

For simultaneous evaluation of 6 or 12 samples with  
 ø 60 mm concerning alpha- and beta/gamma-activity

## FHT 770 T

Multi Low Level Counter with 32-bit user  
 Windows™ software



### Low limits of detection and decision

By the extremely low background measurement of typically  $\leq 1$  pulse/min ( $0,017 \text{ s}^{-1}$ ) in beta/gamma-operating mode, very small limits of detection can be achieved. For that purpose, the utilized proportional window counter tubes are coupled anticoincidentally with a guard counter and surrounded by a lead shielding of 100 mm (4") thickness.

### Time gained by multiple measurement

The standard version of the Low Level Counter is equipped with 3 sample slides for 2 samples each. Alternatively, the Low Level Counter can be delivered with 6 sample slides for 12 samples in total. In this case, the overall height increases by app. 5 cm (0.2").

### Processing of measured values

The standard version (6 sample planchets) of the Low Level Counter is equipped with one 16-channel counter board, the extension (12 sample frames) with a second 16-channel counter board used for signal processing. Above each measuring position a counter tube with 60 mm (2.4") window diameter is mounted. A simultaneous evaluation of alpha and beta/gamma-activity is possible by applying pulse height discrimination. Individual measuring parameters can be assigned to each measuring frame, such as measuring time, calibration factors etc. Of course, the measuring frames may be configured identically for a series of measurements with many similar samples.

### Documentation of measured values

Documentation of measured values in current protocols and formats is getting more and more important. To do this the user can determine the size of data sampling and data storage himself (option). By using different printing possibilities, the measured values can be issued in prefabricated protocol-layouts (e.g. in conformity with DIN ISO 7503). If the number of samples is high, it is also possible to issue them structured line by line. The report generator which can be obtained optionally allows to issue individual protocol formats. The measured values as well as the selected additional information can be stored either in ASCII- or ACCESS data- or file format respectively. The integration of a network card

or a modem (option) contributes to the ease of operation.

### High flexibility

The completely revised evaluating system which is designated for 32 bit operating systems (WINDOWS™ NT) was developed in close dialog with the users.

With this method, once defined measuring tasks can be stored together with the required parameters in so-called "job-files" which are available when needed for a special measuring task. Different access authorizations make sure that relevant changes in measuring parameters can only be carried out by authorized persons.

## Specification

### FHT 770 T

#### Radiological characteristics

Alpha background measurement:  $\leq 0.05 \text{ min}^{-1}$

Beta/gamma background measurement:  $\leq 1 \text{ min}^{-1}$

Sensitivity: (typical values, measured with  $\varnothing 60 \text{ mm}$  (2.4") sample discs)

Cs-137:  $0.38 \text{ s}^{-1}/\text{Bq}$

Co-60:  $0.25 \text{ s}^{-1}/\text{Bq}$

C-14:  $0.24 \text{ s}^{-1}/\text{Bq}$

Am-241 ( $\alpha$ ):  $0.26 \text{ s}^{-1}/\text{Bq}$

#### Mechanical characteristics

Dimensions: for 6 sample frames:  
 $62 \times 45 \times 65 \text{ cm}$  (24.4" x 17.7" x 25.6")

for 12 sample frames:  
 $62 \times 50 \times 65 \text{ cm}$  (24.4" x 19.7" x 25.6")

Weight:  $930 \text{ kg}/1150 \text{ kg}$  (2050 lb/2535 lb)

Counter gas: Ar/CH<sub>4</sub>; Ar/CO<sub>2</sub> (test gas quality)

Operating voltage:  $110 \text{ V}/230 \text{ V}$ , 50-60 Hz

### Software FHT 770 T

The software of the Multi Low Level Counter meets current requirements of modern network software for Windows NT. It can be handled easily and offers high flexibility. Therefore, the operating software comprises modules for automatic plateau curve measurement of the counter tubes as well as a comfortable calibration software.

#### The measuring program of the FHT 770 T offers e.g.:

Menu guided entry of all measuring parameters.

Starting and stopping of measurement by inserting or removing the slide.

Free preselection of nuclides and free selection of the measuring time for each sample frame.

Output of all raw count rates by using "short cuts" for test purposes.

Monitoring of alarm and failure can be set for each measuring frame.

Layout of the measuring protocol can be selected freely (option).

Up to 5 freely configurable calibration and calculation parameters can be set.

Calculation of the limits of detection and decision according to ISO 11929, p. 1.

Automatic calculation of measuring time to comply with predetermined limiting values.

Storing of data in ASCII- or ACCESS-format alternatively.

Different operator access levels.

Automatic background measurement at a predetermined point of time.

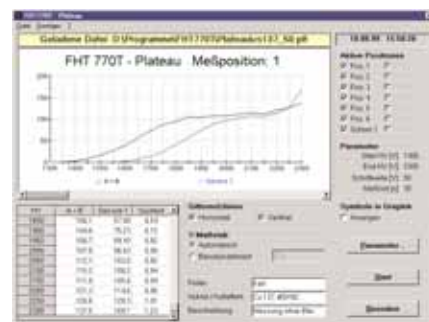
Multiple measurement for one sample can be selected.

Automatic plateau measurement which can be stored and printed.

Calibration of counter tube and transfer of efficiency values to an internal nuclide table.

Input of a sample identification.

Automatic monitoring of the counter tube operating points.



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