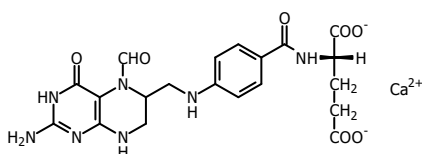


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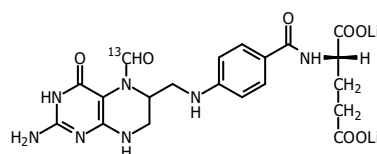
# Schircks Laboratories

## DATA SHEET

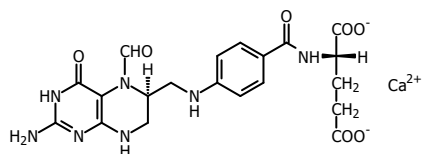
### 5-Formyl-5,6,7,8-tetrahydrofolic acid Product no.'s 16.220-16.222 and 96.220



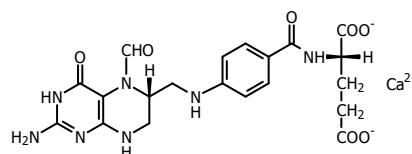
(6R,S)-Leucovorin (calcium folinate) Product No. 16.220  
 $C_{20}H_{21}N_7O_7(Ca)$  MW: 511.5 CAS no. 1492-18-8



(6R,S)-[5-Formyl- $^{13}C$ ]-5,6,7,8-tetrahydrofolic acid, lithium salt  
 Product No. 96.220  $C_{19}H_{21}^{13}CN_7O_7(Li)_2$  MW: 486.3



(6S)-Calcium folinate Product No. 16.221  $C_{20}H_{21}N_7O_7(Ca)$   
 MW: 511.5 CAS no. 80433-71-2



(6R)-Calcium folinate Product No. 16.222  $C_{20}H_{21}N_7O_7(Ca)$   
 MW: 511.5

<b>Description</b>	White or light yellow odourless powder				
<b>Biochemical Functions</b>	<p>(6S)-5-formyl-5,6,7,8-tetrahydrofolic acid (product no. 16.221) is an intermediate product in the metabolism of folic acid.</p> <p>The leucovorin that we sell has 50% of the biologically active isomer (6S)-5-formyl-5,6,7,8-tetrahydrofolic acid. (also known as the citrovorum factor (CF)).</p> <p>The biologically active form which is endogenous to the human body functions primarily as a 1 carbon donor in the synthesis of amino acids.</p>				
<b>Solubility</b>	Leucovorin is sparingly soluble in water and practically insoluble in ethanol. Approximately 1 g of leucovorin is soluble in 100 g of water. A 1 mM solution of leucovorin in water gives a pH of 5.7. Ultrasonication may be used to improve dissolution.				
<b>HPLC Conditions</b>	<u>column</u>	<u>eluant</u>	<u>flow rate</u>	<u>wavelength</u>	<u>solution</u>
	Waters Spherisorb S5 ODS1	10 mM $Na_2HPO_4$ pH 7 / Methanol (19:1)	1 ml/min	254 nm	0.5 mg/ml
Purity: HPLC	Product no. 16.220 and 16.222: > 99% Product no's 96.220 and 16.221 >97%				
Stability	Leucovorin is hygroscopic taking up about 10% of its weight in water within 4 hours. Leucovorin powder is very stable and solutions are relatively stable in air. Neutral and mildly alkaline solutions are more stable than acidic solutions. A 1 mM solution degrades by about 4% after being left open at room temperature for 15 days. After 4 hours the solution had degraded by about 0.3%. 5,10-Methenyltetrahydrofolic acid is formed in acidic solutions.				
Storage	Solutions of leucovorin should be stored in a freezer of $-20^{\circ}C$ or colder. Powders may be stored at room temperature in a well sealed container but storage in a freezer will extend their shelf life.				
Use	Leucovorin is used clinically to treat or prevent host toxicity (rescue agent) in cancer patients due to administration of supralethal doses of methotrexate (MTX). It is also used as a tonic with vitamin B12 in multivitamin preparation for the treatment of anemias. Leucovorin has also been used to enhance the activity of fluorouracil by stabilizing the bond of the active metabolite (5-FdUMP) to the enzyme thymidylate synthetase. Our product is sold for laboratory use only.				
Safety Information	The leucovorin that we sell is intended for laboratory use only. It may irritate mucousal surfaces but we are not aware of any other ill effects which result from handling this product.				
Literature	US Pharmacopoeia: calcium leucovorin Suter et al, Helvetica Chimica Acta, <u>56</u> (3), (1973), 83-84 (UV and IR spectra). Further data sheets can be found on our website <a href="http://www.schircks.ch">www.schircks.ch</a>				

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.