PRODUCT INFORMATION



S-Phenylmercapturic Acid

Item No. 20869

	1775 00 0	
CAS Registry No.:	4775-80-8	
Formal Name:	N-acetyl-S-phenyl-L-cysteine	0
Synonyms:	NSC 17197, S-PMA	H
MF:	$C_{11}H_{13}NO_3S$	N. N
FW:	239.3	S OH
Purity:	≥98%	
UV/Vis.:	λ _{may} : 254 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

S-Phenylmercapturic acid (S-PMA) is supplied as a crystalline solid. A stock solution may be made by dissolving the S-PMA in the solvent of choice. S-PMA is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF), which should be purged with an inert gas. The solubility of S-PMA in ethanol is approximately 5 mg/ml and approximately 30 mg/ml in DMSO and DMF.

S-PMA is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, S-PMA should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. S-PMA has a solubility of approximately 0.12 mg/ml in a 1:7 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

S-PMA is a metabolite of benzene used as a biomarker for benzene exposure in humans.¹ In industrial workers, urinary concentrations of up to 543 μ g/g creatinine have been detected. In a study of benzene exposure through tobacco smoke inhalation in humans, smokers had a urinary concentration of 9.1 μ g S-PMA/g creatinine compared with 4.8 μ g S-PMA/g creatinine in non-smokers.²

References

1. van Sittert, N.J., Boogaard, P.J., and Beulink, G.D. Application of the urinary S-phenylmercapturic acid test as a biomarker for low levels of exposure to benzene in industry. Br. J. Ind. Med. 50(5), 460-469 (1993).

2. Melikian, A.A., O'Connor, R., Prahalad, A.K., et al. Determination of the urinary benzene metabolites S-phenylmercapturic acid and trans, trans-muconic acid by liquid chromatography-tandem mass spectrometry. Carcinogenesis 20(4), 719-726 (1999).

WARNING THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFFTY 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.

WARRANTY AND LIMITATION OF REMEDY

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