Purpurin

**Item No. 11752**

CAS Registry No.: 81-54-9  
Formal Name: 1,2,4-trihydroxy-9,10-anthracenedione  
Synonyms: Hydroxylizaric Acid, NSC 10447, Verantin  
MF: C_{14}H_{8}O_{5}  
FW: 256.2  
Purity: ≥95%  
UV/Vis.: \( \lambda_{\text{max}} \): 255, 484 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

Purpurin is supplied as a crystalline solid. A stock solution may be made by dissolving the purpurin in the solvent of choice, which should be purged with an inert gas. Purpurin is soluble in organic solvents such as DMSO and dimethyl formamide. The solubility of purpurin in these solvents is approximately 0.5 mg/ml.

### Description

Purpurin is a naturally occurring reddish-yellow pigment found in madder root (R. tinctorum) that has been used both in herbal remedies and as food coloring. It can also be synthetically derived from 9,10-anthraquinone. Purpurin is protective against a number of food-derived heterocyclic amines in bacterial mutagenicity assays through its inhibition of CYP450-dependent N-hydroxylation and reduction of N-hydroxylamines.\(^1\) Purpurine can also inhibit (IC\(50\) = 6.6 μM) spermidine-induced autoactivation of plasma hyaluronan-binding protein, a serine protease that can activate coagulation factor VII and prourokinase.\(^2\)

### References