



## Product Information

### 1,3-Dihydroxynaphthalene

Product Number **N 6250**

Store at Room Temperature

**CONSOLIDATION PRODUCT - DELETE THIS MESSAGE,  
ADD TAG LINE, AND USE ALTERNATE HEADER**

Replacement for Product Number 14,529-7

#### Product Description

Molecular Formula:  $C_{10}H_8O_2$

Molecular Weight: 160.2

CAS Number: 132-86-5

Melting Point: 124-125 °C<sup>1</sup>

$\lambda_{max}$ : 288 nm, 298 nm (ethanol)<sup>2</sup>

Extinction Coefficient:  $E^{1\%}_{1cm} = 3.89$  (288 nm);

3.80 (298 nm) (ethanol)<sup>2</sup>

Synonyms: naphthoresorcinol; 1,3-naphthalenediol

1,3-Dihydroxynaphthalene is a specific reagent for the quantitative colorimetric determination of alduronic acids, such as glucuronic acid from urine.<sup>3</sup> It is a dye intermediate, forming stable colors when applied with particular mordants and in mixtures with other oxidizing dyes. 1,3-Dihydroxynaphthalene is utilized in carbohydrate chromatography, sometimes in conjunction with resorcinol.<sup>4</sup>

A method that combines high-performance capillary electrophoresis with indirect absorbance detection has been developed for the determination of carbohydrates, where 1,3-dihydroxynaphthalene has been used as one background electrolyte.<sup>5</sup> 1,3-Dihydroxynaphthalene has been incorporated into a thin-layer electrophoretic method for the analysis of biomass degradation products which contain comprising mono-, oligo- and polysaccharides, and their derivatives, in addition to phenolic compounds.<sup>6</sup>

The mutagenicity of ozonation derivatives of 1,3-dihydroxynaphthalene against several *Salmonella typhimurium* strains has been studied.<sup>7</sup>

#### Precautions and Disclaimer

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

#### Preparation Instructions

This product is soluble in ethanol (50 mg/ml), with heat as needed, yielding a clear to slightly hazy, colorless to orange-brown solution. It is also soluble in water and ether.<sup>1</sup>

#### References

1. The Merck Index, 12th ed., Entry# 6483.
2. Spectrochim. Acta, **15**, 393 (1959).
3. Mozolowski, W., The Quantitative Estimation of Glucuronic Acids and its Conjugated Compounds by Means of the Naphthoresorcinol Test of Tollens. Biochem. J., **34**, 823-828 (1940).
4. Forsyth, W. G. C., Color Reagents for the Paper Chromatography of Sugars. Nature, **161**, 239-240 (1948).
5. Lee, Y. H., and Lin, T. I., Determination of carbohydrates by high-performance capillary electrophoresis with indirect absorbance detection. J. Chromatogr. B Biomed. Appl., **681**(1), 87-97 (1996).
6. Bonn, G., et al., Thin-layer electrophoretic behaviour of oligo- and mono-saccharides, uronic acids and polyhydroxy compounds obtained as biomass degradation products. J. Chromatogr., **370**(3), 485-493 (1986).
7. Sayato, Y., et al., Mutagenicity of products formed by ozonation of naphthoresorcinol in aqueous solutions. Mutat. Res., **189**(3), 217-222 (1987).

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