PRODUCT DATA SHEET

Methyl 17-methyloctadecanoate

Catalog number: 1603
Common Name: iso-Nonadecanoic methyl ester; iso C19 Methyl ester
Source: synthetic
Solubility: chloroform, ethyl ether, ethanol
CAS number: 55124-97-5

Molecular Formula: C_{20}H_{40}O_{2}
Molecular Weight: 313
Storage: -20°C
Purity: GC >98%
TLC System: hexane/ethyl ether, (85:15)
Appearance: liquid

Application Notes:
In bacteria iso-fatty acid content and composition can often be used as a taxonomic marker because iso-fatty acids are often found in bacteria but not commonly in other microorganisms. Some bacteria have iso- but not anteiso-fatty acids while others have anteiso- but not iso-fatty acids. Iso-fatty acids are found in small amounts in marine organisms and ruminants, mainly due to the food chain but also due to some de novo synthesis. Iso-fatty acids with a total even number of carbons are more common than a total odd number. Some waxy materials such as lanolin, as well as secretions near animal eyes, contain an unusually high amount of iso-fatty acids being employed for their lubricating effect. Branched chain fatty acids are critical for the regulation of fluidity in membranes and in membrane transport for many types of bacteria due to their having a significantly lower transition temperature than straight chain fatty acids. Some bacteria handle stress (such as heat and toxicity) by changing the ratio of anteiso/iso-fatty acids in the cell membrane. Iso-fatty acids have been found to be activators for various enzymes and systems and are used as protein modifiers. Although iso-even chain fatty acids and anteiso-chain fatty acids via alpha-oxidation of iso-odd chain fatty acids.

Selected References:

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