Mepenzolate (bromide)
Item No. 23717

CAS Registry No.: 76-90-4
Formal Name: 3-[(2-hydroxy-2,2-diphenylacetyl)oxy]-1,1-dimethyl-piperidinium, monobromide
Synonym: NSC 4358
MF: C21H26NO3 • Br
FW: 420.3
Purity: ≥95%
Supplied as: A solid
Storage: -20°C
Stability: ≥2 years

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

## Laboratory Procedures

Mepenzolate (bromide) is supplied as a solid. A stock solution may be made by dissolving the mepenzolate (bromide) in the solvent of choice. Mepenzolate (bromide) is slightly soluble in the organic solvent DMSO, which should be purged with an inert gas. It is also slightly soluble in water. We do not recommend storing the aqueous solution for more than one day.

## Description

Mepenzolate is an antagonist of muscarinic (M) acetylcholine receptors (K_i = 0.68 and 2.6 nM for human M_2 and M_3 receptors, respectively). It has antispasmodic activity in the gastrointestinal tract of anesthetized cats and dogs when administered at a dose of 0.5 mg/kg. Mepenzolate decreases airspace enlargement induced by elastase or cigarette smoke and reduces respiratory dysfunction in a mouse model of chronic obstructive pulmonary disease (COPD). It also reduces oxidative stress, decreases the expression of IL-1β, IL-6, and TNF-α, and increases the expression of TGF-β1, IGF-1, and VEGF in a diabetic wound healing mouse model.

## References