

**Application Note****FOB Turbilatex, XL-180/XL-200, Erba**  
(AN-Fb-XL200.EN rev 2019.12.04)For *in vitro* diagnostic device  
ENGLISH**General Information****Intended use:**

FOB Turbilatex is a latex turbidimetric assay for the quantitative detection of human haemoglobin (hHb) in human stool samples.

This assay is simple and widely applicable. Test results aid in a presumptive diagnosis of faecal occult blood (gastrointestinal bleeding).

For professional *in vitro* diagnostic use only.

FOB Turbilatex can be performed on every open chemistry analyser. Please follow the subsequent instructions in order to assure performance characteristics as describes in the instructions for use. This instruction has been validated by CerTest BIOTEC S.L Laboratories.

Additionally, please read the "Instructions for use" for instructions on operating and programming user defined test.

**Reagents:****Materials provided by CerTest BIOTEC S.L.:**

| Reagents  | Quantity   | Cat. reference  |
|---|--|---|
| Turbidimetric reagents (R1 & R2)<br>200 Det/kit | R1: 2 vials, 2x15 mL.<br>R2: 1 vial, 1x6 mL.                                 | TL-022FB01<br>TL-022FB02  |
| Auxiliary Reagents                              | Quantity   | Cat. reference  |
| Calibration kit                                 | Calibrator: 6 vials,<br>6x1mL.   | TL-022FB70,<br>TL-022FB71,<br>TL-022FB72,<br>TL-022FB73,<br>TL-022FB74,<br>TL-022FB75 |
| Controls kit                                    | Control C1,<br>2 vials, 2x1 mL/vial.<br>Control C2,<br>2 vials, 2x1 mL/vial. | TL-022FB08<br>TL-022FB09  |
| Sample diluent kit                              | 4 vials,<br>4x125 mL/vial  | TL-022FB03E   |
| Sample dilutions vials                          | 1x2 mL/vial<br>1x2 mL/vial   | MST-0005MF<br>MST-0009F   |

**Preparation of reagents:**

R1 and R2 are ready to use.

Calibrators are ready to use.

Controls are ready to use.

**Storage and stability**

Kit components must be stored at temperature indicated on the label. Do not freeze.

Reagents are stable up to the expiration date printed on the label, always considering that reagent containers must be properly closed to avoid any contamination, must be kept away from the sunlight and conserved at temperature indicated on the label of each reagent.

**Specimen:**

Collect enough quantity of human stool samples. These samples should be collected in clean and dry containers (no preservatives or transport media). The samples can be stored completely dissolved in the refrigerator (2-8°C) for 3 days prior to testing. Homogenise stool samples as thoroughly as possible prior to preparation.

The sample dilution vial with diluted sample can be stored for 7 days in the refrigerator (2-8°C) prior to testing.

Use FOB Turbilatex stool collection tubes for sample collections described the instructions for use.

**Assay procedure****Application parameter set up:**

Specific analyzers settings for FOB Turbilatex must be programmed onto the analyzer, see below. For instructions, consult the XL-200 (Erba) analyzer manual and instructions for use provided with the kits.

**Loading of reagents:**

Load reagents according to the XL-200 (Erba) analyzer manual.

**Calibration curve establishment:**

A 6 points calibration curve can be established in XL-200 (Erba) analyzer. For instructions consult analyzer manual.

**Calibration stability:**

Calibrate the system at least once a month is extremely recommended. Recalibrate the system when reagent lot is change or when the controls are out of the assigned range given in the control label and CoA.

**QC controls:**

FOB Turbilatex controls C1 and C2 must be assayed each day before running patient fecal sample extract to validate the calibration curve. The controls have assigned value ranges indicated on the label and certificate of analysis supplied. The control measurements must be within the indicated value range to obtain valid results for patient fecal extract. If the control values are out of range, follow next procedures: 1) Repeat QC control measurement, 2) Repeat calibration measurement.

**Results:**

The results are evaluated automatically by the analyzer and presented in ng hHb/mL.

### Application Note

## FOB Turbilatex, XL-180/XL-200, Erba (AN-Fb-XL200.EN rev 2019.12.04)

For *in vitro* diagnostic device  
ENGLISH



### Performance characteristics

The following results have been obtained during the validation of FOB Turbilatex on the XL-200 (Erba) analyzer.

