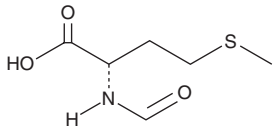
PRODUCT INFORMATION

N-Formylmethionine

Item No. 35594

CAS Registry No.:	4289-98-9
Formal Name:	N-formyl-L-methionine
Synonym:	NSC 334322
MF:	$C_6H_{11}NO_3S$
FW:	177.2
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

N-Formylmethionine is supplied as a solid. A stock solution may be made by dissolving the N-formylmethionine in the solvent of choice, which should be purged with an inert gas. N-Formylmethionine is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of N-formylmethionine in these solvents is approximately 2, 12, and 16 mg/ml, respectively.

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 N-formylmethionine can be prepared by directly dissolving the solid in aqueous buffers. The solubility of N-formylmethionine in PBS (pH 7.2) is approximately 5 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

N-Formylmethionine is an amino acid encoded by AUG, the start codon for protein synthesis.[1] It is the N-terminal amino acid in the majority of proteins in prokaryotic systems but is commonly removed post-translationally. Levels of N-formylmethionine are positively correlated with the incidence of renal disease, heart failure, coronary artery disease, abdominal aortic aneurysms, chronic obstructive pulmonary disease (COPD), as well as mortality.[2]

References

1. Pelley, J.W. Protein synthesis and degradation. *Elsevier's Integrated Biochemistry* 147-158 (2007).
2. Cai, N., Gomez-Duran, A., Yonova-Doing, E., *et al*. Mitochondrial DNA variants modulate N-formylmethionine, proteostasis and risk of late-onset human diseases. *Nat. Med.* **27(9)**, 1564-1575 (2021).

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