

7,8-Dihydropteroic acid

Product number 16.114

Information about reductions with Na₂S₂O₄ can be found in: Bernhard Schircks, "Neue regiospezifische Synthese von L-Biopterin und von dessen Derivaten" (Dissertation-Zurich, 1978), page 47 and 74)

In a 500 ml round bottom flask with a magnetic stir bar, 600 mg of pterioic acid are suspended in 160 ml of water and dissolved by addition of 500 mg of NaOH.

A glass stopcock is added and the round bottom flask is swirled for a short time.

Subsequently 5,4 g of sodium dithionite dissolved in 90 ml of water are added and the round bottom flask is evacuated.

The solution is mixed and the pH is slowly lowered to about 7.6 by addition of HCl 1:10. The round bottom flask is evacuated and furthermore mixed for 4 hours and left for two days.

The solution is filtered and the pH of the filtrate is slowly lowered to about 3.9 by addition of HCl 1:10. The round bottom flask is evacuated and cooled in an ice/water bath for 2 hours.

The precipitated 7,8-dihydropteroic acid is filtered and rinsed with a small amount of cold water.

From now on the 7,8-dihydropteroic acid can be easily attacked by oxygen in the air. The reoxidation is prevented by working under vacuum.

Recrystallisation:

To a 1 l two-neck round-bottom flask are added an egg-shaped magnetic stir bar and 1.6 g of ascorbic acid dissolved in 660 ml of water. To this solution is added the wet 7,8-dihydropteroic acid from above and 5 ml 1 N NaOH. The flask is evacuated immediately and stirred until all is dissolved.

0.1 N HCl is added slowly through a dropping funnel until a lot of precipitation arises.

The pH value should be in the range of 2.5 - 3.0.

The flask is left to stand overnight.

The precipitated 7,8-dihydropteroic acid is filtered through a fine filter paper and rinsed with cold water.

The filter cake is dried in a vacuum desiccator over NaOH.

Purity: 95.0%

Description: beige powder

Data Sheet: There is a data sheet available for this compound.

Data sheets can be found in the price list by clicking on the product number of your choice.