

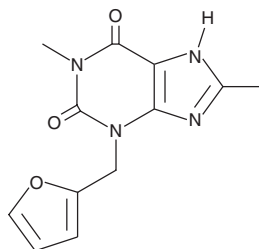
PRODUCT INFORMATION



Furafylline

Item No. 9000058

CAS Registry No.: 80288-49-9
Formal Name: 3-(2-furanylmethyl)-3,9-dihydro-1,8-dimethyl-1H-purine-2,6-dione
MF: C₁₂H₁₂N₄O₃
FW: 260.3
Purity: ≥95%
Storage: -20°C
Stability: ≥4 years
UV/Vis.: λ_{max}: 272 nm



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

Laboratory Procedures

Furafylline is supplied as a crystalline solid. A stock solution may be made by dissolving the furafylline in the solvent of choice, which should be purged with an inert gas. Furafylline is soluble in organic solvents such as DMSO and dimethyl formamide (DMF). The solubility of furafylline in DMSO is approximately 5 mg/ml and approximately 0.3 mg/ml in DMF.

Furafylline is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, furafylline should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. Furafylline has a solubility of approximately 0.5 mg/ml in a 1:1 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Furafylline is a selective inhibitor of human cytochrome P450 (CYP)1A2 (IC₅₀ = 0.07 μM), demonstrating little effect on other CYP isoforms including 2D1, 2C, 3A, or 1A1.¹ It was originally introduced as a bronchodilator with extended duration compared to theophylline, but then subsequently reported to inhibit the oxidation of caffeine (Item No. 14118), a reaction catalyzed by CYP1A2.¹⁻²

References

1. Sesardic, D., Boobis, A.R., Murray, B.P., *et al.* Furafylline is a potent and selective inhibitor of cytochrome P4501A2 in man. *Br. J. Clin. Pharmacol.* **29(6)**, 651-663 (1990).
2. Tarrus, E., Cami, J., Roberts, D.J., *et al.* Accumulation of caffeine in healthy volunteers treated with furafylline. *Br. J. Clin. Pharmacol.* **23(1)**, 9-18 (1987).

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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