



## Product Information

### N-Nitrosodiisopropanolamine

Product Number **N 1768**

Storage Temperature 2-8 °C

#### Product Description

Molecular Formula: C<sub>6</sub>H<sub>14</sub>N<sub>2</sub>O<sub>3</sub>

Molecular Weight: 162.2

CAS Number: 53609-64-6

Boiling Point: 122-124 °C

Synonyms: N-nitrosobis(2-hydroxypropyl)amine, N,N-di-(2-hydroxypropyl)nitrosamine, NDIPLA, di-isopropanolnitrosamine

N-Nitrosodiisopropanolamine (NDIPLA), the nitroso derivative of diisopropanolamine, is a member of the nitrosamine class of compounds, which have been investigated for their carcinogenic properties.<sup>1</sup> *In vivo* activation of NDIPLA primarily occurs in the liver. DNA adducts that have been detected after treatment of cultured pancreatic ductal cells *in vitro* and hamsters and rats *in vivo* include methyl and hydroxypropyl adducts, such as N7-hydroxypropylguanine, N7-methylguanine, O<sup>6</sup>-methylguanine, and O<sup>6</sup>-hydroxypropylguanine.<sup>2,3</sup>

NDIPLA has been used to induce carcinoma *in vivo* in such organs as the pancreas and the thyroid.<sup>4,5,6,7,8</sup> GC/MS procedures to analyze for the presence of NDIPLA in gel and chemical formulations have been published.<sup>9,10</sup>

#### Precautions and Disclaimer

For Laboratory Use Only. Not for drug, household or other uses.

#### Preparation Instructions

This product is miscible in DMSO (0.1 ml/ml, 10% [v/v]), yielding a clear, faint yellow to yellow solution.

#### References

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4. Kilian, M., et al., Effects of taurolidine and octreotide on tumor growth and lipid peroxidation after staging-laparoscopy in ductal pancreatic cancer. *Prostaglandins Leukot. Essent. Fatty Acids*, **69(4)**, 261-267 (2003).
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7. Kinami, Y., et al., Promoting effects of bile acid load on the occurrence of cholangiocarcinoma induced by diisopropanolnitrosamine in hamsters. *Oncology*, **50(1)**, 46-51 (1993).
8. Imamura, Y., et al., Lectin histochemistry in rat thyroid tumours. *Basic Appl. Histochem.*, **33(3)**, 185-196 (1989).

9. Wigfield, Y. Y., et al., Gas chromatographic determination of N-nitrosodialkanolamines in herbicide di- or trialkanolamine formulations. J. Assoc. Off. Anal. Chem., **71(2)**, 328-333 (1988).
10. James, J. C., et al., Gas chromatographic/mass spectrometric (GC/MS) analysis of N-nitrosodiisopropanolamine at the nanogram-per-gram level in a gel formulation containing a nonsteroidal antiinflammatory agent. Pharm. Res., **6(10)**, 892-894 (1989).

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