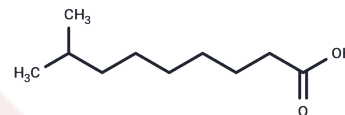


8-methyl Nonanoic Acid

Chemical Properties

| | |
|-------------------|---|
| CAS No. : | 5963-14-4 |
| Formula: | C ₁₀ H ₂₀ O ₂ |
| Molecular Weight: | 172.265 |
| 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 | Capsaicin, the chemical that imparts the spicy-hot quality of chili peppers, is produced by the fruits of plants belonging to the Capsicum family. 8-methyl Nonanoic acid is an immediate precursor of capsaicin as well as a by-product of capsaicin degradation.[1] Addition of 5 mM of 8-methyl nonanoic acid significantly increases the yield of capsaicin in both immobilized and freely suspended cells of <i>C. frutescens</i> . [2] Capsaicin has reported antimicrobial properties, however isocaproic acid can act as a growth substrate in certain bacterial strains.[3] |
| Targets(IC50) | Others |

Solubility Information

| | |
|------------|---|
| Solubility | Ethanol: 10.00 mg/mL (58.05 mM),Sonication is recommended. DMSO: 10.00 mg/mL (58.05 mM),Sonication is recommended. DMF: 10.00 mg/mL (58.05 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble) |
|------------|---|

Preparing Stock Solutions

| | 1mg | 5mg | 10mg |
|-------|-----------|------------|------------|
| 1 mM | 5.8048 mL | 29.0242 mL | 58.0484 mL |
| 5 mM | 1.161 mL | 5.8048 mL | 11.6097 mL |
| 10 mM | 0.5805 mL | 2.9024 mL | 5.8048 mL |
| 50 mM | 0.1161 mL | 0.5805 mL | 1.161 mL |

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

Kaga, H., Miura, M., and Orito, K. A facile procedure for synthesis of capsaicin. *The Journal of Organic Chemistry* 54, 3477-3478 (1989).

Lindsey, K., and Yeoman, M.M. The synthetic potential of immobilised cells of *Capsicum frutescens* mill cv. *annuum*. *Planta* 162, 495-501 (1984).

Flagan, S.F., and Leadbetter, J.R. Utilization of capsaicin and vanillylamine as growth substrates by *Capsicum* (hot pepper)-associated bacteria. *Environmental Microbiology* 8(3), 560-565 (2006).

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