

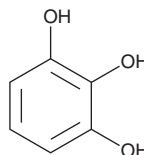
PRODUCT INFORMATION



Pyrogallol

Item No. 20347

CAS Registry No.: 87-66-1
Formal Name: 1,2,3-benzenetriol
Synonyms: Antioxidant PY, Benzene-1,2,3-triol,
C.I. 76515, Fouramine Brown AP,
NSC 5035, 2,3-Dihydroxyphenol,
1,2,3-Trihydroxybenzene
MF: C₆H₆O₃
FW: 126.1
Purity: ≥98%
UV/Vis.: λ_{max}: 267 nm
Supplied as: A crystalline 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

Pyrogallol is supplied as a crystalline solid. A stock solution may be made by dissolving the pyrogallol in the solvent of choice, which should be purged with an inert gas. Pyrogallol is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of pyrogallol in ethanol and DMF is approximately 30 mg/ml and approximately 20 mg/ml in DMSO.

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 pyrogallol can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of pyrogallol in PBS (pH 7.2) is approximately 5 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

Pyrogallol is a natural oxidant that can generate superoxide (O₂⁻) in alkaline solutions through autoxidation to a semiquinone radical.¹ Importantly, the semiquinone radical can react with O₂⁻ in an acidic environment to produce a quinone and H₂O₂.¹ Pyrogallol autoxidation is used in superoxide dismutase activity assays.¹ It can also be used in assays to assess antioxidant capacity.^{2,3} Pyrogallol is used in some biological systems as an O₂⁻ scavenger.⁴ In other biological systems, it is used as an O₂⁻ generator.^{5,6} Pyrogallol effectively scavenges DPPH radical (Item No. 14805) and ABTS⁺ *in vitro*.⁷ Pyrogallol is a product of tannin degradation to gallic acid (Item No. 11846) by ruminant microbes and has hepatotoxic and nephrotoxic effects *in vivo*.⁸

References

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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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