

PRODUCT INFORMATION

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

Item No. 40606

Formal Name: 2-[(1,3-dimethylbutyl)amino]-5-(phenyl- $^{13}\text{C}_6$ -amino)-2,5-cyclohexadiene-1,4-dione

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

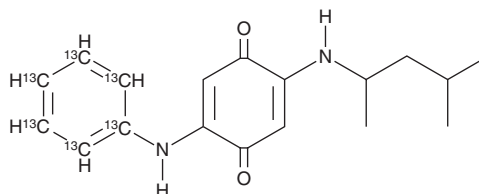
FW: 304.3

Purity: $\geq 98\%$

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

$^{13}\text{C}_6$ -6-PPD-Q is intended for use as an internal standard for the quantification of 6-PPD-Q (Item No. 38247) by GC- or LC-MS. $^{13}\text{C}_6$ -6-PPD-Q is supplied as a solid. A stock solution may be made by dissolving the $^{13}\text{C}_6$ -6-PPD-Q in the solvent of choice, which should be purged with an inert gas. $^{13}\text{C}_6$ -6-PPD-Q is soluble (≥ 10 mg/ml) in DMSO

Description

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

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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