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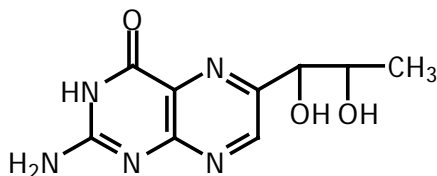
# Schircks Laboratories

## DATA SHEET

### BIOPTERIN

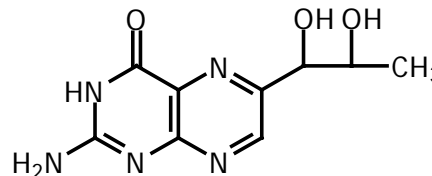
Product No.'s 11.203, 11.218

Synonyms: erythro-6-(1,2-Dihydroxypropyl)pterin



**Product no. 11.203 L-Biopterin**

$C_9H_{11}N_5O_3$  MW 237.2  
 CAS No. [22150-76-1]



**Product no. 11.218 D-Biopterin**

$C_9H_{11}N_5O_3$  MW 237.2  
 CAS No. [13039-62-8]

Description	Light yellow powder		
Biochemical functions	Biopterin has two isomers. We sell both D- and L-biopterin. L-Biopterin is the natural form. <i>Biopterin is inactive in the body and is rapidly excreted in the urine.</i> The hydrogenated forms of biopterin i.e. dihydrobiopterin and tetrahydrobiopterin are involved in many important biochemical functions in the human body, among which are the hydroxylation of tyrosine, phenylalanine and tryptophan.		
Solubility	Biopterin is very slightly soluble in water. The solubility of biopterin is about 0.01g per 100 g of water (22°C). Concentrated solutions of biopterin may be prepared using 0.05 M NaOH. Ultrasonication may be used to improve dissolution.		
Analytical methods	HPLC conditions:	column: eluant: flow rate: wavelength: solution:	Waters Spherisorb S5 ODS1 10 mM $Na_2HPO_4$ pH 6 - Methanol, (19:1) 1 ml/min 254 nm 2 mg/ml 0.05 M NaOH
	TLC conditions:	stationary phase: eluant:	cellulose water
	UV and IR conditions	Details of UV and IR analysis are given in the literature reference given below.*	
Specifications	Purity: HPLC TLC	> 99.0% one blue fluorescent spot at 366 nm	
Stability	Biopterin is light sensitive. Biopterin contains half a mole of water. It can be stored for several years, dry, in tightly closed amber coloured vials, at -20°C or colder.		
Storage	Keep the powder dry in amber vials at -20°C or colder. Biopterin can be transported without the use of dry ice. In tightly closed amber vials, wrapped in aluminium foil, it is stable at ambient temperature for several months.		
Uses	Biopterin is an important standard for analytical work involving tetrahydrobiopterin and dihydrobiopterin. It is not suitable for the addition to nutritional supplements. <i>It is sold for laboratory use only.</i>		
Safety information	Biopterin is known to be safe and there are no special precautions required in handling this product.		
References	Biosynthesis and function of tetrahydrobiopterin. David S. Duch and Gary K. Smith, J. Nutr. Biochem., <u>2</u> , (1991), 411-423. Tetrahydrobiopterin deficiency: From phenotype to genotype. Nenad Blau, Beat Thöny, Claus W. Heizmann and Jean-Louis Dhondt, Pteridines, <u>4</u> , (1993), 1-10. New Tetrahydrobiopterin-Dependent Systems. Seymour Kaufman, Annu. Rev. Nutr., <u>13</u> , (1993), 261-286. *Trennung von synthetischem Biopterin und Isobiopterin. Tschesche et al, Liebigs Ann. Chem. <u>658</u> , 1962, 193.		

Further data sheets can be found on our website [www.schircks.ch](http://www.schircks.ch)

The information 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.