

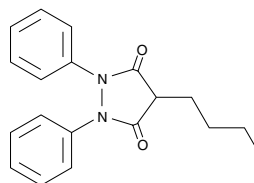
Product Information



Phenylbutazone

Item No. 70400

CAS Registry No.: 50-33-9
Formal Name: 4-butyl-1,2-diphenyl-3,5-pyrazolidinedione
MF: C₁₉H₂₀N₂O₂
FW: 308.4
Purity: ≥99%
Stability: ≥2 years at room temperature
Supplied as: A crystalline solid
UV/Vis.: λ_{max}: 242 nm



Laboratory Procedures

For long term storage, we suggest that phenylbutazone be stored as supplied at room temperature. It should be stable for at least two years.

Phenylbutazone is supplied as a crystalline solid. A stock solution may be made by dissolving the phenylbutazone in an organic solvent purged with an inert gas. Phenylbutazone is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of phenylbutazone is approximately 50 mg/ml in ethanol and 25 mg/ml in DMSO and DMF.

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 phenylbutazone can be prepared by directly dissolving the crystalline compound in aqueous buffers. The solubility of phenylbutazone in PBS (pH 7.2) is approximately 0.5 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Phenylbutazone, a nonsteroidal anti-inflammatory drug, is an efficient reducing cofactor for the peroxidase activity of COX.¹ Phenylbutazone-dependent inactivation of COX and prostacyclin synthase is markedly increased in the presence of 100 μM hydrogen peroxide with half-maximal effects at Phenylbutazone concentrations of 100 and 25 μM for COX and prostacyclin synthase, respectively.¹

Reference

1. Reed, G.A., Griffin, I.O., and Eling, T.E. Inactivation of prostaglandin H synthase and prostacyclin synthase by phenylbutazone. Requirement for peroxidative metabolism. *Mol. Pharmacol.* **27**, 109-114 (1985).

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WARNING: THIS PRODUCT IS FOR LABORATORY RESEARCH ONLY: NOT FOR ADMINISTRATION TO HUMANS. NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

MATERIAL SAFETY DATA

This material should be considered hazardous until information to the contrary becomes available. Do not ingest, swallow, or inhale. Do not get in eyes, on skin, or on clothing. Wash thoroughly after handling. This information contains some, but not all, of the information required for the safe and proper use of this material. Before use, the user must review the complete Material Safety Data Sheet, which has been sent via email to your institution.

WARRANTY AND LIMITATION OF REMEDY

Cayman Chemical Company makes **no warranty or guarantee** of any kind, whether written or oral, expressed or implied, including without limitation, any warranty of fitness for a particular purpose, suitability and merchantability, which extends beyond the description of the chemicals hereof. Cayman **warrants only** to the original customer that the material will **meet our specifications at the time of delivery**.

Cayman will carry out its delivery obligations with due care and skill. Thus, in no event will Cayman have **any obligation or liability**, whether in tort (including negligence) or in contract, for any direct, indirect, incidental or consequential damages, even if Cayman is informed about their possible existence.

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