

Quantum Blue[®]

QUANTITATIVE CALPROTECTIN RAPID TEST WITH
DEDICATED READER FOR IBD/IBS SCREENING

- Quantitative
- Rapid
- RFID Technology



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Quantum Blue® Quantitative IBD/IBS Screening

Discriminating between IBD and IBS

Gastroenterologists can find it difficult to discriminate between IBD and IBS since patients present with similar symptoms.

How can the correct diagnosis and treatment be achieved?

Quantum Blue® Calprotectin Rapid Test

The system is a sensitive diagnostic tool to help pre-select patients requiring colonoscopy for confirmation of organic bowel disease or to exclude IBD.

Within 12 minutes, a quantitative measure of Calprotectin in faecal samples is given (expressed as $\mu\text{g/g}$). The data are comparable to established and highly precise tests like the BÜHLMANN ELISA (see correlation data on back page).

The BÜHLMANN Quantum Blue® Test relies on the simple, established technology of lateral flow assays, in combination with an easy to use reader that allows for quantitative analysis of the test result.

The reader detects the intensity of test bands through optical measurement. Thus, Quantum Blue® Calprotectin avoids subjective misinterpretations of reading by eye, simplifies the analysis for the operator and ensures correct interpretation of the test result.

In addition, test cassettes and readers have been equipped with RFID chips (Radio Frequency Identification) which allow lot-specific calibration information to be transferred automatically from the cassette to the reader. This process happens automatically without any need for intervention by the operator.

Thus Quantum Blue® is the ideal quantitative tool for IBD/IBS screening.

Quantum Blue® Calprotectin: innovations and advantages

Simplicity: Ideally suited for low sample throughput environments when a rapid turnaround time is needed.

Rapid: Test result returned within 12 minutes post sample loading onto cassette.

Quantitation: Provides a quantitative measure of Calprotectin in faecal samples. The following interpretation of results is recommended:

< 40	$\mu\text{g/g}$	negative
40-60	$\mu\text{g/g}$	grey zone
> 60	$\mu\text{g/g}$	positive

RFID Technology: The perfect assistant for the operator – lot specific calibration data are automatically transferred from the cassette to the reader.



Calprotectin is a calcium-binding S100 protein and is released mainly from neutrophils. Calprotectin is a very reliable, sensitive and specific marker for bowel inflammation. Calprotectin is not elevated in patients with non-organic, functional diseases like IBS. Due to the high sensitivity and specificity, as well as a high NPV (negative predictive value), the clinician can rely on Calprotectin levels to distinguish between organic and functional disease.

Quantitative Lateral Flow Test Format



1. Sample preparation for measurement. Dilute extract 1:16 into a clean microtube e.g. add 20 μl of extract to 300 μl of Extraction Buffer. Vortex and centrifuge for 5 min at 3'000 $\times g$. Alternatively the faeces can be sedimented for 10 min. The supernatant is used for the assay.



2. Load 60 μl of diluted and centrifuged faecal extract onto the sample loading port of the test cassette with a precision pipette.



3. Immediately after loading, start the timer by pressing the Enter button on the reader. To avoid contamination of the reader's optical device, close the tray after about 30 seconds.



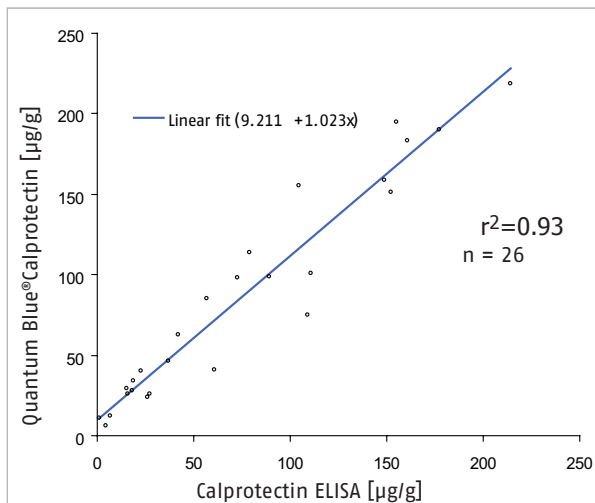
4. After 12 minutes the Test Cartridge is automatically read and the test result displayed in $\mu\text{g/g}$ Calprotectin concentration of the sample.

Quantum Blue[®] Reader



Method Comparison

(linear fit)



The measurable range of the Quantum Blue system is from 30 to 300 µg/g Calprotectin in faecal samples and results are directly comparable to the established and highly precise ELISA method.

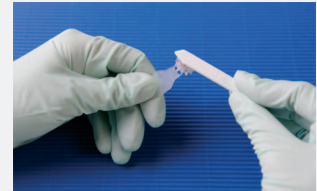
The integrated lot-specific standard curve for the test cassettes ensures the minimum of inter-technician and inter-lot variation in results.



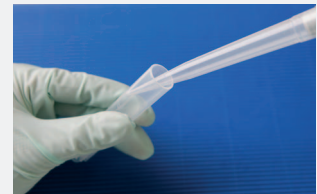
Sample Extraction



Extraction Device included in the test box



Apply stool sample into cap and place it onto the tube



Add 4 ml of Extraction Buffer into the tube and close the device firmly



Homogenise the sample on a Vortex mixer for 1 min. Perform sample dilution step and apply to test cassette

Requirements

- Lab coat and protective gloves
- Pipettes (4 ml, 300 µl Extraction Buffer, 20 µl sample)
- Vortexer

Available from



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Ordering Codes:

Quantum Blue® Reader
BI-POCTR-ABS

Quantum Blue® Calprotectin
LF-CAL20-RD P1044-05ML

