

PRODUCT INFORMATION



$^{13}\text{C}_6$ -6-PPD-Q (solution)

Item No. 45447

Formal Name: 2-((4-methylpentan-2-yl)amino)-5-((phenyl- $^{13}\text{C}_6$)amino)cyclohexa-2,5-diene-1,4-dione

Synonym: $^{13}\text{C}_6$ -6-PPD-quinone

MF: $\text{C}_{12}^{13}\text{H}_{22}\text{N}_2\text{O}_2$

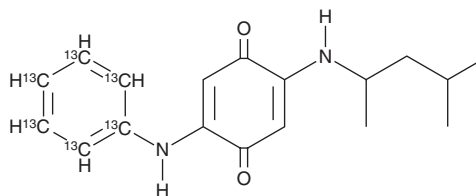
FW: 304.3

Purity: $\geq 98\%$

Supplied as: A 100 $\mu\text{g}/\text{ml}$ 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

$^{13}\text{C}_6$ -6-PPD-Q (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. 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 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.^{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

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.

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