#### Measuring range:

FOB Turbilatex assay measuring range is 7.1-1000 ng hHb/mL on the XL-200 (Erba) analyzer. Samples higher concentrated than 1000 ng hHb/mL must be diluted for proper quantification by the user, using additional sample buffer.

#### Prozone effect

Using the reported parameters, no hook effect was observed up to 2 µg hHb/mL. Samples with Haemoglobin concentration of 2 µg hHb/mL give a typical positive result >1000 ng hHb/mL.

#### Detection limit

**Limit of detection (LOD): 7.1 ng hHb/mL.** The lower limit of detection of FOB Turbilatex was determined on 30 repetitions of calibrator 0 as 3 times standard deviation value.

**Limit of quantification (LOQ): 21.7 ng hHb/mL.** The lower limit of quantification is defined was determined on 30 repetitions of calibrator 0 as 9.2 times standard deviation value.

#### Precision

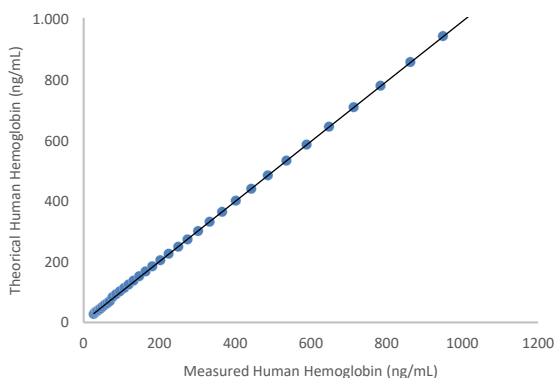
FOB Turbilatex was tested with three different controls levels.

|                 | Low<br>(50 ng/mL) | Medium<br>(250 ng/mL) | High<br>(5000 ng/mL) |
|-----------------|-------------------|-----------------------|----------------------|
| N               | 20                | 20                    | 20                   |
| Mean<br>(ng/mL) | 42.5              | 253.4                 | 548.2                |
| SD (ng/mL)      | 3.1               | 3.4                   | 7.7                  |
| CV (%)          | 7.2               | 1.3                   | 1.4                  |

### General characteristics

#### Linearity:

FOB Turbilatex on Biolis 24i analyzer using calibrator kit is linear in the calibration range of 0-1000 ng hHb/mL.



### Method comparison

Results obtained with FOB Turbilatex on the Biolis 24i analyzer were compared with those obtained with EIKEN FOB Latex.

|                                      | Sensitivity | Specificity |
|--------------------------------------|-------------|-------------|
| FOB Turbilatex vs<br>EIKEN FOB Latex | 96%         | >99%        |

### Shipping damage

Please notify your distributor, if this product was received damaged.

### Symbols key

|  |   |     |                        |
|--|---|-----|------------------------|
|  | For <i>in vitro</i> diagnostic use only |     | Keep dry               |
|  | Consult instructions for use            |     | Temperature limitation |
|  | Catalogue number                        |     | Lot number             |
|  | Use by                                  |     | Manufacturer           |
|  | Contains sufficient for <n> test        | DIL | Sample diluent         |
|  | Keep out of the sunlight                |     |                        |

### Manufacturer

#### CERTEST BIOTEC

Pol. Industrial Río Gállego II, Calle J, Nº 1, 50840,  
San Mateo de Gállego, Zaragoza (SPAIN)  
www.certest.es

### NOTES

Please refer to the instruction for use for the detailed information about the test on the following:

**Synthesis; Principle; Precautions; Reagents; Specimen collection; Interpretation of results.**

**Application Note****FOB Turbilatex, XL-180/XL-200, Erba***(AN-Fb-XL200.EN rev 2019.12.04)*For *in vitro* diagnostic device

