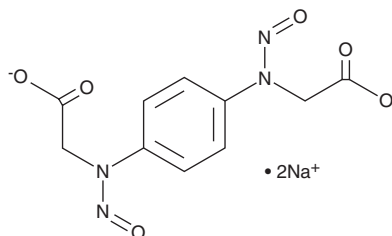


PRODUCT INFORMATION

N,N'-1,4-Phenylenebis[N-nitrosoglycine] (sodium salt)

Item No. 45244

CAS Registry No.: 214211-69-5
Formal Name: N,N'-1,4-phenylenebis[N-nitroso-glycine, disodium salt
Synonym: BNN5Na
MF: C₁₀H₈N₄O₆ • 2Na
FW: 349.2
Purity: ≥95%
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

N,N'-1,4-Phenylenebis[N-nitroso-glycine] (sodium salt) is supplied as a solid. A stock solution may be made by dissolving the N,N'-1,4-phenylenebis[N-nitroso-glycine] (sodium salt) in the solvent of choice, which should be purged with an inert gas. N,N'-1,4-Phenylenebis[N-nitroso-glycine] (sodium salt) is slightly soluble (0.1-1 mg/ml) in acetonitrile:water.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of N,N'-1,4-phenylenebis[N-nitroso-glycine] (sodium salt) can be prepared by directly dissolving the solid in aqueous buffers. N,N'-1,4-phenylenebis[N-nitroso-glycine] (sodium salt) is soluble (≥10 mg/ml) in PBS (pH 7.2). We do not recommend storing the aqueous solution for more than one day.

Description

N,N'-1,4-Phenylenebis[N-nitrosoglycine] is a photocontrollable nitric oxide (NO) donor.^{1,2} It displays an absorption maximum at 300 nm. Upon photoexcitation, homolysis of the nitrogen-nitrogen bonds releases two stable NO radicals. N,N'-1,4-Phenylenebis[N-nitrosoglycine] increases photoinduced vasorelaxation in methoxamine-precontracted endothelial cell-denuded rat aortic strips when used at a concentration of 1 μM.² It also releases caged NO when exposed to ultrasound in NO spin trap studies.³

References

1. Namiki, S., Arai, T. and Fujimori, K. High-performance caged nitric oxide: A new molecular design, synthesis, and photochemical reaction. *J. Am. Chem. Soc.* **119**, 3840-3841 (1997).
2. Namiki, S., Kaneda, F., Ikegami, M., et al. Bis-N-nitroso-caged nitric oxides: Photochemistry and biological performance test by rat aorta vasorelaxation. *Bioorg. Med. Chem.* **7(8)**, 95-702 (1999).
3. Feril, L. B. J. and Kondo, T. Ultrasound liberates nitric oxide (NO) from the caged NO compound N,N'-bis(carboxymethyl)-N,N'-dinitroso-p-phenylenediamine sodium salt. *Ultrason. Sonochem.* **13(5)**, 397-400 (2006).

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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