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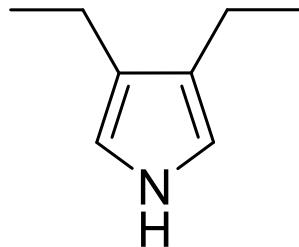
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Technical Data Sheet
Catalog Number: **PB1989**

For research use only
Not intended or approved for
diagnostic or therapeutic use.

Product Name: 3,4-Diethylpyrrole

Catalog Number: PB1989



Sizes Available: 1 g, 5 g and larger sizes available

Molecular weight: 123.3 g/mol

Molecular Formula: C₈H₁₃N

CAS Number: 16200-52-5

Storage: Store at -20 °C, under Argon, Air Sensitive!

Synonyms: 3,4-DIETHYLPYRROLE, 16200-52-5, 3,4-Diethyl-1H-pyrrole, 3,4-Diethylpyrrol, MFCD08062571, 3,4-diethyl pyrrole, 1H-Pyrrole,3,4-diethyl-, SCHEMBL891271

Field of Interest: Chemical synthesis

Uses: Synthesis building block, Organic Synthesis, pyrrole nitrogen heterocycle, synthesis, synthesis of porphyrins.

3,4-Diethylpyrrole, is a synthetic fine chemical useful in the synthesis of pharmaceuticals, fine organic chemicals, and pyrrole beta-substituted porphyrins.

References:

- Cheng, Y.; Yuan, X.; Ma, J.; Yu, S., Direct Aromatic C-H Trifluoromethylation via an Electron-Donor-Acceptor Complex. *Chem. - Eur. J.* 2015, 21 (23), 8355-8359.
- Dohi, T.; Ito, M.; Yamaoka, N.; Morimoto, K.; Fujioka, H.; Kita, Y., Hypervalent iodine(III): selective and efficient single-electron-transfer (SET) oxidizing agent. *Tetrahedron* 2009, 65 (52), 10797-10815.
- Dohi, T.; Morimoto, K.; Maruyama, A.; Kita, Y., Direct Synthesis of Bipyrroles Using Phenyliodine Bis(trifluoroacetate) with Bromotrimethylsilane. *Org. Lett.* 2006, 8 (10), 2007-2010.
- Ito, S.; Murashima, T.; Ono, N.; Uno, H., A new synthesis of benzoporphyrins using 4,7- dihydro-4,7-ethano-2H-isoindole as a synthon of isoindole. *Chem. Commun. (Cambridge)* 1998, (16), 1661-1662.
- Jaqinod, L.; Siri, O.; Khoury, R. G., Linear fused oligoporphyrins: potential molecular wires with enhanced electronic communication between bridged metal ions. *Chem. Commun. (Cambridge)* 1998, (12), 1261-1262.
- Kral, V.; Furuta, H.; Shreder, K.; Lynch, V.; Sessler, J. L., Protonated Sapphyrins. Highly Effective Phosphate Receptors. *J. Am. Chem. Soc.* 1996, 118 (7), 1595-607.
- Krayer, M.; Ptaszek, M.; Kim, H.-J.; Meneely, K. R.; Fan, D.; Secor, K.; Lindsey, J. S., Expanded Scope of Synthetic Bacteriochlorins via Improved Acid Catalysis Conditions and Diverse Dihydrodipyrin-Acetals. *J. Org. Chem.* 2010, 75 (4), 1016-1039.
- Krivokapic, A.; Cowley, A. R.; Anderson, H. L., Contracted and Expanded meso-Alkynyl Porphyrinoids: from Triphyrin to Hexaphyrin. *J. Org. Chem.* 2003, 68 (3), 1089-1096.
- Lash, T. D., Porphyrins with exocyclic rings. Part 9. Synthesis of porphyrins by the "3 + 1" approach. *J. Porphyrins Phthalocyanines* 1997, 1 (1), 29-44.
- Lash, T. D.; Colby, D. A.; Szczepura, L. F., New Riches in Carbaporphyrin Chemistry: Silver and Gold Organometallic Complexes of Benzocarbaporphyrins. *Inorg. Chem.* 2004, 43 (17), 5258-5267.
- Liu, T.-F.; Feng, D.; Chen, Y.-P.; Zou, L.; Bosch, M.; Yuan, S.; Wei, Z.; Fordham, S.; Wang, K.; Zhou, H.-C., Topology-Guided Design and Syntheses of Highly Stable Mesoporous Porphyrinic Zirconium Metal-Organic Frameworks with High Surface Area. *J. Am. Chem. Soc.* 2015, 137 (1), 413-419.
- Mizutani, T.; Ema, T.; Tomita, T.; Kuroda, Y.; Ogoshi, H., Design and Synthesis of a Trifunctional Chiral Porphyrin with C₂ Symmetry as a Chiral Recognition Host for Amino Acid Esters. *J. Am. Chem. Soc.* 1994, 116 (10), 4240-50.
- Nguyen, L. T.; Senge, M. O.; Smith, K. M., Simple Methodology for Syntheses of Porphyrins Possessing Multiple Peripheral Substituents with an Element of Symmetry. *J. Org. Chem.* 1996, 61 (3), 998-1003.
- Paolesse, R.; Marini, A.; Nardis, S.; Frolio, A.; Mandoj, F.; Nurco, D. J.; Prodi, L.; Montalti, M.; Smith, K. M., Novel routes to substituted 5,10,15-triarylcorroles. *J. Porphyrins Phthalocyanines* 2003, 7 (1), 25-36.
- Senge, M. O.; Kalisch, W. W., Synthesis and Structural Characterization of Nonplanar Tetraphenylporphyrins and Their Metal Complexes with Graded Degrees of β-Ethyl Substitution. *Inorg. Chem.* 1997, 36 (26), 6103-6116.
- Sessler, J. L.; Cyr, M. J.; Lynch, V.; McGhee, E.; Ibers, J. A., Synthetic and structural studies of sapphyrin, a 22-π-electron pentapyrrolic "expanded porphyrin". *J. Am. Chem. Soc.* 1990, 112 (7), 2810-13.

