

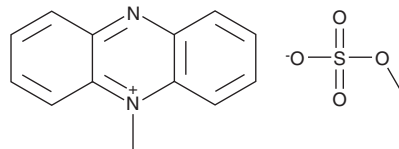
PRODUCT INFORMATION



Phenazine (methosulfate)

Item No. 30558

CAS Registry No.: 299-11-6
Formal Name: 5-methyl-phenazinium, methyl sulfate
Synonym: NSC 34661
MF: C₁₃H₁₁N₂ • CH₃SO₄
FW: 306.3
Purity: ≥98%
UV/Vis.: λ_{max}: 259, 386 nm
Supplied as: A crystalline solid
Storage: -20°C
Stability: ≥2 years



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

Laboratory Procedures

Phenazine (methosulfate) is supplied as a crystalline solid. A stock solution may be made by dissolving the phenazine (methosulfate) in the solvent of choice, which should be purged with an inert gas. Phenazine (methosulfate) is soluble in organic solvents such as DMSO and dimethyl formamide. The solubility of phenazine (methosulfate) in these solvents is approximately 10 mg/ml.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of phenazine (methosulfate) can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of phenazine (methosulfate) in PBS, pH 7.2, is approximately 10 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

Phenazine is a free radical generator.¹ It has been used as an electron transfer reactant in cell viability assays.² Phenazine (10 μM) induces ssDNA break formation in the presence of the reducing agent NADPH in a cell-free plasmid cleavage assay when used at a concentration of 10 μM. It induces oxidative DNA damage in an alkaline comet assay and apoptosis in A375 melanoma cells when used at a concentration of 10 μM. Phenazine (20 nM) oxidizes cysteine-containing proteins in HepG2 cells.¹

References

1. Lin, C.-Y., Hu, C.-T., Cheng, C.-C., *et al.* Oxidation of heat shock protein 60 and protein disulfide isomerase activates ERK and migration of human hepatocellular carcinoma HepG2. *Oncotarget* **7(10)**, 11067-11082 (2016).
2. Hua, A.B., Justiniano, R., Perer, J., *et al.* Repurposing the electron transfer reactant phenazine methosulfate (PMS) for the apoptotic elimination of malignant melanoma cells through induction of lethal oxidative and mitochondriotoxic stress. *Cancers (Basel)* **11(5)**, E590 (2019).

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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