DATA SHEET

5-Methyl-5,6,7,8-tetrahydrofolic acid, calcium salt
Abbreviations used: MethylFH₄, 5MeTHFA, 5MFH₄
Product no.'s 16.235 and 16.236

CAS No. 139418-88-5
(6R,S)-5-Methyl-5,6,7,8-tetrahydrofolic acid, calcium salt
Product number 16.235 C₂₀H₂₃N₇O₆⋅4H₂O(Ca) MW: 497.5

CAS No. 151533-22-1
(6S)-5-Methyl-5,6,7,8-tetrahydrofolic acid, calcium salt
Product number 16.236 C₂₀H₂₃N₇O₆⋅4H₂O(Ca) MW: 497.5

Description
Light beige powder

Biochemical Functions
Precursor of the methyl group of methionine in bacterial, avian and mammalian systems. The biosynthesis is accomplished by pyridine nucleotide dependant reduction of 5,10-methylene tetrahydrofolic acid. 5MFH₄ appears in particular to be involved in serotonin metabolism. Of all forms of folate, 5MFH₄ is the only one which can pass through the blood-brain barrier.

Solubility in H₂O
MethylFH₄ calcium salt is slightly soluble in water (50 mg/100g H₂O (22°C)). A 1 mM solution in water has a pH of 5.9. Ultrasonication may be used to improve dissolution.

HPLC Conditions
column Waters Spherisorb 5, ODS 1, 4.6 x 150 mm or Whatman Partisil 10 SCX
eluant 10 mM Na₂HPO₄ pH 7 / Methanol (17:3)
flow rate 1 ml/min
wavelength 254 nm
solution 1 mg / 2 ml water (~1 mM)
retention time 1.9 min

Purity: HPLC > 95%

Stability
Solutions are less stable than the solid form and should be made immediately before use. A 1 mM solution in water at room temperature for 2.5 hours degrades by approximately 4% and within 4 hours 10% has degraded. Keep the powder dry in amber vials at -20°C or colder. The powder is hygroscopic, taking up 10% of its weight in water within 4 hours.

Storage
The compound 16.235 is sold in amber vials and the compound 16.236 in ampoules. They are stable at room temperature for a few weeks but at -25°C or colder they can be stored for several years.

Safety Information
The product is not provided for human use. It is sold for laboratory use only.

Literature

Further data sheets can be found on our website www.schircks.ch

The information given in this publication is based on our current knowledge and experience. It does not relieve users or processors from carrying out their own precautions and tests.