2.2.4 Limit test for iron

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

The standard solution against which the comparison of colour is made contains 40 µg of iron.

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 the substance as specified in the monograph, or dissolve directly an indicated quantity in 40 mL of water, and transfer to a comparison tube. Add 2 mL of citric acid (180 g/l) FeTS and 2 drops of mercaptoacetic acid R; mix, make alkaline with ammonia (~100 g/l) FeTS, dilute to 50 mL with water, and allow to stand for 5 minutes. The colour produced is not more intense than the similarly prepared standard colour when viewed down the vertical axis of the tube in diffused light against a white background.

Standard colour

Measure 2 mL of iron standard FeTS and 40 mL of water into a comparison tube. Add 2 mL of citric acid (180 g/l) FeTS and 2 drops of mercaptoacetic acid R; mix, make alkaline with ammonia (~100 g/l) FeTS, dilute to 50 mL with water, and allow to stand for 5 minutes.