(6S)-5,6,7,8-Tetrahydro-L-biopterin sulfate

Product number 11.215 CAS number 109784-74-9

When 6R-BH4 is produced, a filtrate is formed, that is rich in 6S-BH4.
This filtrate that contains a lot of HCl is evaporated by means of a rotary evaporator. Between the rotary evaporator and the membrane pump three gas wash bottles are placed. The middle bottle contains a 10% KOH solution.
The viscous residue is poured in a crystallizing dish and dried in a vacuum desiccator over NaOH.
30 g of this residue is grinded and slowly added in portions to 360 ml of a 4% H_2SO_4 solution. The residue dissolves and immediately 6S-BH4 sulphate precipitates and forms a viscous slurry, so a strong magnetic stirrer is needed.
The slurry is stirred for 4 hours and then set aside at 2°C overnight.
The precipitation is filtered through a filtering funnel. The filter cake is compacted with a glass stopper, rinsed with 200 ml of EtOH (the H_2SO_4 must be removed completely, the cracks have to be closed again and again) and dried in a vacuum desiccator over NaOH.
Argon is bubbled through 75 ml of 1% H_2SO_4 and after 20 minutes
5 g of the dried and grinded residue is added and heated to about 80°C in an oil bath. When all is dissolved, the vessel is taken out of the oil bath and the solution is allowed to cool to about 40°C, evacuated and kept overnight at 4°C.
The precipitated 6S-BH4 sulfate is filtered through a filtering funnel. The filter cake is rinsed with 50 ml of EtOH and then dried in a vacuum desiccator over NaOH.
Precipitates from 1% H_2SO_4 must not be dried without washing, otherwise H_2SO_4 remains.
The recrystallization described above is repeated again.

Purity: 99.3%

Description: white 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.