**PRODUCT DATA SHEET**

**Undecanoic acid**

**Catalog number:** 1165  
**Synonyms:** C11:0 Fatty acid  
**Source:** natural, plant  
**Solubility:** chloroform, ethanol, ethyl ether  
**CAS number:** 112-37-8  
**Molecular Formula:** C₁₁H₂₂O₂  
**Molecular Weight:** 186  
**Storage:** room temperature  
**Purity:** TLC: 99%, GC >99%  
**TLC System:** hexane/ethyl ether/acetic acid (80:20:1)  
**Appearance:** solid

**Application Notes:**
This high purity undecanoic acid is ideal as a standard and for biological studies. Odd numbered fatty acids occur in small amounts in mammals but are found in much larger amounts in bacteria and in some plants and lower animals. Due to difficulties in their identification the properties and functions of odd numbered fatty acids have not been fully studied, but with better analytical techniques and high purity standards they are now gaining more prevalence in research.¹ Odd numbered fatty acids are found in small amounts acylated to various sphingolipids where they have unique properties and functions.² Microbial fatty acid profiles, which often contain significant amounts of odd numbered fatty acids, are unique from one species to another and can therefore be used in the determination of bacterial identity. Fatty acids are known to have antifungal properties and undecanoic acid has recently been studied in its role in inhibiting the fungus *Trichophyton rubrum*.³ Sphingolipids are normally acylated with long-chain fatty acids and are critical in many biological functions. When acylated with shorter fatty acids these sphingolipids can more easily cross the cell membrane barrier. Undecanoic acid is a saturated fatty acid and saturated fatty acids have been found to cause moderate risk of coronary heart disease as compared with polyunsaturated fatty acids and they significantly lower the total cholesterol/high density lipoprotein-cholesterol ratio as compared with carbohydrates.⁴

**Selected References:**

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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