

Product Information

Compound 48/80

Catalog Number **C2313**

Storage Temperature $-20\text{ }^{\circ}\text{C}$

Product Description

Molecular Formula: $\text{C}_{11}\text{H}_{15}\text{NO}$ (monomer)²

Molecular weight: 153 (monomer)²

Compound 48/80 is a condensation product of N-methyl-p-methoxyphenethylamine with formaldehyde; it is a mixture of low-molecular weight polymers having a degree of polymerization between 3 to 6.¹

Compound 48/80 is a potent histamine releasing agent, primarily from mast cells, with a subsequent depletion of tissue histamine. It is the action of mast cell mediators on the cardiovascular system that leads to circulatory collapse.³ The toxicity is due to more than histamine release.⁵ It is a potent inhibitor of phospholipase C.⁶

This material has been used to induce degranulation of GnRH-like immunoreactivity of mast cells in the brain and mesentery⁷ and for elucidating the mechanism by which anti-allergic medications suppress conjunctivitis.⁸

Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

Preparation Instructions

This product is soluble in water, 50 mg/ml, yielding a clear solution.

Storage/Stability

Store at $-20\text{ }^{\circ}\text{C}$.

Solutions can be autoclaved at 15 psi for 30 minutes with no detectable change in toxicity or potency.

References

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3. Niemegeers, C. J., et al., Protection of rats from compound 48/80-induced lethality. A simple test for inhibitors of mast cell-mediated shock. *Arch. Int. Pharmacodyn. Ther.*, **234(1)**, 164-176 (1978).
4. Read, G. W., and Lenney, J. F., Molecular weight studies on the active constituents of compound 48-80. *J. Med. Chem.*, **15(3)**, 320-323 (1972).
5. Papacostas, et al., *Arch. Int. Pharmacodyn. Ther.*, **120**, 353 (1959).
6. Bronner, C., et al., Compound 48/80 is a potent inhibitor of phospholipase C and a dual modulator of phospholipase A2 from human platelet. *Biochim. Biophys. Acta*, **920(3)**, 301-305 (1987).
7. Yang, M. F., et al., Compound 48/80-induced degranulation of GnRH-like immunoreactive mast cells in the brain and mesentery of gerbil. *Zoological Studies*, **41(1)**, 99-110 (2002).
8. Li, Q., et al., Suppressive effect of antflammin-2 on compound 48/80-induced conjunctivitis. Role of phospholipase A2s and inducible nitric oxide synthase. *Ocul. Immunol. Inflamm.*, **6(2)**, 65-73 (1998).

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