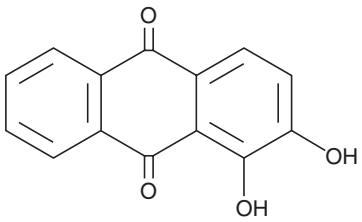
PRODUCT INFORMATION

Alizarin

Item No. 11676

CAS Registry No.:	72-48-0
Formal Name:	1,2-dihydroxy-9,10-anthracenedione
Synonyms:	CI-58000, NSC 7212
MF:	$C_{14}H_8O_4$
FW:	240.2
Purity:	≥95%
UV/Vis.:	λ_{max}: 248, 433 nm
Supplied as:	A crystalline solid
Storage:	Room temperature
Stability:	≥4 years
Item Origin:	Synthetic



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

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

Alizarin is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, alizarin should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. Alizarin has a solubility of approximately 0.5 mg/ml in a 1:1 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Alizarin is a small molecule inhibitor of cytochrome P450 isoforms CYP1A1, CYP1A2, and CYP1B1 (IC_{50}s = 6.2, 10, and 2.7 µM, respectively).[1] Alizarin acts as an antioxidant against iodophenol-derived phenoxyl radicals, superoxide anion radicals, and lipid peroxidation in rat liver microsomes.[2] It also reduces hepatic content of thiobarbituric acid-reactive substances and serum levels of alanine aminotransferase in poisoned rats.[2] Alizarin is also used as a red dye to stain bacteria, human adipose-derived stem cells, multipotent adult progenitor cells, skin, hair, and keratin fibers.[1,3,4]

References

1. Chin, C.-L., Tovcimak, A.E., Hradil, V.P., *et al.* Differential effects of cannabinoid receptor agonists on regional brain activity using pharmacological MRI. *Br. J. Pharmacol.* **153(2)**, 367-379 (2008).
2. Kumar, B.M., Yoo, J.-G., Ock, S.A., *et al. In vitro* differentiation of mesenchymal progenitor cells derived from porcine umbilical cord blood. *Mol. Cells.* **24(3)**, 343-350 (2007).
3. Louvet, O., Thualt, D., and Vaillant, R. Method and device for determining if a product is in condition for use or consumption. WO2005026383 A1 (2005), PCT/EP2004/052237, Cryolog S.A.
4. Dumosseaux, C. Composition for use on the skin, lips and/or nails. EP1588687 A1 (2005), EP20050300267, L'Oreal.

CAYMAN CHEMICAL
1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA
PHONE: [800] 364-9897
[734] 971-3335
FAX: [734] 971-3640
CUSTSERV@CAYMANCHEM.COM
WWW.**CAYMANCHEM**.COM