

## **Technical Data Sheet**

## Urobilinogen

for biochemistry Order number: 2190

Urobilinogen (UBG in short) is a catabolic product of hemoglobin metabolism. It is a colorless pigment formed in the intestine by bacterial degradation of bilirubin.

Bilirubin (conjugated with glucuronic acid) is water soluble and passes from the liver through the bile ducts into the small intestine, where it is converted into urobilinogen.

Normally, about half the urobilinogen is excreted in the stool, the other half is reabsorbed into the enterohepatic circulation. As a result, regular urine contains only small amounts of urobilinogen. In a urine sample from a healthy individual, 0.1-1 mg/dL of urobilinogen can be expected.

Urobilinogen level in serum and urine is an important parameter in clinical diagnosis, especially in clinical differentiation of jaundice. It allows conclusions to be drawn about hepatitis and other liver diseases, hemolysis, and obstruction of the bile ducts.

The product Urobilinogen for biochemistry is an aqueous urobilinogen solution with an urobilinogen content of 25 mg/ml.

## Applications

Urobilinogen for biochemistry is used for research purposes, such as studies of degradation metabolism, experiments on chemical properties, reactions, and effects. It can also be used as a control (reference) in urine analysis and to evaluate the performance of test strips and test methods.

Urobilinogen reacts with Ehrlich's reagent (solution of 2 % p-dimethylaminobenzaldehyde in 20 % HCl) to give an orange-red color. Ehrlich's reagent can be used for the detection of primary amino groups, pyrrole and indole derivatives in general. Accordingly, the method is not specific for urobilinogen. A color reaction is also observed with porphobilinogen, sulfonamides, procaine, indole, methyldopa, 5-hydroxyindoleacetic acid, and aminosalicylic acid metabolites. In contrast, the reaction can be inhibited by high concentrations of nitrites, such as those produced by bacterial metabolism, which in turn leads to a false-negative result.

## Storage and Stability:

Urobilinogen (both as an aqueous solution and in crystalline form) is stable at -20°C for at least 1 year. Shipment can be made on wet ice.

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