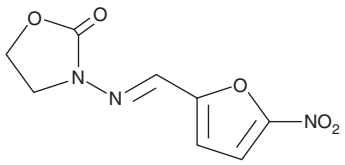
PRODUCT INFORMATION

Furazolidone

Item No. 34090

CAS Registry No.: 67-45-8
Formal Name: 3-[[(5-nitro-2-furanyl)methylene]amino]-2-oxazolidinone
Synonyms: Furoxone, NSC 6469, Nifulidone, Nitrofurazolidone, Nitrofuroxon, Tikofuran, Trifurox
MF: $C_8H_7N_3O_5$
FW: 225.2
Purity: ≥98%
UV/Vis.: λ_{max}: 261, 355 nm
Supplied as: A solid
Storage: -20°C
Stability: ≥4 years



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

Laboratory Procedures

Furazolidone is supplied as a solid. A stock solution may be made by dissolving the furazolidone in the solvent of choice, which should be purged with an inert gas. Furazolidone is soluble in organic solvents such as DMSO and dimethyl formamide. The solubility of furazolidone in these solvents is approximately 1 mg/ml.

Furazolidone is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, furazolidone should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. Furazolidone has a solubility of approximately 0.2 mg/ml in a 1:4 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Furazolidone is a nitrofuran antiprotozoal agent and antibacterial agent.[1-3] It is active against *G. lamblia* trophozoites (IC_{50} = 2.9 µM), as well as metronidazole-susceptible and -resistant *T. vaginalis* clinical isolates with minimum lethal concentration (MLC) values of less than 3.1 µg/ml.[1,2] Furazolidone is also active against clinical isolates of *Salmonella*, *Shigella*, *E. coli*, and *V. parahaemolyticus* (MICs = ≤0.5-4 µg/ml).[3] *In vivo*, furazolidone (50 mg/kg per day) reduces splenic and hepatic parasite burden in a golden hamster model of *L. chagasi* infection.[4] Formulations containing furazolidone have been used in the treatment of bacterial and protozoal infections.

References

1. Campanati, L. and Monteiro-Leal, L.H. The effects of the antiprotozoal drugs metronidazole and furazolidone on trophozoites of *Giardia lamblia* (P1 strain). *Parasitol Res.* **88(1)**, 80-85 (2002).
2. Narcisi, E.M. and Secor, W.E. *In vitro* effect of tinidazole and furazolidone on metronidazole-resistant *Trichomonas vaginalis*. *Antimicrob. Agents and Chemother.* **40(5)**, 1121-1125 (1996).
3. Carlson, J.R., Thornton, S.A., Dupont, H.L., *et al.* Comparative in vitro activities of ten antimicrobial agents against bacterial enteropathogens. *Antimicrob. Agents Chemother.* **24(4)**, 509-513 (1983).
4. Tempone, A.G., Mortara, R.A., de Andrade, H.F., Jr., *et al.* Therapeutic evaluation of free and liposome-loaded furazolidone in experimental visceral leishmaniasis. *Int. J. Antimicrob. Agents* **36(2)**, 159-163 (2010).

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