

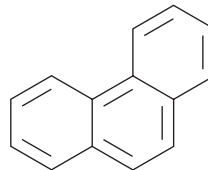
# PRODUCT INFORMATION



## Phenanthrene

Item No. 34284

CAS Registry No.: 85-01-8  
Synonyms: [3]Helicene, NSC 26256, Ravatite  
MF: C<sub>14</sub>H<sub>10</sub>  
FW: 178.2  
Purity: ≥98%  
UV/Vis.: λ<sub>max</sub>: 252 nm  
Supplied as: A 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

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

Phenanthrene is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, phenanthrene should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. Phenanthrene has a solubility of approximately 0.3 mg/ml in a 1:2 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

### Description

Phenanthrene is a polycyclic aromatic hydrocarbon (PAH).<sup>1</sup> It is found in fossil fuels and produced during the combustion of organic material. Phenanthrene accumulates in the environment, is toxic to aquatic species, and is considered a pollutant. It has been used as an intermediate in the synthesis of certain pesticides, plastics, and steroids.

### Reference

1. Waigi, M.G., Kang, F., Goikavi, C., *et al.* Phenanthrene biodegradation by sphingomonads and its application in the contaminated soils and sediments: A review. *Int. Biodeter. Biodegr.* **104**, 333-349 (2015).

#### 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.

#### WARRANTY AND LIMITATION OF REMEDY

Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

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