

# Calprotectin + Lactoferrin detection kit

CerTest  
BIOTEC

## Pathology and product description

**Calprotectin** is a neutrophil cytosolic protein with antimicrobial properties, which is present at increased concentration in stool during bowel inflammation. The stability of the protein to degradation keeps it stable in faeces for up to 7 days at room temperature, making it an ideal analyte.

**Calprotectin** is released by activation of leukocytes, giving increased levels in plasma, cerebral spinal fluid, synovial fluid, urine or stools as a consequence of disease in the relevant organ(s).

**Calprotectin** inhibits zinc-dependent enzyme systems, as a result kills microbes and induces apoptosis in normal and cancer cells.

In the presence of calcium, calprotectin is a remarkably resistant to proteolytic degradation. It is stable in stools kept at room temperature for 7 days.

**Lactoferrin** is a glycoprotein component of neutrophil secondary granules, a primary component of the acute inflammatory response and is released from faecal leukocytes. This protein is resistant to proteolysis in the faeces and may serve as a marker of inflammation in the intestine. The major cause of faecal neutrophils in patients with chronic diarrhoea is chronic inflammatory intestine disease of the colon (i.e., Crohn's Disease and Ulcerative Colitis).

**Lactoferrin** has been also studied as a predictor of infection with invasive enteropathogens in children with diarrhoea. Bacterial inflammatory diarrhoea may be caused by Shigella, Salmonella, Campylobacter and Clostridium difficile. The hCp and hLf are non-invasive markers of intestinal inflammation (for example in Ulcerative Colitis (UC) and Crohn's Disease (CD)).



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## TEST PROCEDURE

1

Unscrew the cap and use the stick to pick up the sample.



2

Close the tube with the diluent and stool sample. Shake the tube in order to assure good sample dispersion.



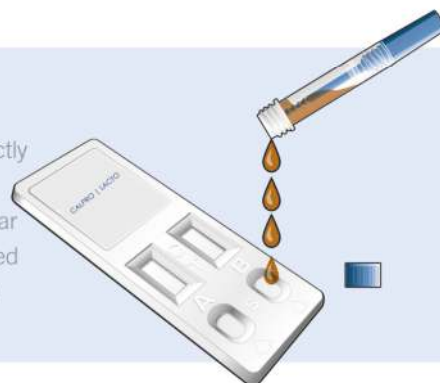
3

Cut the end of the cap and dispense exactly 4 drops into the "A" circular window marked with an arrow.



4

Dispense exactly 4 drops into the "B" circular window marked with an arrow.



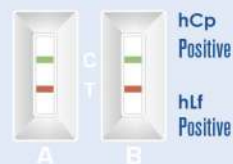
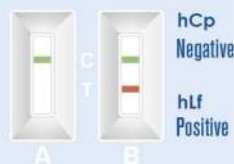
5

Wait for coloured bands to appear.

Read the result at 10 minutes



## INTERPRETATION OF THE RESULTS



ANY OTHER RESULT: INVALID

## Clinical Sensitivity and Specificity

	Sensitivity	Specificity	PPV	NPV
CerTest Calprotectin + Lactoferrin (Calprotectin) vs Calprest	> 94%	93%	>94%	93%

	Sensitivity	Specificity	PPV	NPV
CerTest Calprotectin + Lactoferrin (Lactoferrin) vs IBD EZ VUE	> 99%	>99%	>99%	99%

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