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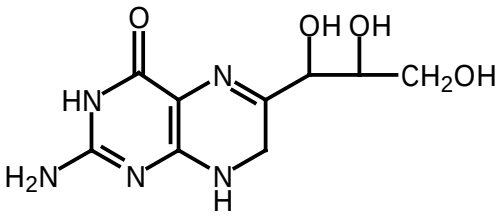
Schircks Laboratories

D A T A S H E E T

7,8-Dihydro-D-neopterin

Product No. 11.306

CAS No. [1218-98-0]



$C_9H_{13}N_5O_4$ MW 255.2

Description	Yellow powder		
Biochemical functions	Dihydroneopterin triphosphate is an intermediate in the biosynthesis of tetrahydrobiopterin. Neopterin levels are related to the activity of the cellular immune system. The stimulation of T-lymphocytes, the release of interferon and the synthesis of neopterin are closely related. Dihydroneopterin and neopterin are both closely related to tetrahydrobiopterin, an important cofactor in humans.		
Solubility	Dihydroneopterin is slightly soluble in water. Its solubility is about 0.16 g per 100 g of water (22°C). Ultrasonication may be used to improve dissolution.		
Analytical methods	HPLC conditions:	column:	Whatman Partisil 10 SCX
		eluant:	10 mM Na_2HPO_4 pH 3
		flow rate:	1 ml/min
		wavelength:	254 nm
	TLC conditions:	stationary phase:	cellulose
		eluant:	water
	UV spectrum:	We have no UV spectrum for any of our compounds. We recommend that you refer to www.spectroscopynow.com	
Specifications	Purity: HPLC	> 98.0%	
	TLC	one blue fluorescent spot at 366 nm and a very weak spot caused by the oxidation of dihydroneopterin to neopterin during the TLC analysis.	
Stability	Dihydroneopterin is hygroscopic. In acidic solutions 3'-hydroxy-D-sepiapterin is formed. Dihydroneopterin is more stable in the presence of oxygen than tetrahydroneopterin. It reacts with oxygen especially in dilute solutions. Both 1 mM and 0.1 mM dihydroneopterin solutions left open at room temperature for 1 hour degrade by approximately 3%. After 3 hours both solutions are degraded by about 10%. Dry, in tightly closed vials and at -20°C or colder it can be stored for several years.		
Storage	Solutions of dihydroneopterin should be made in oxygen free water and frozen as soon as possible. Dihydroneopterin can be transported without the use of dry ice. In tightly closed vials it is stable at ambient temperature for several weeks.		
Uses	Dihydroneopterin is an important standard for analytical work. It is sold for laboratory use only.		
Safety information	Dihydroneopterin is known to be safe and there are no special precautions required in handling this product.		
References	"Formation of Oxygen Radicals in Solutions of Different 7,8-Dihydropterins: Quantitative Structure-Activity Relationships", K. Oettl, W. Pfleiderer, G. Reibnegger, Helv. Chim. Acta, 83, (2000), 954.		

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