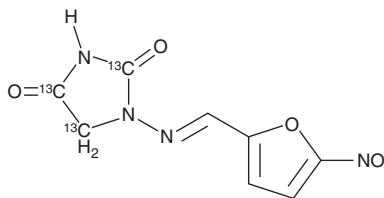


# PRODUCT INFORMATION



## Nitrofurantoin-<sup>13</sup>C<sub>3</sub> Item No. 33296

**CAS Registry No.:** 1217226-46-4  
**Formal Name:** 1-[[[(5-nitro-2-furanyl)methylene]amino]-2,4-imidazolidinedione-<sup>13</sup>C<sub>3</sub>  
**MF:** C<sub>5</sub>[<sup>13</sup>C]<sub>3</sub>H<sub>6</sub>N<sub>4</sub>O<sub>5</sub>  
**FW:** 241.1  
**Purity:** ≥95%  
**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

Nitrofurantoin-<sup>13</sup>C<sub>3</sub> is supplied as a solid. A stock solution may be made by dissolving the nitrofurantoin-<sup>13</sup>C<sub>3</sub> in the solvent of choice, which should be purged with an inert gas. Nitrofurantoin-<sup>13</sup>C<sub>3</sub> is slightly soluble in methanol and DMSO.

### Description

Nitrofurantoin-<sup>13</sup>C<sub>3</sub> is intended for use as an internal standard for the quantification of nitrofurantoin (Item No. 23510) by GC- or LC-MS. Nitrofurantoin is a nitrofuran antibiotic.<sup>1</sup> *In vivo*, nitrofurantoin (25-100 mg/kg) reduces *E. coli* replication and abscess formation in the renal medulla of infected rats in a dose-dependent manner. It prevents kidney and bladder infection in rats following bladder inoculation with clinical isolates of *P. mirabilis*. Nitrofurantoin also prevents alkalization of urine, as well as calculi and abscess formation, in a rat model of *P. vulgaris* urinary tract infection.<sup>2</sup> Formulations containing nitrofurantoin have been used in the treatment of urinary tract infections.

### References

1. Rocha, H., Da Silva Teles, E., and Barros, M. Site of action of nitrofurantoin in experimental urinary tract infection. *Appl. Microbiol.* **18(4)**, 547-549 (1969).
2. Hossack, D.J.N. Proteus vulgaris urinary tract infections in rats; treatment with nitrofuran derivatives. *Br. J. Pharmacol. Chemother.* **19(2)**, 306-312 (1962).

#### 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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