

## DDAC

## Chemical Properties

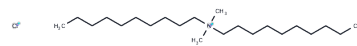
CAS No. : 7173-51-5

Formula: C<sub>22</sub>H<sub>48</sub>ClN

Molecular Weight: 362.08

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	DDAC (Quaternium 12), also known as Didecyl-dimethylammonium chloride, is a dialkyl-quaternary ammonium compound widely utilized in various products due to its bactericidal, virucidal, and fungicidal characteristics.
Targets(IC50)	Antibacterial, Antifungal
In vitro	DDAC (Didecyl-dimethylammonium chloride, DDAC) is a broad-spectrum bactericidal and fungicidal biocide that exhibits antimicrobial activity against several pathogens such as Staphylococcus aureus, Escherichia coli, Pseudomonas aeruginosa, Legionella pneumophila, Stachybotrys chartarum and enveloped and non-enveloped viruses[1].

## Solubility Information

Solubility	DMSO: 60 mg/mL (165.71 mM), Sonication is recommended. ( < 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+40% PEG300+5% Tween 80+45% Saline: 2 mg/mL (5.52 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	2.7618 mL	13.8091 mL	27.6182 mL
5 mM	0.5524 mL	2.7618 mL	5.5236 mL
10 mM	0.2762 mL	1.3809 mL	2.7618 mL
50 mM	0.0552 mL	0.2762 mL	0.5524 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

Anderson SE, et al. Evaluation of the irritancy and hypersensitivity potential following topical application of didecyldimethylammonium chloride. *J Immunotoxicol.* 2016;13(4):557-566.

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