

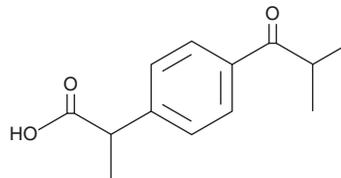
PRODUCT INFORMATION



1-oxo Ibuprofen

Item No. 22573

CAS Registry No.: 65813-55-0
Formal Name: α -methyl-4-(2-methyl-1-oxopropyl)-benzeneacetic acid
Synonym: Ibuprofen Impurity J
MF: C₁₃H₁₆O₃
FW: 220.3
Purity: $\geq 98\%$
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

1-oxo Ibuprofen is supplied as a solid. A stock solution may be made by dissolving the 1-oxo ibuprofen in the solvent of choice, which should be purged with an inert gas. 1-oxo Ibuprofen is soluble in the organic solvent chloroform.

Description

1-oxo Ibuprofen is a degradation product and potential impurity in commercial preparations of ibuprofen.^{1,2} Ibuprofen (Item No. 70280) is a non-selective, reversible COX inhibitor and non-steroidal anti-inflammatory drug (NSAID).¹ Formulations containing ibuprofen are widely used for inflammation, pain, and fever. However, it is considered, among other pharmaceuticals, an environmental contaminant because it cannot be completely biodegraded during the wastewater treatment process.³ Degradation using ultraviolet light, Fe(III), and peroxymonosulfate has been described and results in degradation products, including 1-oxo ibuprofen.¹

References

1. YongFang, R., Xue, D., Pan, H., *et al.* Degradation of ibuprofen by a synergistic UV/Fe(III)/Oxone process. *Chem. Eng. J.* **283**, 65-75 (2016).
2. Vijay Kumar, R., Rao, V.U., Anil Kumar, N., *et al.* A novel, rapid, and validated stability-indicating UPLC method for the estimation of drotaverine hydrochloride and ibuprofen impurities in oral solid dosage form. *Sci. Pharm.* **83(4)**, 567-581 (2015).
3. Méndez-Arriaga, F., Esplugas, S., and Giménez, J. Degradation of the emerging contaminant ibuprofen in water by photo-Fenton. *Water Res.* **44(2)**, 589-595 (2010).

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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