

⁵⁷Co cyanocobalamin

1. Indications

⁵⁷Co was used as a radiolabel for Vitamin-B12 in Schilling's test. The determination of gastrointestinal absorption of Vitamin B12 continues to be a useful procedure in the work-up and management of patients with megaloblastic anemia, suspected Vitamin-B12 deficiency and gastrointestinal malabsorption. However, nowadays vitamin B12 deficiency is usually treated with intramuscular vitamin B12 injections without prior identification of the cause of the deficiency. The Schilling test is therefore not performed anymore. Radioactively labelled cobalamin is no longer available commercially.

2. Preparation

⁵⁷Co cyanocobalamin is supplied as capsule with a dose of approximately 20 kilobecquerels.

3. Quality control

See pharmacopeias for quality control test.

4. Interactions

Medication causing malabsorption of vitamin B12 can interfere with the investigation, i.e. colchicine, chloramphenicol, proton pump inhibitors, ascorbic acid, metformin, aminosalicic acid.

5. Adverse reactions

No adverse reactions specifically attributable to Cyanocobalamin ⁵⁷Co capsules have been reported.

Adverse reactions have been reported with nonradioactive cyanocobalamin. Rare: allergic reactions (exanthema, itching, urticaria), anaphylactic shock.

6. Pharmacokinetic properties

After oral administration, cyanocobalamin is normally bound by intrinsic factor and absorbed by the distal ileum. It is then bound to plasma proteins, stored in the liver, and slowly released when needed to carry out normal cellular metabolic functions. Absorbed cyanocobalamin is ultimately excreted in the urine; any cyanocobalamin not bound by intrinsic factor is excreted in the stool.

7. Stability

Store at room temperature (15-25°C)

8. Literature

- www.micromedexsolutions.com
- SmPC cyanocobalamin 1 mg/ml, injection