

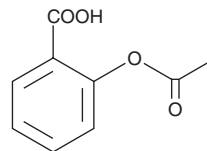
# PRODUCT INFORMATION



## Aspirin

Item No. 70260

**CAS Registry No.:** 50-78-2  
**Formal Name:** 2-(acetyloxy)-benzoic acid  
**Synonyms:** Acetylsalicylic Acid, NSC 27223, NSC 406186  
**MF:** C<sub>9</sub>H<sub>8</sub>O<sub>4</sub>  
**FW:** 180.2  
**Purity:** ≥90%  
**UV/Vis.:** λ<sub>max</sub>: 226, 275 nm  
**Supplied as:** A crystalline solid  
**Storage:** Room temperature  
**Stability:** ≥2 years



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

### Laboratory Procedures

Aspirin is supplied as a crystalline solid. A stock solution may be made by dissolving the aspirin in the solvent of choice. Aspirin is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide, which should be purged with an inert gas. The solubility of aspirin in these solvents is approximately 80, 41, and 30 mg/ml, respectively.

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 aspirin can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of aspirin in PBS, pH 7.2, is approximately 2.7 mg/ml. Avoid adding aspirin to basic solutions (pH > 7.4), since base treatment will hydrolyze aspirin to salicylic acid. Store aqueous solutions of aspirin on ice and use within 30 minutes of preparation.

### Description

Aspirin is a non-selective, irreversible COX inhibitor. The IC<sub>50</sub> values for ovine COX-1 and -2 are 0.75 and 1.25 mM, respectively.<sup>1</sup> Aspirin acetylates COX-1 at Ser<sup>530</sup> and COX-2 at Ser<sup>516</sup> resulting in irreversible enzyme inhibition.

### Reference

1. Johnson, J.L., Wimsatt, J., Buckel, S.D., *et al.* Purification and characterization of prostaglandin H synthase-2 from sheep placental cotyledons. *Arch. Biochem. Biophys.* **324**(1), 26-34 (1995).

#### 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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