



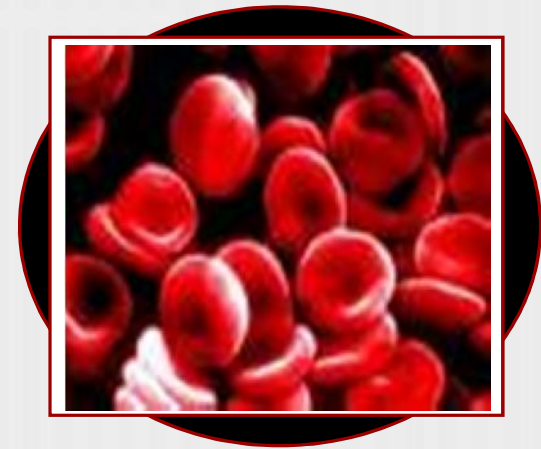
# ***FOB+TRANSFERRIN*** ***Rapid Test***

**CerTest Biotec**  
[www.certest.es](http://www.certest.es)



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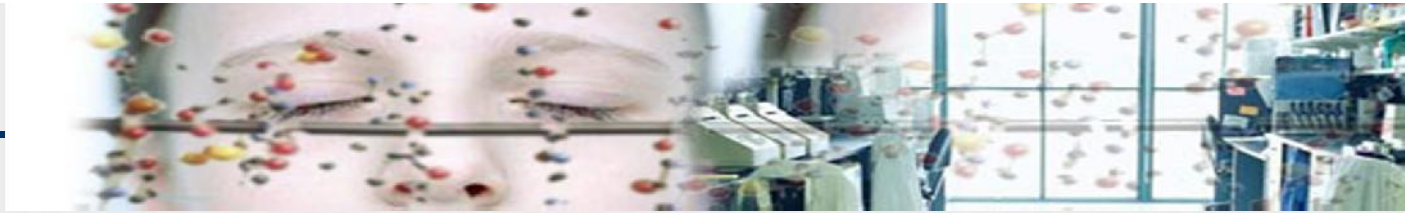




# Transferrin background

- ❑ Transferrin is a blood plasma protein that transports iron through the blood to the liver, spleen and bone marrow.
- ❑ Glycoprotein highly resistant to bacterial degradation as well as to breakdown by digestive enzymes
- ❑ The blood transferrin level is tested for diverse reasons:
  - ✚ to determine the cause of anaemia
  - ✚ to examine iron metabolism
  - ✚ to determine the iron-carrying capacity of the blood.





# Transferrin versus Haemoglobin

- ❑ The Transferrin protein is more resistant to the microbial and enzymatic proteolysis in the digestive tract.
- ❑ Haemoglobin concentration in blood is 100 times higher than that of Transferrin.
- ❑ Haemoglobin is degraded during its transport through the gastrointestinal tract.
- ❑ The detection of **faecal Transferrin** (much more stable than Haemoglobin) provides the best alternative way of diagnosing the disease in the upper digestive tract.





# Transferrin versus Haemoglobin

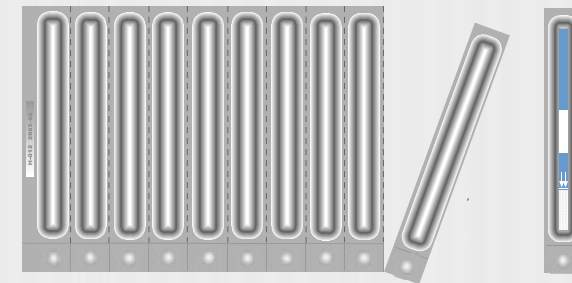
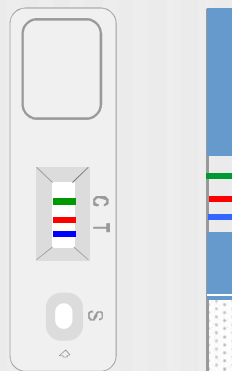
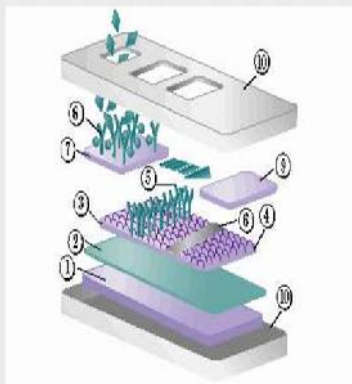
- ❑ **Positive Tf and negative Hb** means that the haemorrhagic level is really high; upper level (gastric and intestine) disease.
- ❑ **Positive Haemoglobin** means low level (colon) disease.
- ❑ **Positive Tf and Hb**: the haemorrhage may be either in the upper or lower digestive tract.





# Product: FOB+Tf rapid test

- ❑ Rapid test for the detection of human Haemoglobin (Hb) and human Transferrin (Tf) in stool samples.
- ❑ Detects gastrointestinal bleeding
- ❑ Technique: Immunocromatographic assay
- ❑ Format: Card, Blister and Tube





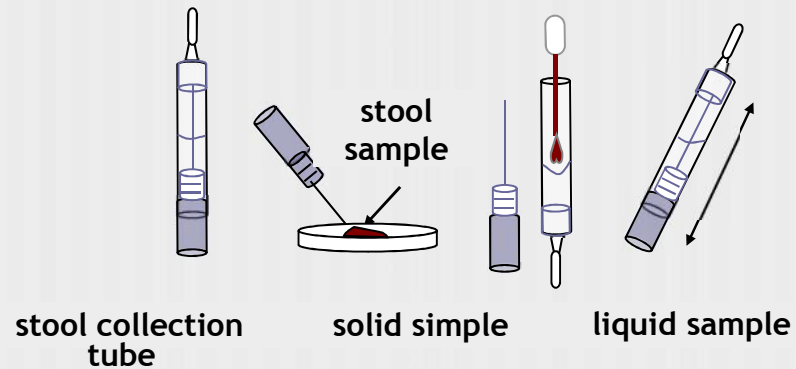
# FOB+Tf test. Why?

