

7,8-Dihydro-D-neopterin

Product number 11.306

CAS number 1218-98-0

In a 1 l round bottom flask 13.5 g of D-neopterin are suspended in 505 ml of water and dissolved by the addition of 60.0 g of 1 N NaOH (it is easier to balance the exact amount of 1 N NaOH).

A glass stopcock is added and the round bottom flask is evacuated and shaken for a short time. Subsequently 30 g of sodium dithionite is added and the round bottom flask is evacuated immediately.

The round bottom flask is warmed in a water bath at 60°C for about 40 minutes (without stirring or shaking). After some minutes the solution becomes brown. Some minutes later the brown color disappears again and the solution is almost colorless. The round bottom flask is immersed in cold water for about 30 seconds. Subsequently the round bottom flask is kept for 2 hours at ambient temperature and then overnight at 2°C.

The precipitated dihydroneopterin is filtered through a sintered disc filter funnel and the filter cake is rinsed with 20 ml of cold water and placed in a 4 l round bottom flask.

Recrystallisation

The wet dihydroneopterin is placed in a 1 l round bottom flask in small pieces and 670 ml of water are added. A glass stopcock is added and the round bottom flask is evacuated, so that the dihydroneopterin is not oxidized by oxygen. The round bottom flask is shaken and the chunks are disintegrated in an ultrasonic bath. The round bottom flask is warmed in a water bath at 50°C and shaken from time to time in order to dissolve the dihydroneopterin.

After about 15 minutes*), when 90% is dissolved, the round bottom flask is first placed in a water bath at 20°C for a short time, then for 2 hours at ambient temperature and subsequently at 2°C for 2 days.

The precipitated dihydroneopterin is filtered through a sintered disc filter funnel and the filter cake is rinsed with 40 ml of cold water (0°C) and dried in a vacuum desiccator over NaOH to give 9.1 g of dihydro-D-neopterin.

*When the suspension is heated longer, the dihydroneopterin becomes dark yellow.

Purity: 99.0% (HPLC)

Description: light yellow 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.