reinhold, 1992, TDM800