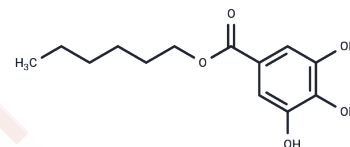


## Hexyl gallate

## Chemical Properties

CAS No. :	1087-26-9
Formula:	C <sub>13</sub> H <sub>18</sub> O <sub>5</sub>
Molecular Weight:	254.28
Storage:	Powder: -20°C for 3 years   In solvent: -80°C for 1 year Actual storage temperature shall be subject to the COA.



## Biological Description

Description	Hexyl gallate (Gallic acid hexyl ester), an alkyl ester derivative of gallic acid, exhibits potent antimalarial activity against Plasmodium falciparum (IC50: 0.11 mM).
Targets(IC50)	Antibacterial, Parasite
In vitro	Hexyl gallates (Hexyl 3,4,5-trihydroxybenzoate) selectively inhibit RhIR-dependent production of rhamnolipid and pyocyanin, impacting only RhI-regulated pathways while preserving elastase production and biofilm formation controlled by the Las system. These compounds show pigment inhibition at concentrations of 10-30 μM and exhibit notable antibacterial properties. Hexyl gallates also suppress N-butanoyl homoserine lactone (BHL) production at 100 and 300 μM, without affecting N-(3-oxododecanoyl)-L-homoserine lactone (OdDHL) and 2-heptyl-3-hydroxy-4(1H) quinolone (PQS) synthesis. As a promising antimicrobial alternative to copper compounds, Hexyl gallates effectively inhibit Xanthomonas citri growth at 30-50 μg/ml by targeting the bacterium's membrane, demonstrating a dose-responsive behavior.

## Solubility Information

Solubility	DMSO: 245 mg/mL (963.5 mM), Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+90% Saline: 24.5 mg/mL (96.35 mM), Solution. 10% DMSO+40% PEG300+5% Tween 80+45% Saline: 2 mg/mL (7.87 mM), Sonication is recommended. <i>Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.</i>

### Preparing Stock Solutions

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	1mg	5mg	10mg
1 mM	3.9327 mL	19.6634 mL	39.3267 mL
5 mM	0.7865 mL	3.9327 mL	7.8653 mL
10 mM	0.3933 mL	1.9663 mL	3.9327 mL
50 mM	0.0787 mL	0.3933 mL	0.7865 mL

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Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

### Reference

Kim B, et al. Differential effects of alkyl gallates on quorum sensing in *Pseudomonas aeruginosa*. *Sci Rep.* 2019;9(1):7741. Published 2019 May 23.

Ade Arsianti, et al. Synthesis and in vitro antimalarial activity of alkyl esters of gallate as a growth inhibitor of *plasmodium falciparum*. *Oriental Journal of Chemistry*, 34(2), 655-662.

Cavalca LB, et al. Hexyl gallate for the control of citrus canker caused by *Xanthomonas citri* subsp *citri* [published online ahead of print, 2020 Aug 6]. *Microbiologyopen.* 2020;e1104.

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