



# WATER CONTAMINATION MONITORING SYSTEMS

## MZHG-A

### INTENDED USE

Determination of radionuclide composition and measurement of volumetric (specific) activity of radionuclides in the monitored liquid.

### APPLICATION

The MZHG-A water contamination monitoring systems can be used for continuous automated radiation monitoring of liquid discharges, process media, unbalanced water and waste water at nuclear power plants and other enterprises using gamma-emitting radionuclides in their processes, as well as for monitoring of drinking water at water intakes and for environmental monitoring.

### DESIGN

Depending on the version, radiometers can include one or two UDS-GC gamma detecting devices based on NaI(Tl) ( $\varnothing 40 \times 40$ ) mm or NaI(Tl) ( $\varnothing 76 \times 305$ ) mm crystals, installed in measuring chambers in flow-through versions (for MZHG-A01, MZHG-A02, MZHG-A04) or designed as submersible or mortised units (for MZHG-A03, MZHG-A05, MZHG-A06), and a spectrometric processing unit.

Lead shielding blocks surrounding the chamber from all sides reduce the influence of external background during measurements.

The spectrometric processing unit includes a panel computer with specialised software installed, as well as power supply and communication

### KEY FEATURES

- Several MZHG-A systems can be combined to build a distributed site monitoring system
- Safety class 3 and/or 4 according to NP-001-15, NP-016-05, NP-022-17, NP-033-11
- Cross-platform system software, including for Linux OS
- Continuous automated radiometric and spectrometric analysis of liquids
- Ingress protection no lower than IP54 according to GOST 14254-2015





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## SPECIFICATIONS

RANGE OF MEASURED VOLUMETRIC ACTIVITY FOR <sup>137</sup> CS NUCLIDE	FLOW-THROUGH DESIGN	SUBMERSIBLE (MORTISED) DESIGN	APPLICATION
0.1 to 1×10 <sup>4</sup> Bq/l	MZHG-A01	MZHG-A06	Environmental monitoring
2.5 to 5×10 <sup>6</sup> Bq/l	MZHG-A04	MZHG-A05	Anti-terrorism
0.1 to 5×10 <sup>6</sup> Bq/l	MZHG-A02	MZHG-A03	Nuclear power plants

## CERTIFICATION

- The MZHG-A water contamination monitoring systems are registered in the State Register of Measuring Instruments under № 90851-23

