

# PRODUCT INFORMATION



## Monoacetylphloroglucinol (hydrate)

Item No. 19451

**Formal Name:** 1-(2,4,6-trihydroxyphenyl)-ethanone, hydrate

**Synonyms:** MAPG, NSC 54927, Phloroacetophenone, 2',4',6'-Trihydroxyacetophenone

**MF:** C<sub>8</sub>H<sub>8</sub>O<sub>4</sub> • XH<sub>2</sub>O

**FW:** 168.1

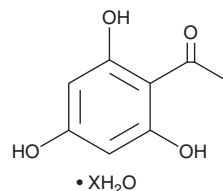
**Purity:** ≥98%

**UV/Vis.:** λ<sub>max</sub>: 209, 226, 286 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

Monoacetylphloroglucinol (MAPG) (hydrate) is supplied as a crystalline solid. A stock solution may be made by dissolving the MAPG (hydrate) in the solvent of choice, which should be purged with an inert gas. MAPG (hydrate) is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of MAPG (hydrate) in these solvents is approximately 25, 15, and 30 mg/ml, respectively.

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

### Description

MAPG is a metabolite produced by fluorescent pseudomonads that is acetylated by MAPG acetyltransferase to form the broad-spectrum antibiotic, 2,4-diacetylphloroglucinol (DAPG; Item No. 16345), which is used in the biocontrol of plant diseases by some *Pseudomonas* strains.<sup>1-3</sup> MAPG exhibits a broad range of antibiotic activity with fairly weak potency.

### References

- Hayashi, A., Saitou, H., Mori, T., *et al.* Molecular and catalytic properties of monoacetylphloroglucinol acetyltransferase from *Pseudomonas* sp. YGJ3. *Biosci. Biotechnol. Biochem.* **76(3)**, 559-566 (2012).
- Meyer, S.L.F., Halbrendt, J.M., Carta, L.K., *et al.* Toxicity of 2,4-diacetylphloroglucinol (DAPG) to plant-parasitic and bacterial-feeding nematodes. *J. Nematol.* **41(4)**, 274-280 (2009).
- Shanahan, P., O'Sullivan, D.J., Simpson, P., *et al.* Isolation of 2,4-diacetylphloroglucinol from a fluorescent pseudomonad and investigation of physiological parameters influencing its production. *Appl. Environ. Microbiol.* **58(1)**, 353-358 (2009).

#### 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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