

# PRODUCT INFORMATION



## Acetophenazine (maleate)

Item No. 34415

CAS Registry No.: 5714-00-1

Formal Name: 1-[10-[3-[4-(2-hydroxyethyl)-1-piperazinyl] propyl]-10H-phenothiazin-2-yl]-ethanone, dimaleate

Synonyms: NSC 70600, NSC 169180

MF:  $C_{23}H_{29}N_3O_2S \cdot 2C_4H_4O_4$

FW: 643.7

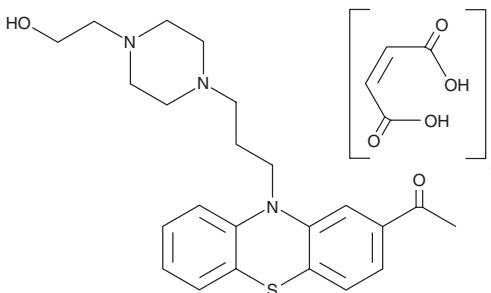
Purity:  $\geq 98\%$

UV/Vis.:  $\lambda_{max}$ : 244, 279 nm

Supplied as: A solid

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

Stability:  $\geq 4$  years



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

### Laboratory Procedures

Acetophenazine (maleate) is supplied as a solid. A stock solution may be made by dissolving the acetophenazine (maleate) in the solvent of choice, which should be purged with an inert gas. Acetophenazine (maleate) is soluble in organic solvents such as DMSO and dimethyl formamide. The solubility of acetophenazine (maleate) in these solvents is approximately 30 mg/ml.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of acetophenazine (maleate) can be prepared by directly dissolving the solid in aqueous buffers. The solubility of acetophenazine (maleate) in PBS (pH 7.2) is approximately 1 mg/ml. We do not recommend storing the aqueous solution for more than one day.

### Description

Acetophenazine is a typical antipsychotic that binds to the serotonin (5-HT) receptor subtypes 5-HT<sub>6</sub> and 5-HT<sub>7</sub> and the androgen receptor ( $K_i$ s = 72, 2.4, and 800 nM, respectively).<sup>1,2</sup> Acetophenazine also inhibits the binding of the sigma receptor agonist SKF 10047 ( $K_i$  = 36 nM) and the dopamine D<sub>2</sub>-selective antagonist spiperone ( $IC_{50}$  = 17 nM) to guinea pig brain membranes.<sup>3</sup> It increases the duration of fighting and the latency to submission in mice.<sup>3</sup>

### References

1. Roth, B.L., Craigo, S.C., Choudhary, M.S., *et al.* Binding of typical and atypical antipsychotic agents to 5-hydroxytryptamine-6 and 5-hydroxytryptamine-7 receptors. *J. Pharmacol. Exp. Ther.* **268**(3), 1403-1410 (1994).
2. Bisson, W.H., Cheltsov, A.V., Bruey-Sedano, N., *et al.* Discovery of antiandrogen activity of nonsteroidal scaffolds of marketed drugs. *Proc. Nat. Acad. Sci. USA* **104**(29), 11927-11932 (2007).
3. Tam, S.W. and Cook, L.  $\sigma$  opiates and certain antipsychotic drugs mutually inhibit (+)-[<sup>3</sup>H] SKF 10,047 and [<sup>3</sup>H]haloperidol binding in guinea pig brain membranes. *Proc. Natl. Acad. Sci. USA* **81**(17), 5618-5621 (1984).
4. Knight, W.R., Holtz, J.R., and Sprogis, G.R. Acetophenazine and fighting behavior in mice. *Science* **141**(3583), 830-831 (1963).

#### WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

#### SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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