

FoodTester-G



ANALYZER OF CESIUM ISOTOPES ACTIVITY IN FOOD

FoodTester-G

analyzer of cesium isotopes activity in food

ADVANTAGES

- mobile, practical
- no special training of the user is required, operates in the interactive mode
- no certain container for a food product is required, takes measurements by being put to the food product
- no special preparation of the food product is required (the food stays inside the container/packing)
- no special protection is required

PURPOSE OF USE

- measurement of gamma radiation ambient dose equivalent rate (DER)
- detection of cesium isotopes activity in food products and calculation of their specific activity

DELIVERY KIT

- detecting unit based on the scintillation detector of gamma radiation (Csj - scintillator-photodiode)
- tablet PC with installed Android OS and specialized software
Data communication is done via the Bluetooth channel.

TECHNICAL SPECIFICATIONS

- Measurement range of gamma radiation DER – from 0.1 μ Sv/h to 100 μ Sv/h.
- Energy range of registered gamma radiation – from 0.05 MeV to 3.0 MeV.
- Error of gamma radiation DER measurements – 15 %.
- Minimum detected cesium isotopes activity in food products at up to 0.15 μ Sv/h background level is 50 Bq/kg (at up to 0.05 μ Sv/h background level – 10 Bq/kg).
- Time of continuous operation:
 - detector – 40 hours,
 - tablet PC – 8 hours.
- Ingress protecting rate of the detector IP54.
- Operating temperature range:
 - detector – from -20 °C to +40 °C,
 - tablet PC – specifications specified by the manufacturer.
- Weight and dimensions:
 - detector (without case) – not more than 0.4 kg and 110x36x83 mm respectively,
 - tablet PC – determined by its type (default weight and dimensions do not exceed 0.15 kg and 135x65x10 mm).

TWO OPERATING MODES

- mode of gamma radiation DER measurement (priority mode)
- FoodTest mode

FoodTest MODE

- detection of cesium isotopes activity in food
- calculation of existing cesium isotopes specific activity in food products

Food product groups testing:

- baby nutrition
- water, milk
- meat, fish, eggs
- vegetables, fruits
- cereal crops
- dried products
- dried herbs (tea)

FoodTest MODE – 6 steps

- Step 1.** Selecting the way of compensation of background.
- Step 2.** Putting the device to a food product.
- Step 3.** Searching for cesium isotopes.
- Step 4.** Selecting a food group.
- Step 5.** Selecting a form of the food product (container/packing).
- Step 6.** Selecting a dimensions of the food product (container/packing).
Calculation results of cesium isotopes specific activity.

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