2.2.2 Limit test for sulfates

The limit test for sulfates is provided to demonstrate that the content of sulfates does not exceed the limit given in the individual monograph in terms of micrograms of sulfates per gram of the substance being tested.

The solution against which the comparison of turbidity is made contains 480 µg of SO_4^{--} more than the standard barium sulfate suspension.

Recommended procedure

Carry out the test in matched flat-bottomed comparison tubes of transparent glass of about 70 mL capacity and about 23 mm internal diameter bearing a 45-mL and a 50-mL mark. Nessler cylinders complying with the above dimensions are suitable. The expression "matched tubes" means tubes that are matched as closely as possible in internal diameter and in all other respects.

Prepare a solution as specified in the monograph, transfer to a comparison tube, dilute to 45 mL with water and add 5 mL of barium sulfate suspension TS. Stir immediately with a glass rod, and set aside for 10 minutes. The turbidity produced is not greater than the similarly prepared standard turbidity when viewed down the vertical axis of the tube in diffused light against a black background.

Standard turbidity

Measure 1.00 mL of sulfuric acid (0.005 mol/l) VS and 3 mL of hydrochloric acid (~70 g/l) TS into a comparison tube. Dilute to 45 mL with water, and add 5 mL of barium sulfate suspension TS. Stir immediately with a glass rod and set aside for 10 minutes.