- ❑ Added value to the traditional standard FOB rapid test:
  - ✚ **upper gastrointestinal bleeding: gastric and duodenal ulcers**
  - ✚ **to differentiate upper from lower GI bleeding**
- ❑ The detection of faecal Transferrin, much more stable than Haemoglobin, provides the best alternative way of diagnosing the disease in the upper digestive tract.
- ❑ Rapid test detecting simultaneously Haemoglobin and Transferrin provides early colorectal cancer diagnosis.
- ❑ When results of this test are positive, the diagnosis is confirmed using additional procedures (e.g., barium enema, sigmoidoscopy, colonoscopy).
- ❑ Colorectal cancer is the leading cause of illness and death in the Western world.
- ❑ Usefulness of the Certest FOB+Tf test as a faecal occult blood test.

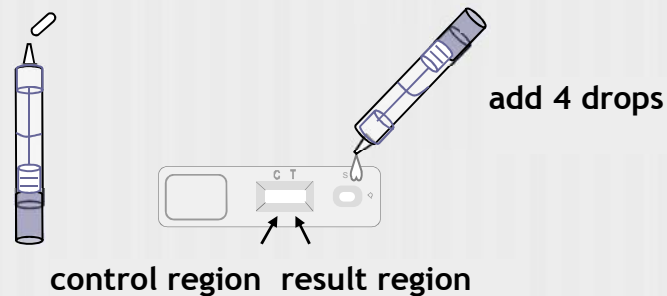




# CerTest FOB+Tf performance



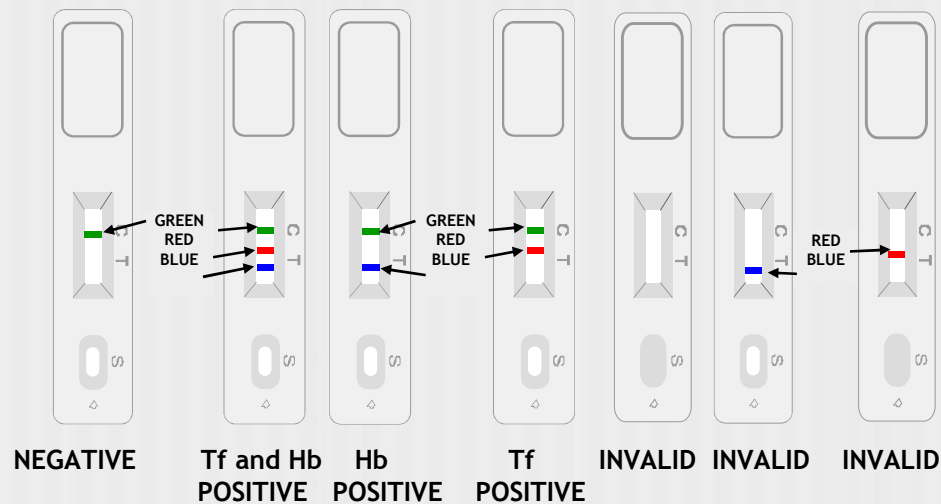
- Qualitative immunocromatographic assay to determine human Haemoglobin and human Transferrin in stool samples.





# CerTest FOB+Tf

## Results



- ❑ **NEGATIVE:** only one GREEN band appearing. No occult blood presence: neither human Haemoglobin nor Transferrin.
- ❑ **Tf+ and Hb+:** in addition to the GREEN control band, the RED (Tf test line) and BLUE (Hb test line) band are also appearing.
- ❑ **Tf+:** in addition to the GREEN control band, the RED one (Tf test line) is also appearing (human Haemoglobin probably degraded in the GI tract).
- ❑ **Hb+:** in addition to the GREEN control band, the BLUE one (Hb test line) is also appearing, which probably means a lower GI bleeding disease.
- ❑ **INVALID:** total absence of the control coloured band (GREEN) regardless the appearance or not of the result lines (RED/BLUE).

### Reasons for control failure:

- ⚡ Insufficient specimen volume
- ⚡ incorrect procedural techniques
- ⚡ Reagents deterioration





# Results

Transferrin	Hemoglobin	Digestive tract: haemorrhage level
+	+	upper/lower; acute blood loss
+	-	upper part; acute blood loss
-	+	lower part; slight blood loss
-	-	No GI bleeding





# Conclusions

- ❑ Easy performance. 5-10 minutes result
- ❑ Easy to interpret: three different coloured lines
- ❑ Tf and Hb perfect markers for GI bleeding
- ❑ The bleeding is likely from the upper part of the digestive tract
- ❑ Excellent specificity value
- ❑ Specific *mouse monoclonal antibodies*
  - ✚ no cross-reaction with animal Hb or Tf
- ❑ Screening for FOB+Tf raises the probability of GI diseases
  - ✚ Ulcers
  - ✚ Carcinomas





*¡¡ Thanks for your attention !!*

