**Product Information**

**Oxidized Lipid HPLC Mixture**

*Item No. 34004*

**Purity:**  
≥98% for each compound

**Stability:**  
≥1 year at -20°C

**Supplied as:**  
A solution in ethanol (5 µg of each compound)

**Laboratory Procedures**

This HPLC mixture contains representative oxidized lipids derived from unsaturated fatty acids. Cholesterol and LDL particles accumulate and become oxidized in the fatty deposits of atherosclerotic plaques. Contained within these lipid deposits are the racemic monohydroxylation products of both linoleic and arachidonic acid.¹

This HPLC mixture contains the free acid (non-esterified) forms of racemic 15-HETE, 9-HODE, and 13-HODE. 15-HETE is one of five different regioisomers produced by the random oxygenation of arachidonic acid.² (The other four can be purchased in HPLC Mixture Item No. 34002). The 9- and 13-HODEs are the two different monohydroxylated regioisomers of linoleic acid produced during random free radical oxidation. In this mixture, the HODE compounds are provided both in their free acid form, and also esterified to cholesterol. Linoleate is transported primarily as the cholesteryl ester in the LDL particle, and it is likely that the esterified form is oxidized when LDL particles are exposed to uncontrolled reactive oxygen species.³

**References**


**Related Products**

- (S)-HETE HPLC Mixture - Item No. 34001
- (±)-HETE HPLC Mixture - Item No. 34002
- ex-3 Hydroxy Acid HPLC Mixture - Item No. 34003
- (±)15-HETE - Item No. 34700
- (±)9-HODE - Item No. 38400
- (±)9-HODE cholesteryl ester - Item No. 38401
- (±)13-HODE - Item No. 38600
- (±)13-HODE cholesteryl ester - Item No. 38601
- Arachidonic Acid - Item No. 90010

**WARNING:** This product is for laboratory research only; not for administration to humans, not for human or veterinary diagnostic or therapeutic use.

**MATERIAL SAFETY DATA**

This material should be considered hazardous until information to the contrary becomes available. Do not ingest, swallow, or inhale. Do not get in eyes, on skin, or on clothing. Wash thoroughly after handling. This information contains some, but not all, of the information required for the safe and proper use of this material. Before use, the user must review the complete Material Safety Data Sheet, which has been sent under separate cover to the MSDS supervisor at your institution.

**WARRANTY AND LIMITATION OF REMEDY**

Cayman Chemical Company makes no warranty or guarantee of any kind, whether written or oral, expressed or implied, including without limitation, any warranty of fitness for a particular purpose, suitability and merchantability, which extends beyond the description of the chemicals hereof. Cayman warrants only to the original customer that the material will meet our specifications at the time of delivery. Thus, in no event will Cayman have any obligation or liability, whether in tort (including negligence) or in contract, for any direct, indirect, incidental or consequential damages, even if Cayman is informed about their possible existence.

This limitation of liability does not apply in the case of intentional acts or negligence of Cayman, its directors or its employees.

Buyer’s exclusive remedy and Cayman’s sole liability hereunder shall be limited to a refund of the purchase price, or at Cayman’s option, the replacement at no cost to Buyer, of all material that does not meet specifications.

A Buyer may cancel the order if Cayman’s sole liability hereunder is limited to a refund of the purchase price.

**For further details, please refer to our Warranty and Limitation of Remedy located on our website and in our catalog.**

---

1. (±)13-HODE cholesteryl ester
2. (±)9-HODE cholesteryl ester
3. (±)15-HETE
4. (±)13-HODE
5. (±)9-HODE

Mobile phase: HEXipaHAC.(987:12:1)
Flow rate: 1.0 ml