

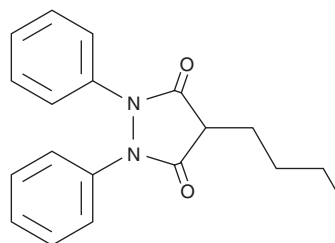
PRODUCT INFORMATION



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%
UV/Vis.: λ_{max}: 242 nm
Supplied as: A crystalline solid
Storage: Room temperature
Stability: ≥4 years



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

Laboratory Procedures

Phenylbutazone is supplied as a crystalline solid. A stock solution may be made by dissolving the phenylbutazone in the solvent of choice, which should be 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 approximately 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 solid 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.

Description

Phenylbutazone is a non-steroidal anti-inflammatory drug and an inhibitor of the peroxidase activity of COX (IC₅₀ = ~100 μM in the presence of hydrogen peroxide).¹ It also inhibits prostaglandin I synthase (IC₅₀ = ~25 μM in the presence of hydrogen peroxide). Phenylbutazone (2 mg/kg) reduces increases in type II collagen levels in the inflamed joints of an equine model of LPS-induced acute synovitis.² Formulations containing phenylbutazone have been used in the treatment of lameness in horses.

References

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).
2. de Grauw, J.C., van Loon, J.P.A.M., van de Lest, C.H.A., et al. In vivo effects of phenylbutazone on inflammation and cartilage-derived biomarkers in equine joints with acute synovitis. *Vet. J.* **201(1)**, 51-56 (2014).

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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