

FUNCTIONS

- Rapid food testing in standalone mode
- With PC and MultiAct software package:
 - Isotope identification
 - Activity determination in samples

FEATURES

- Easily transportable
- Built-in sample-tray dispenser
- Automatic determination of the consumability of food and drinks following nuclear incident
- Simultaneous measurement of beta and gamma radiation
- MultiAct software package with user programmable isotope library
- Simultaneous data acquisition and data evaluation procedures



With the IH-111L user can rapidly obtain several information about the contamination in samples, through the selective measuring of beta and gamma radiation of any radioisotopes of fission or activation origin. The principle of the process is the fact that isotopes having characteristically simultaneous beta and gamma radiation, either with short or long half-life period, can be divided into groups as a function of their energy. Based on the measured radiation in the groups, the instrument compares the activity of the sample with relevant norms and determines if the foodstuff is consumable or not. The device is using a compound scintillation detector. The measurement method and the technological scheme of the system are patented by Gamma Technical Corporation.

Technical parameters

In standalone mode

Measurement time: 5s ... 10min, automatic timing

Automatic background compensation
Automatic energy calibration with enclosed Am-241 source

With MultiAct spectrometric software package adjustable: measurement time from 1s, high voltage, discrimination level.

Four kinds of calibration procedure are available:

- pulse width calibration
- channel number versus radiation energy
- peak width versus radiation energy
- counting efficiency versus radiation energy

Operating conditions

Temperature range:
-10 ...+50°C

Relative Humidity:
max. 98% RH

Power supply:
230V +- 15%, 50 Hz

Operating time on battery:
12 hours

Weight:
27 kg unpacked
34 kg packed

Detection limits

in standalone mode with max. 10 min measurement time:

Permissible values according to decree 3954/87/EURATOM for drinking water and liquid foodstuffs as well as for other foodstuffs in the case of contamination of beta- and gamma radiating materials with short and long half-life period:

I-131: 500Bq/kg
Cs-137: 1000Bq/kg