

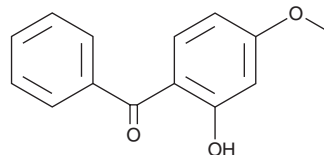
PRODUCT INFORMATION



Oxybenzone

Item No. 42170

CAS Registry No.: 131-57-7
Formal Name: (2-hydroxy-4-methoxyphenyl)phenyl-methanone
Synonyms: Benzophenone-3,
2-Hydroxy-4-methoxybenzophenone, NSC 7778
MF: C₁₄H₁₂O₃
FW: 228.2
Purity: ≥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

Oxybenzone is supplied as a solid. A stock solution may be made by dissolving the oxybenzone in the solvent of choice, which should be purged with an inert gas. Oxybenzone is sparingly soluble (1-10 mg/ml) in DMSO and ethanol.

Description

Oxybenzone is a benzophenone UV filter.¹⁻³ Oral administration of oxybenzone (30, 212, or 3,000 µg/kg per day) to pregnant mice reduces mammary cell proliferation and the number of cells expressing estrogen receptor α (ERα) and alters mammary gland morphology in female offspring.¹ It induces cognitive impairments in an associative learning protocol with electroshock as a stimulus and increases brain levels of reactive oxygen species (ROS) in zebrafish.² Oxybenzone (33 and 50 ppm) induces coral bleaching and death when administered in the tank water.³ Formulations containing oxybenzone have been used as sunscreens and as industrial additives to protect textiles, color agents, and plastics from bleaching and UV-induced degradation.

References

1. Matouskova, K., Jerry, D.J., and Vandenberg, L.N. Exposure to low doses of oxybenzone during perinatal development alters mammary gland morphology in male and female mice. *Reprod. Toxicol.* **92**, 66-77 (2020).
2. Moreira, A.L.P., Paiva, W.S., de Souza, A.M., et al. Benzophenone-3 causes oxidative stress in the brain and impairs aversive memory in adult zebrafish. *Environ. Toxicol. Pharmacol.* **100**, 104164 (2023).
3. DiNardo, J.C. and Downs, C.A. Dermatological and environmental toxicological impact of the sunscreen ingredient oxybenzone/benzophenone-3. *J. Cosmet. Dermatol.* **17**(1), 15-19 (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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