PRODUCT DATA SHEET

Methyl-3-hydroxytridecanoate

Catalog number: 1734  Molecular Weight: 244
Synonyms: 3-Hydroxy C13:0 methyl ester  Storage: -20°C
Source: synthetic  Purity: TLC: >98%, GC: >98%; identity
Solubility: chloroform, ethyl ether  confirmed by MS
CAS number: 150024-70-7  TLC System: hexane/ethyl ether (70:30)
Molecular Formula: C\textsubscript{14}H\textsubscript{28}O\textsubscript{3}  Appearance: solid

Application Notes:
This 3-hydroxytridecanoic acid methyl ester is a high purity standard that is ideal for analysis and biological systems. 3-Hydroxytridecanoic acid is unusual in many biological systems and is therefore useful as an internal standard.\(^1\) However 3-hydroxytridecanoic acid is a major constituent of some organisms such as in the anaerobic bacterium \textit{Veillonella}.\(^2\) 3-Hydroxy fatty acids are intermediates in fatty acid biosynthesis and have been found to be converted to the \textit{omega}-fatty acid by the enzyme CYP4F11 and then into dicarboxylic acids \textit{in vivo}.\(^3\) 3-Hydroxy fatty acids are used as markers for fatty acid oxidative disorders of both the long- and short-chain 3-hydroxy-acyl-CoA dehydrogenases.\(^4\) Polyhydroxyalkenoates, polymers produced by bacteria fermentation, are used for carbon and energy storage and are of interest in studies regarding their synthesis, properties and mechanisms and are used as biodegradable plastics.\(^5\) Medium chain-length polyhydroxyalkenoate monomers may have pharmaceutical properties.

Selected References:
1. L. Larsson and A. Saraf “Use of gas chromatography-ion trap tandem mass spectrometry for the detection and characterization of microorganisms in complex samples” \textit{Molecular Biotechnology}, vol. 7 pp. 279-287, 1997

This product is to be used for research only. It is not intended for drug or diagnostic use, human consumption or to be used in food or food additives. Matreya assumes no liability for any use of this product by the end user. We believe the information, offered in good faith, is accurate.

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