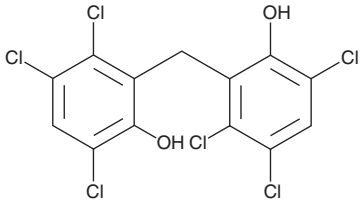
PRODUCT INFORMATION

Hexachlorophene

Item No. 23948

CAS Registry No.:	70-30-4
Formal Name:	2,2'-methylenebis[3,4,6-trichloro-phenol
Synonyms:	Nabac, NSC 9887, NSC 49115
MF:	$C_{13}H_6Cl_6O_2$
FW:	406.9
Purity:	≥98%
UV/Vis.:	λ_{max}: 300 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

Hexachlorophene is supplied as a crystalline solid. A stock solution may be made by dissolving the hexachlorophene in the solvent of choice. Hexachlorophene is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide, which should be purged with an inert gas. The solubility of hexachlorophene in these solvents is approximately 30 mg/ml.

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

Description

Hexachlorophene is an organochlorine antiseptic and antibacterial biocide.[1-4]It is active against *S. aureus* (MIC = 1.56 µg/ml), *E. faecium* isolates from fresh produce (MICs = 5-50 mg/L), *Salmonella* isolates from meats (MICs = 2.5-25 mg/L), and *Pseudomonas* isolates from slaughterhouse surfaces (MICs = ≤0.0025-≤0.25 mg/L). Hexachlorophene inhibits severe acute coronavirus 2 (SARS-CoV-2) endoribonuclease (nsp15) in a FRET assay (IC_{50} = 1.6 µM) and inhibits SARS-CoV-2 replication in infected Vero CCL-81 cells (IC_{50} = 0.91 µM).[5] Hexachlorophene inhibits infection of mouse astrocytoma delayed brain tumor (DBT) cells by mouse hepatitis virus (MHV; IC_{50} = 1.2 µM).[6] Hexachlorophene also inhibits recombinant human glutathione transferases P1-1 and A3-3 (IC_{50}s = 9.7 and <0.16 µM, respectively) and activates KCNQ1- and KCNE1 subunit-containing voltage-gated potassium K_v7 channels expressed in CHO cells (EC_{50} = 4.61 µM).[7,8] *In vivo*, hexachlorophene is toxic to fasted and non-fasted rats with LD_{50} values of 215 and 165 mg/kg, respectively.[9] It reduces *R. solani*-induced fruit rot in cucumber plants when applied at a concentration of 4.4 kg/ha.[10]

References

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