

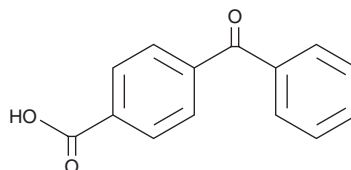
PRODUCT INFORMATION



4-(Phenylcarbonyl)benzoic Acid

Item No. 30407

CAS Registry No.: 611-95-0
Formal Name: 4-benzoyl-benzoic acid
Synonyms: 4-Benzoylbenzoic Acid,
4-Carboxybenzophenone,
NSC 37115, *p*-Benzoylbenzoic
Acid, *p*-Carboxybenzophenone
MF: C₁₄H₁₀O₃
FW: 226.2
Purity: ≥98%
UV/Vis.: λ_{max}: 257 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

4-(Phenylcarbonyl)benzoic acid is supplied as a crystalline solid. A stock solution may be made by dissolving the 4-(phenylcarbonyl)benzoic acid in the solvent of choice, which should be purged with an inert gas. 4-(Phenylcarbonyl)benzoic acid is soluble in organic solvents such as DMSO and dimethyl formamide (DMF). The solubility of 4-(phenylcarbonyl)benzoic acid in these solvents is approximately 10 and 30 mg/ml, respectively.

4-(Phenylcarbonyl)benzoic acid is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, 4-(phenylcarbonyl)benzoic acid should first be dissolved in DMF and then diluted with the aqueous buffer of choice. 4-(Phenylcarbonyl)benzoic acid has a solubility of approximately 0.16 mg/ml in a 1:5 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

4-(Phenylcarbonyl)benzoic acid is a photooxidant.¹⁻³ Upon light activation, 4-(phenylcarbonyl)benzoic acid forms an electrophilic aromatic ketone that acts as an oxidant in organic synthesis or biological systems. It has been used in the study of amino acid oxidation, as well as the synthesis of photoactivated antibacterial and antiviral compounds.

References

1. Cohen, S.G. and Ojanpera, S. Photooxidation of methionine and related compounds. *J. Am. Chem. Soc.* **97(19)**, 5633-5634 (1975).
2. Bobrowski, K., Marciniak, B., and Hug, G.L. 4-Carboxybenzophenone-sensitized photooxidation of sulfur-containing amino acids. nanosecond laser flash photolysis and pulse radiolysis studies. *J. Am. Chem. Soc.* **114(26)**, 10279-10288 (1992).
3. Si, Y., Zhang, Z., Wu, W., *et al.* Daylight-driven rechargeable antibacterial and antiviral nanofibrous membranes for bioprotective applications. *Sci. Adv.* **4(3)**, eaar5931 (2018).

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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