

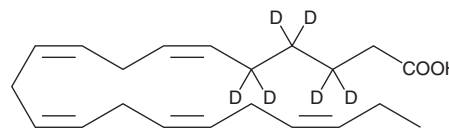
# PRODUCT INFORMATION



## Heneicosapentaenoic Acid-d<sub>6</sub>

Item No. 10570

<b>Formal Name:</b>	6Z,9Z,12Z,15Z,18Z-heneicosapentaenoic-3,3,4,4,5,5-d <sub>6</sub> acid
<b>Synonyms:</b>	FA 21:5-d <sub>6</sub> , HPA-d <sub>6</sub>
<b>MF:</b>	C <sub>21</sub> H <sub>26</sub> D <sub>6</sub> O <sub>2</sub>
<b>FW:</b>	322.5
<b>Chemical Purity:</b>	≥98% (Heneicosapentaenoic Acid)
<b>Deuterium Incorporation:</b>	≥99% deuterated forms (d <sub>1</sub> -d <sub>6</sub> ); ≤1% d <sub>0</sub>
<b>Supplied as:</b>	A solution in ethanol
<b>Storage:</b>	-20°C
<b>Stability:</b>	≥2 years



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

### Laboratory Procedures

Heneicosapentaenoic acid-d<sub>6</sub> (HPA-d<sub>6</sub>) is intended for use as an internal standard for the quantification of HPA 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).

HPA-d<sub>6</sub> is supplied as a solution in ethanol. To change the solvent, simply evaporate the ethanol under a gentle stream of nitrogen and immediately add the solvent of choice. Solvents such as DMSO and dimethyl formamide purged with an inert gas can be used. The solubility of HPA-d<sub>6</sub> in these solvents is approximately 100 mg/ml.

### Description

HPA is a ω-3 fatty acid present in trace amounts in the green alga *B. pennata* Lamouroux and in fish oils. Its chemical composition is similar to eicosapentaenoic acid (EPA) except elongated with one carbon on the carboxyl end, placing the first double bond in the Δ<sup>6</sup> position.<sup>1</sup> HPA can be used to study the significance of the position of the double bonds in n-3 fatty acids. It incorporates into phospholipids and into triacylglycerol *in vivo* with the same efficiency as EPA and docosahexaenoic acid (DHA) and exhibits strong inhibition of arachidonic acid synthesis from linoleic acid.<sup>1</sup> HPA is a poor substrate for PGH synthase and for 5-LO but retains the ability to rapidly inactivate PGH synthase.<sup>1</sup>

### Reference

1. Larsen, L.N., Hovik, K., Bremer, J., *et al.* Heneicosapentaenoate (21:5n-3): Its incorporation into lipids and its effects on arachidonic acid and eicosanoid synthesis. *Lipids* **32**(7), 707-714 (1997).

#### 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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