

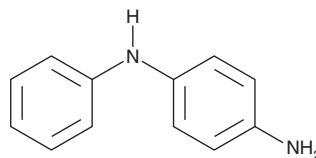
PRODUCT INFORMATION



4-Aminodiphenylamine

Item No. 40726

CAS Registry No.: 101-54-2
Formal Name: N¹-phenyl-1,4-benzenediamine
Synonyms: 4-ADPA, N-Phenyl-1,4-phenylenediamine, N-Phenyl-*p*-phenylenediamine, NSC 3401, NSC 37074, S 789
MF: C₁₂H₁₂N₂
FW: 184.2
Purity: ≥98%
Supplied as: A solid
Storage: -20°C
Stability: ≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

4-Aminodiphenylamine (4-ADPA) is supplied as a solid. A stock solution may be made by dissolving the 4-ADPA in the solvent of choice, which should be purged with an inert gas. 4-ADPA is soluble (≥10 mg/ml) in ethanol and DMSO.

Description

4-ADPA is a phenyl-substituted *p*-phenylenediamine.¹ It has been used in the synthesis of biodegradable electroactive hydrogels for increasing the viability of cardiomyocytes *via* electrical stimulation *in vitro* and supporting exogenous cardiomyocyte survival *in vivo*. 4-ADPA is also a starting material in the synthesis, as well as an oxidative degradation product, of the substituted *p*-phenylenediamine 6-PPD (Item No. 38246).^{2,3} It has been found as a contaminant in roadway runoff and urban creeks.³

References

1. Cui, H., Liu, Y., Cheng, Y., *et al.* In vitro study of electroactive tetraaniline-containing thermosensitive hydrogels for cardiac tissue engineering. *Biomacromolecules* **15**(4), 1115-1123 (2014).
2. Ushmarin, N.F. and Kavun, S.M. New antiozonants for rubber compounds based on oxyalkylated derivatives of 4-aminodiphenylamine. *Intern. Polymer Sci. Tech.* **44**(11), 36-41 (2016).
3. Zhao, H.N., Hu, X., Tian, Z., *et al.* Transformation products of tire rubber antioxidant 6PPD in heterogeneous gas-phase ozonation: Identification and environmental occurrence. *Environ. Sci. Technol.* **57**(14), 5621-5632 (2023).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the [complete](#) Safety Data Sheet, which has been sent via email to your institution.

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