

PRODUCT INFORMATION

6-PPD-Q Standards Set

Item No. 45452

Overview and Properties

Synonyms: EPA Draft Method 1634 Standards Set, 6-PPD-quinone Standards Set
Supplied as: A solution in acetonitrile (100 µg/ml of each compound)

Materials Supplied

Item Number	Item Name	Quantity/Size	Storage Temperature
45446	6-PPD-Q (CRM)	1 ampule/1 ml	2-8°C
45447	¹³ C ₆ -6-PPD-Q (solution)	1 ampule/1 ml	2-8°C
45448	6-PPD-Q-d ₅ (solution)	1 ampule/1 ml	2-8°C

Storage and Stability

Store individual components as directed in the Materials Supplied section and use before the expiration date indicated on the label.

Description

6-PPD-Q Standards Set (Item No. 45452) is a set of standards containing 6-PPD-Q (CRM), ¹³C₆-6-PPD-Q, and 6-PPD-Q-d₅. 6-PPD-Q is a substituted p-phenylenediamine (PPD) quinone, oxidized transformation product of the tire rubber antioxidant 6-PPD (Item No. 38246), and an environmental toxicant.¹ 6-PPD-Q has been detected as a contaminant in atmospheric particles, road dust, and various aquatic sources, including surface water, stormwater, and wastewater, among other media.^{1,2} 6-PPD-Q is highly toxic to aquatic organisms, including salmon and zebrafish, and induces oxidative stress, DNA damage, inflammation, and reproductive dysfunction in model organisms.¹ The standards in this set are designed for use as reference standards for analytical testing of 6-PPD-Q in environmental samples by LC-MS using the EPA's Draft Method 1634.³ Each standard is supplied as a ready-to-use 100 µg/ml solution in an amber ampule in which the headspace has been purged with argon.

References

1. Zhang, S., Tang, J., Qiu, Z., *et al.* Environmental and human health risks of 6PPD and 6PPDQ: Assessment and implications. *Toxics* **13**(10), 873 (2025).
2. Bohara, K., Timilsina, A., Adhikari, K., *et al.* A mini review on 6PPD quinone: A new threat to aquaculture and fisheries. *Environ. Pollut.* **340**(Pt 2), 122828 (2024).
3. DRAFT method 1634. Determination of 6PPD-quinone in aqueous matrices using liquid chromatography with tandem mass spectrometry (LC/MS/MS). In: United States Environmental Protection Agency. EPA (2024). Available from: https://www.epa.gov/system/files/documents/2025-02/draft-method-1634_1-24-24_508.pdf

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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