



Product Information

Resorcinol

Product Number **30,752-1**
Store at Room Temperature
Replacement for Product Number R 1000

Product Description

Molecular Formula: $C_6H_6O_2$
Molecular Weight: 110.1
CAS Number: 108-46-3
Melting Point: 109-111 °C¹
Boiling Point: 280 °C (compound will volatilize at low temperature and is slightly volatile with steam)¹
Synonyms: 1,3-benzenediol; m-dihydroxybenzene; resorcin¹

Resorcinol is an aromatic alcohol used in large scale processes such as tanning, the manufacture of resins and resin adhesives, the production of hexylresorcinol and p-aminosalicylic acid, and the dyeing and printing of textiles.¹ Resorcinol may also be produced in bacteria from other phenolic compounds, and may undergo further conversion to alicyclic products and eventual oxidation to acetyl-CoA. A review of the anaerobic metabolism of aromatic compounds in bacteria that discusses resorcinol has been published.²

Resorcinol is used in dermatology research, such as in studies of irritant contact dermatitis. The role of resorcinol in causing cytotoxicity and cytokine release in human epidermal keratinocytes and dermal fibroblasts has been studied.³ The cytotoxicity of resorcinol and other phenolic compounds against the melanotic human melanoma cell lines IRE 1 and IRE 2, and the lymphoma- and leukemia-derived cell lines Raji and K 562 has been studied, at phenolic compound concentrations of 10 μ M to 5 mM.⁴

The use of resorcinol in a colorimetric assay for sialic acid has been reported.⁵ A reversed phase LC

Precautions and Disclaimer

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

Preparation Instructions

This product is soluble in water (50 mg/ml), yielding a clear, colorless solution. The solubility in water has also been reported at 111 mg/ml. It is also soluble in alcohol (111 mg/ml), ether, and glycerol.¹

References

1. The Merck Index, 12th ed., Entry# 8323.
2. Heider, J., and Fuchs, G., Anaerobic metabolism of aromatic compounds. *Eur. J. Biochem.*, **243(3)**, 577-596 (1997).
3. Newby, C. S., et al., Cytokine release and cytotoxicity in human keratinocytes and fibroblasts induced by phenols and sodium dodecyl sulfate. *J. Invest. Dermatol.*, **115(2)**, 292-298 (2000).
4. Passi, S., et al., Comparative cytotoxicity of phenols *in vitro*. *Biochem. J.*, **245(2)**, 537-542 (1987).
5. Svennerholm, L., Quantitive estimation of sialic acids. II. A colorimetric resorcinol-hydrochloric acid method. *Biochem. Biophys. Acta*, **24(3)**, 604-611 (1957).
6. Asan, A., and Isildak, I., Determination of major phenolic compounds in water by reversed-phase liquid chromatography after pre-column derivatization with benzoyl chloride. *J. Chromatogr. A*, **988(1)**, 145-149 (2003).

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method for the detection of resorcinol and other phenol compounds in water has been described.⁶