

# PRODUCT INFORMATION



## Levomefolate (calcium salt hydrate)

Item No. 21616

**Formal Name:** N-[4-[[[(6S)-2-amino-3,4,5,6,7,8-hexahydro-5-methyl-4-oxo-6-pteridiny]methyl]amino]benzoyl]-L-glutamic acid, monocalcium salt, hydrate

**Synonyms:** BAY 86-7660, LMCA  
**MF:** C<sub>20</sub>H<sub>23</sub>N<sub>7</sub>O<sub>6</sub> • Ca [XH<sub>2</sub>O]  
**FW:** 497.5

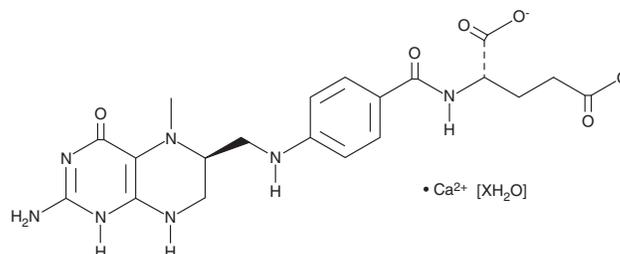
**Purity:** ≥98%

**UV/Vis.:** λ<sub>max</sub>: 217, 290 nm

**Supplied as:** A crystalline solid

**Storage:** -20°C

**Stability:** ≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

### Laboratory Procedures

Levomefolate (calcium salt hydrate) is supplied as a crystalline solid. A stock solution may be made by dissolving the levomefolate (calcium salt hydrate) in water. The solubility of levomefolate (calcium salt hydrate) in water is approximately 0.3 mg/ml. We do not recommend storing the aqueous solution for more than one day.

### Description

Levomefolate is the calcium salt of 5-methyltetrahydrofolic acid (Item No. 16159), a biologically active form of folic acid (Item No. 20515) that functions, in conjunction with Vitamin B<sub>12</sub> (Item No. 18425), as a methyl-group donor involved in the conversion of homocysteine to methionine.<sup>1,2</sup> The availability of methyl groups is essential for a variety of methylation reactions including the synthesis of DNA and proper neural tube closure.<sup>1</sup> Levomefolate is included in formulations of certain oral contraceptives to ensure adequate folic acid levels in women of child-bearing age to reduce the risk of neural tube defects. The combination of levomefolate and oral contraceptives increases folic acid levels.<sup>3,4</sup>

### References

1. Blom, H.J. and Smulders, Y. Overview of homocysteine and folate metabolism. With special references to cardiovascular disease and neural tube defects. *J. Inherit. Metab. Dis.* **34(1)**, 75-81 (2011).
2. Zhang, X., Li, H., Jin, H., *et al.* Effects of homocysteine on endothelial nitric oxide production. *Am. J. Physiol. Renal Physiol.* **279(4)**, 671-678 (2000).
3. Blode, H., Klipping, C., Richard, F., *et al.* Bioequivalence study of an oral contraceptive containing ethinylestradiol/drospirenone/levomefolate calcium relative to ethinylestradiol/drospirenone and to levomefolate calcium alone. *Contraception* **85(2)**, 177-184 (2012).
4. Bart, S., Sr., Marr, J., Diefenbach, K., *et al.* Folate status and homocysteine levels during a 24-week oral administration of a folate-containing oral contraceptive: A randomized, double-blind, active-controlled, parallel-group, US-based multicenter study. *Contraception* **85(1)**, 42-50 (2012).

#### WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

#### SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the [complete](#) Safety Data Sheet, which has been sent via email to your institution.

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