

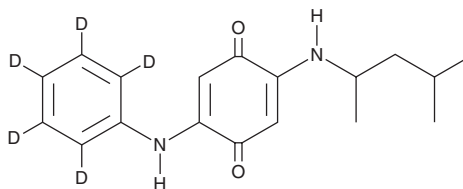
# PRODUCT INFORMATION



## 6-PPD-Q-d<sub>5</sub> (solution)

Item No. 45448

**CAS Registry No.:** 2750119-14-1  
**Formal Name:** 2-[(1,3-dimethylbutyl)amino]-5-(phenyl-2,3,4,5,6-d<sub>5</sub>-amino)-2,5-cyclohexadiene-1,4-dione  
**Synonym:** 6-PPD-quinone-d<sub>5</sub>  
**MF:** C<sub>18</sub>H<sub>17</sub>D<sub>5</sub>N<sub>2</sub>O<sub>2</sub>  
**FW:** 303.4  
**Chemical Purity:** ≥90% (6-PPD-Q)  
**Deuterium Incorporation:** ≥99% deuterated forms (d<sub>1</sub>-d<sub>5</sub>); ≤1% d<sub>0</sub>  
**Supplied as:** A 100 µg/ml solution in acetonitrile  
**Storage:** 4°C  
**Stability:** ≥2 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

### Description

6-PPD-Q-d<sub>5</sub> (solution) is intended for use as an internal standard for the quantification of 6-PPD-Q (Item Nos. 45543 | 38247) by GC- or LC-MS. The accuracy of the sample weight in this vial is between 5% over and 2% under the amount shown on the vial. If better precision is required, the deuterated standard should be quantitated against a more precisely weighed unlabeled standard by constructing a standard curve of peak intensity ratios (deuterated versus unlabeled).

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.<sup>1</sup> This product is supplied in an amber ampule in which the headspace has been purged with argon.

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.<sup>1,2</sup> 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.<sup>1</sup>

### 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).

#### 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.

#### WARRANTY AND LIMITATION OF REMEDY

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