17. Sessler, J. L.; Johnson, M. R.; Lynch, V., Synthesis and crystal structure of a novel tripyrrane-containing porphyrinogen-like macrocycle. *J. Org. Chem.* 1987, 52 (19), 4394-7.
18. Sessler, J. L.; Mody, T. D.; Hemmi, G. W.; Lynch, V., Synthesis and structural characterization of lanthanide(III) texaphyrins. *Inorg. Chem.* 1993, 32 (14), 3175-87.
19. Sessler, J. L.; Mody, T. D.; Lynch, V., Synthesis and x-ray characterization of a uranyl(VI) Schiff base complex derived from a 2:2 condensation product of 3,4-diethylpyrrole-2,5-dicarbaldehyde and 1,2-diamino-4,5-dimethoxybenzene. *Inorg. Chem.* 1992, 31 (4), 529-31.
20. Tang, J.; Verkade, J. G., Nonionic Superbase-Promoted Synthesis of Oxazoles and Pyrroles: Facile Synthesis of Porphyrins and α -C-Acyl Amino Acid Esters. *J. Org. Chem.* 1994, 59 (25), 7793-802.

Hazardous Properties and Cautions: The toxicological and pharmacological properties of this compound are not fully known. For further information see the SDS on request. **3,4-Diethylpyrrole** is manufactured, shipped according to standard practices, and intended for research and development in a laboratory utilizing prudent procedures for handling chemicals of unknown toxicity, under the supervision of persons technically qualified to evaluate potential risks and authorized to enforce appropriate health and safety measures. As with all research chemicals, precautions should be taken to avoid unnecessary exposures or risks.

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