

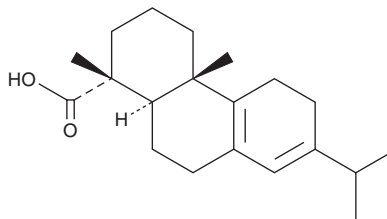
PRODUCT INFORMATION



Palustric Acid

Item No. 39136

CAS Registry No.: 1945-53-5
Formal Name: (1R,4aS,10aR)-1,2,3,4,4a,5,6,9,10,10a-decahydro-1,4a-dimethyl-7-(1-methylethyl)-1-phenanthrenecarboxylic acid
Synonym: NSC 148945
MF: $C_{20}H_{30}O_2$
FW: 302.5
Purity: $\geq 95\%$
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

Palustric acid is supplied as a solid. A stock solution may be made by dissolving the palustric acid in the solvent of choice, which should be purged with an inert gas. Palustric acid is slightly soluble in methanol and DMSO.

Description

Palustric acid is a diterpenoid that has been found in *P. resinosa* and has diverse biological activities.¹⁻⁴ It increases secreted hydrogen peroxide levels in isolated mouse macrophages when used at a concentration of 2 mg/ml.¹ Palustric acid is toxic to water fleas (*D. magna*) and rainbow trout (*S. gairdneri*; $LC_{50} = 0.1$ and 0.5 mg/L, respectively).² Phloem levels of palustric acid are increased in mechanically injured, as well as mechanically injured and *L. abietinum*-infected, red pine and white spruce trees.³ It has been found as an environmental contaminant in pulp and paper mill effluent.⁴

References

1. Moreira, R.R., Carlos, I.Z., and Vilega, W. Release of intermediate reactive hydrogen peroxide by macrophage cells activated by natural products. *Biol. Pharm. Bull.* **24**(2), 201-204 (2001).
2. Peng, G. and Roberts, J.C. Solubility and toxicity of resin acids. *Water Res.* **34**(10), 2779-2785 (2000).
3. Mason, C.J., Klepzig, K.D., Kopper, B.J., et al. Contrasting patterns of diterpene acid induction by red pine and white spruce to simulated bark beetle attack, and interspecific differences in sensitivity among fungal associates. *J. Chem. Ecol.* **41**(6), 524-532 (2015).
4. van den Heuvel, M.R., Ellis, R.J., Tremblay, L.A., et al. Exposure of reproductively maturing rainbow trout to a New Zealand pulp and paper mill effluent. *Ecotoxicol. Environ. Saf.* **51**(1), 65-75 (2002).

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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