6-Methylpterin

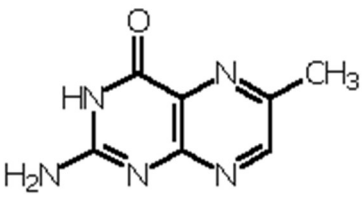
Product number 11.480 CAS number 708-75-8

In a round bottom flask are poured 2.5 l of H2O. 28.6 g of 2,4,5- triamino-6-hydroxypyrimidine sulfate are added. The suspension is stirred and 342 g of Na2SO3 are slowly added.
After 30 minutes the flask is cooled in an ice bath to about 3°C and 500 g of ice are added.
The following solution is prepared: 21.5 g of methylglyoxal 40% in H2O, 150 ml of H2O and 35.6 g of NaHSO3 solution 40% in H2O.
This solution is added through a dropping funnel within 30 minutes.
The flask is removed from the ice bath and left overnight at room temperature.
The precipitated 6-methylpterin is filtered through a big filtering funnel. The filtration may take several hours. See the “General instructions for working with pteridines”.
The filter cake is rinsed with 200 ml of water and 80 ml of EtOH.

Recrystallisation as sodium salt
The wet, crude 6-methylpterin is placed in a round bottom flask containing a magnetic stir bar and 800 ml of water. 4 N NaOH is slowly added (about 160 ml) until most of the 6-methylpterin is dissolved (pH about 12.4). Then an additional 640 ml of 4 N NaOH are slowly added and the sodium salt of 6-methylpterin precipitates.
The flask is left overnight at room temperature.
The mixture is filtered through a filtering funnel and rinsed with 100 ml of 2 N NaOH.
If the work cannot be continued, the sodium salt is stored in a freezer.
The sodium salt is suspended in 2.0 l of water. Diluted AcOH 1:10 (about 90 ml) is added very slowly through a dropping funnel within 2 hours until a pH of 6.1 is reached.
The flask is left overnight at room temperature.
The precipitated 6-methylpterin is filtered through a big filtering funnel. The filtration may take several hours. See the “General instructions for working with pteridines”.
The filter cake is rinsed with 150 ml of water.
After a second recrystallisation as sodium salt 11.2 g of 6-methylpterin are obtained.

Purity: 99.5% (HPLC)

Description: light yellow



6-Methylpterin

$C_7H_7N_5O$
177.16

C 47.46% H 3.98% N 39.53% O 9.03%
Product no. 11.480

HPLC conditions

Column	Spherisorb S5-ODS1
Eluant	10 mM Na2HPO4 pH 7.5 - Methanol, (4:1)
Flow (ml/min)	1
Wavelength (nm)	254
Conc.	1 mg/4ml plus minimal ammonium hydroxide
Purity	>97.0