

Haemocult

Haemocult or **guaiac occult bleeding test** is used to screen for colorectal cancer. Standard occult bleeding tests - TOKS, Haemocult test, are based on the chemical principle, the pseudoperoxidase reaction of hemoglobin. The substrate was originally benzidine, as a carcinogen, it was modified to non-carcinogenic dimethylbenzidine-o-tolidine (eg German KryptoHaem), or tetramethylbenzidine (TMB). Today, tests with guaiac resin - from *Guajacum Officinale* / *sanctum* - containing guaiacol (o-methoxyphenol), a benzidine-type substrate, are used. In the leucoform it is colorless, oxidized turns blue-green. Oxidation takes place with hydrogen peroxide, the catalyst is hemoglobin with pseudoperoxidase activity. Due to the chemical principle of the oxidation reaction, the test result may be affected by the presence of other oxidizing substances (vitamin C), the presence of hemoglobin from food (meat, blood), false-positive result may be caused by the presence of plant peroxidases (some root vegetables). The guidelines of the Ministry of Health of the Czech Republic for the search and early diagnosis of colorectal tumors - screening - clearly specify Haemocult as a suitable, recommended and verified test. Controlled TOKS screening significantly reduces the incidence of colorectal cancer.

Performing the test

A kit is supplied for screening, which contains 3 tests with two windows and plastic or wooden stools for stool collection. The patient always takes two different samples from three consecutive stools, which he spreads on the marked test sites, closes the test windows and sends the tests to the laboratory. Laboratory processing consists in applying the detection reagent to the opposite side of the windows and evaluating any color change. The evaluation is qualitative, each test where a specific blue-green coloration is evaluated is positive. The Haemocult test sensitivity / cut-off value is set at about 5 mg Hb / g stool. In the study performed at ÚKBLD 1. LF UK and VFN in > 95,000 asymptomatic persons, the Haemocult test posed a positivity of 2.8%, the false positivity tested in comparison with immunochemical tests was zero.

Home-care test

The EZ Detect test, a 2-minute chromogenic test designed for home use, is also based on the chemical principle of blood detection in the stool. The patient performs the test and evaluates it. The test is made of biodegradable material, the substrate is tetramethylbenzidine (TMB).

Resousces

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Detection of occult bleeding (https://www.wikiskripta.eu/images/5/5f/Detekce_okultn%C3%ADho_krv%C3%A1cen%C3%AD-chemick%C3%BD_pr%C5%AFkaz.jpg)



Detection of occult bleeding (https://www.wikiskripta.eu/images/c/c0/Detekce_okultn%C3%ADho_krv%C3%A1cen%C3%AD.jpg)



Home-care detection kit (https://www.wikiskripta.eu/images/c/cf/Home-care_detek%C4%B8Dn%C3%AD_kit-FOBT.jpg)

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