

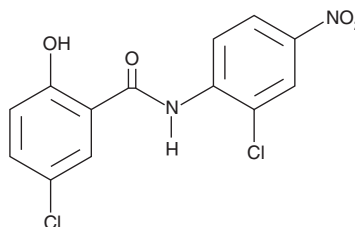
PRODUCT INFORMATION



Niclosamide

Item No. 10649

CAS Registry No.: 50-65-7
Formal Name: 5-chloro-N-(2-chloro-4-nitrophenyl)-2-hydroxy-benzamide
Synonyms: BAY-6076, BAY-73, Bayer 6076, Bayer 73, HL 2448, NSC 178296
MF: C₁₃H₈Cl₂N₂O₄
FW: 327.1
Purity: ≥95%
UV/Vis.: λ_{max}: 333 nm
Supplied as: A crystalline 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

Niclosamide is supplied as a crystalline solid. A stock solution may be made by dissolving the niclosamide in the solvent of choice, which should be purged with an inert gas. Niclosamide is soluble in the organic solvent ethanol at a concentration of approximately 0.5 mg/ml.

Description

Niclosamide is a molluscicide.¹ It is toxic to *H. trivolvis* snail eggs, juveniles, and adults (LC₅₀s = 0.035, 0.044, and 0.11 mg/kg, respectively), as well as rainbow trout, white sucker, and fathead minnow (LC₅₀s = 0.03, 0.09, and 0.11 mg/L, respectively).^{2,3} Niclosamide induces cell cycle arrest at the G₀/G₁ phase and induces apoptosis in DU145 human prostate cancer cells in a concentration-dependent manner.³ It inhibits STAT3-induced gene expression in a reporter assay using HeLa human cervical cancer cells when used at a concentration of 5 μM. Niclosamide (1 μM) uncouples mitochondrial respiration and increases the oxygen consumption rate of NIH3T3 mouse fibroblasts.⁴ Dietary administration of niclosamide (1,500 ppm) reduces blood glucose and plasma insulin levels, as well as decreases liver weight and triglyceride levels, in a mouse model of high-fat diet-induced diabetes.⁴

References

1. Tchounwou, P.B., Englande, A.J., Jr., and Malek, E.A. Toxicity evaluation of Bayluscide® and malathion to three developmental stages of freshwater snails. *Arch. Environ. Contam. Toxicol.* **21**(3), 351-358 (1991).
2. Marking, L.L. and Bills, T.D. Effects of contaminants on toxicity of the lampricides TFM and Bayer 73 to three species of fish. *J. Great Lakes Res.* **11**(2), 171-178 (1985).
3. Ren, X., Duan, L., He, Q., et al. Identification of niclosamide as a new small-molecule inhibitor of the STAT3 signaling pathway. *ACS Med. Chem. Lett.* **1**(9), 454-459 (2010).
4. Tao, H., Zhang, Y., Zeng, X., et al. Niclosamide ethanolamine-induced mild mitochondrial uncoupling improves diabetic symptoms in mice. *Nat. Med.* **20**(11), 1263-1269 (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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