

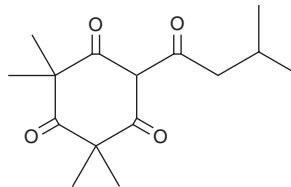
PRODUCT INFORMATION



Leptospermone

Item No. 45456

CAS Registry No.: 567-75-9
Formal Name: 2,2,4,4-tetramethyl-6-(3-methyl-1-oxobutyl)-1,3,5-cyclohexanetrione
MF: $C_{15}H_{22}O_4$
FW: 266.3
Purity: $\geq 98\%$
Supplied as: A 10 mg/ml solution in ethyl acetate
Storage: -20°C
Stability: ≥ 4 years
Item Origin: Synthetic



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Description

Leptospermone is a polyketide synthase-derived β -triketone that has been found in *L. scoparium* and has diverse biological activities.¹⁻⁴ It inhibits 4-hydroxyphenylpyruvate dioxygenase (HPPD; $IC_{50} = 11.8 \mu\text{M}$ for the *A. thaliana* enzyme).¹ Leptospermone is active against *B. subtilis* and *T. mentagrophytes* (MICs = 2 and 3 $\mu\text{g/ml}$, respectively).² It is lethal to *T. ni* and *C. includens* third-instar larvae (LD_{50} s = 20.5 and 28.2 $\mu\text{g/larva}$, respectively) and induces foliar damage in cabbage, soybean, and corn.³ Leptospermone is also active against *S. scabiei* mites, young eggs, and mature eggs (LC_{50} s = 61.7, 33.6, and 75.9 mM, respectively).⁴

References

1. Dayan, F.E., Singh, N., McCurdy, C.R., et al. β -triketone inhibitors of plant p-hydroxyphenylpyruvate dioxygenase: Modeling and comparative molecular field analysis of their interactions. *J. Agric. Food Chem.* **57**(12), 5194-5200 (2009).
2. van Klink, J.W., Larsen, L., Perry, N.B., et al. Triketones active against antibiotic-resistant bacteria: Synthesis, structure-activity relationships, and mode of action. *Bioorg. Med. Chem.* **13**(24), 6651-6662 (2005).
3. Muturi, E.J., Neidmann, M.A., Ribeiro, V.P., et al. Insecticidal activity of manuka essential oil triketones against two major lepidopteran pests. *Pest Manag. Sci.* **82**(4), 3717-3724 (2026).
4. Nammunige, N.A., Agnew-Francis, K.A., Fernando, D.D., et al. β -Triketones from *Leptospermum scoparium* (mānuka) oil show potential as scabicides. *Phytomedicine* **136**, 156321 (2025).

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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