ENGLISH

**XL-200 (Erba) /Application parameters**

|                             |                           |
|-----------------------------|---------------------------|
| <b>ASSAY PARAMETERS</b>     |                           |
| <b>Std. No</b>              | 6                         |
| <b>R1</b>                   | 153 µL                    |
| <b>Sample</b>               | 15.3 µL                   |
| <b>R2</b>                   | 42 µL                     |
| <b>Others</b>               | NA                        |
| <b>Reaction mode</b>        | 2-point                   |
| <b>Primary wavelength</b>   | 505 nm                    |
| <b>Secondary wavelength</b> | None                      |
| <b>Direction</b>            | Increase                  |
| <b>M1 start -M1 end</b>     | 19                        |
| <b>M2 start -M2 end</b>     | 34                        |
| <b>Reaction time</b>        | -                         |
| <b>Linear range</b>         | 7.1-1000 ng/ml            |
| <b>CALIBRATION</b>          |                           |
| <b>Calibration Method</b>   | Cubic spline              |
| <b>Calibration set</b>      | 6 calibrators             |
| <b>Blank</b>                | Calibrator 1 (0 ng/mL)    |
| <b>Calibrator 1</b>         | Calibrator 2 (50 ng/mL)   |
| <b>Calibrator 2</b>         | Calibrator 3 (100 ng/mL)  |
| <b>Calibrator 3</b>         | Calibrator 4 (250 ng/mL)  |
| <b>Calibrator 4</b>         | Calibrator 5 (500 ng/mL)  |
| <b>Calibrator 5</b>         | Calibrator 6 (1000 ng/mL) |

**Application Note**

**FOB Turbilatex, XL-180/XL-200, Erba**  
 (AN-Fb-XL200.EN rev 2019.12.04)

For *in vitro* diagnostic device  
 ENGLISH



## FOB Turbilatex Combo

### Assay parameters / Erba XL-180 and XL-200

#### Test Details: FOB

|                            |            |                             |              |                            |        |
|----------------------------|------------|-----------------------------|--------------|----------------------------|--------|
| <b>Report Name:</b>        | FOB        | <b>Decimal Places:</b>      | 2            | <b>Auto Rerun:</b>         | No     |
| <b>Unit:</b>               | ng/mL      | <b>Secondary:</b>           | 0            | <b>Online Calibration:</b> | No     |
| <b>Wavelength Primary:</b> | 505        | <b>Curve Type:</b>          | Cubic Spline | <b>Cuvette Wash:</b>       | No     |
| <b>Assay Type:</b>         | 2 - Point  | <b>M1 Start:</b>            | 19           | <b>Special Diluent:</b>    | No     |
| <b>M1 End:</b>             | 34         | <b>M2 Start:</b>            | 19           | <b>Warn After:</b>         | 20     |
| <b>M2 End:</b>             | 34         | <b>Standard Replicates:</b> | 3            | <b>Reagents Used:</b>      | 2      |
| <b>Sample Replicates:</b>  | 1          | <b>Control Interval:</b>    | 0            | <b>Reagent R1:</b>         | FOB R1 |
| <b>Control Replicates:</b> | 1          | <b>React. Abs. Limit:</b>   | 0            | <b>Reagent R2:</b>         | FOB R2 |
| <b>Reaction Direction:</b> | Increasing | <b>Prozone Check:</b>       | Lower        |                            |        |
| <b>Prozone Limit %:</b>    | 0          | <b>Delta Abs/Min:</b>       | 0            |                            |        |
| <b>Linearity Limit %:</b>  | 0          | <b>Technical Maximum:</b>   | 0            |                            |        |
| <b>Technical Minimum:</b>  | 0          | <b>Y=aX+b</b>               | a= 1 b= 0    |                            |        |
| <b>Reagent Abs Min:</b>    | 0          | <b>Reagent Abs Max:</b>     | 0            |                            |        |

#### Sample Volumes:

|                  |         |                        |    |
|------------------|---------|------------------------|----|
| <b>Normal:</b>   | 15,3 µL | <b>Dilution Ratio:</b> | 1× |
| <b>Increase:</b> | 30,6 µL | <b>Dilution Ratio:</b> | 1× |
| <b>Decrease:</b> | 7 µL    | <b>Dilution Ratio:</b> | 1× |

**Standard Volume:** 15,3 µL

|                        |           |           |
|------------------------|-----------|-----------|
| <b>Reagent Volume:</b> | <b>R1</b> | <b>R2</b> |
|                        | 153 µL    | 42 µL     |
| <b>Stirrer Speed:</b>  | High      | Medium    |