

# Product Information



## Oxidized Lipid HPLC Mixture

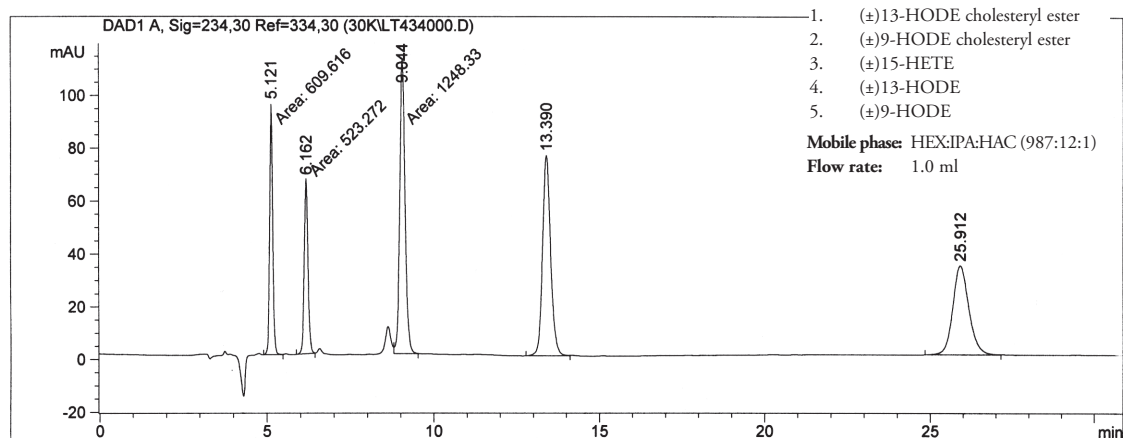
Item No. 34004

**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.<sup>1</sup>

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.<sup>2</sup> (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.<sup>3</sup>



### References

1. Belkner, J., Wiesner, R., Kühn, H., *et al.* The oxygenation of cholesterol esters by the reticulocyte lipoxygenase. *FEBS Lett.* **279**, 110-114 (1991).
2. Green, M.D., Xiao, L., and Lal, A.A. Formation of hydroxyicosatetraenoic acids from hemozoin-catalyzed oxidation of arachidonic acid. *Mol. Biochem. Parasitol.* **83**, 183-188 (1996).
3. Harland, W.A., Gilbert, J.D., and Brooks, C.J.W. Lipids of Human Atheroma. VIII. Oxidised derivatives of cholesteryl linoleate. *Biochim. Biophys. Acta* **316**, 378-385 (1973).

### Related Products

(S)-HETE HPLC Mixture - Item No. 34001 • (±)-HETE HPLC Mixture - Item No. 34002 • ω-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

### Cayman Chemical

**Mailing address**  
1180 E. Ellsworth Road  
Ann Arbor, MI  
48108 USA

**Phone**  
(800) 364-9897  
(734) 971-3335

**Fax**  
(734) 971-3640

**E-Mail**  
custserv@caymanchem.com

**Web**  
www.caymanchem.com

**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.

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