

Product Data Sheet

Product Name: Mepiquat chloride

Cat. No.: GD16157

Chemical Properties

Cas. No. 24307-26-4

Chemical Name Piperidinium, 1,1-dimethyl-, chloride (1:1)

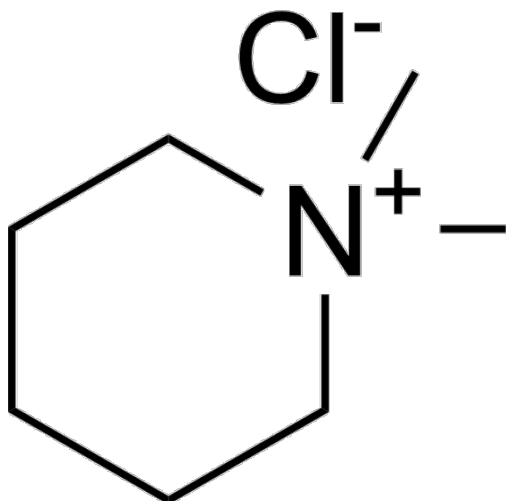
Formula $C_7H_{16}ClN$ M.Wt 149.66

Solubility DMSO : 8 mg/mL (53.45 mM; ultrasonic and warming and heat to 60°C) Storage RT

General tips For obtaining a higher solubility , please warm the tube at 37 °C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Shipping Condition Evaluation sample solution : ship with blue ice All other available size: ship with RT , or blue ice upon request.

Structure



Background

Mepiquat chloride (N,N-Dimethylpiperidinium chloride) is a systemic plant growth regulator. Mepiquat chloride reduces the activity of RuBP carboxylase. Mepiquat chloride decreases plant height, total length of vegetative and fruiting branches, and total leaf area of cotton. Mepiquat chloride reduces the net photosynthetic rate of cotton leaves. Mepiquat chloride promotes starch accumulation in

Caution: Product has not been fully validated for medical applications. For research use only.

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cotton leaves without altering sucrose content^[1].

Mepiquat chloride (active ingredient 7.65-61.2 g ha⁻¹) can reduce the plant height, stem elongation, branch length, leaf area, net photosynthetic rate and RuBP carboxylase activity of *Gossypium hirsutum* L. cv. DES 119 cotton plants, increase chlorophyll (based on leaf area) and starch content, and does not change sucrose content; the highest concentration tested (61.2 g active ingredient ha⁻¹) can reduce the stem elongation rate by 50% compared with the control, and reduce the net photosynthetic rate and RuBP carboxylase activity by 25% compared with the control^[1].

References:

[1]. Attipalli Ramachandra Reddy, et al. Mepiquat chloride (PIX)-induced changes in photosynthesis and growth of cotton. *Plant Growth Regulation*. 1996, 20(3):179-183.

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