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LABORATORIES



FREQUENTLY ASKED SOLUTIONS



**DRINKING WATER MONITORING  
DWM-3**



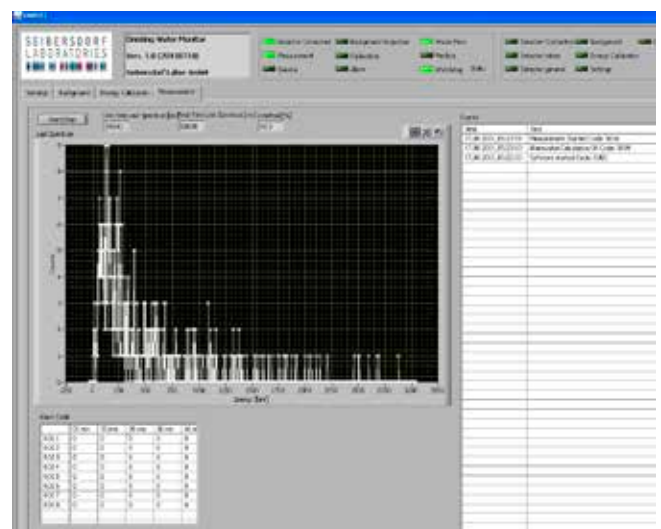
# MONITORING OF DRINKING WATER DWM-3

The team of Seibersdorf Laboratories is Austria's largest provider of service, know-how and technology in the field of radiation protection.

## DWM-3 PROBE

Decades of experience in measuring radioactivity have enabled Seibersdorf Laboratories to develop a reliable measuring system and to offer supplementary expertise for the analysis and interpretation of the results.

The DWM-3 probe is based on a highly sensitive scintillation detector for the gamma spectroscopic monitoring of drinking water. Compared to the predecessor model TWM 2000, many improvements have been incorporated in the measuring system. The communication and data transmission have been updated, too.



## TECHNICAL SPECIFICATIONS DWM-3

### MEASURING CELL

- 55 mm lead shield for ambient radiation
- Measuring volume: 34 l
- Max. operating pressure: 5 bar (test pressure 6 bar)
- Connections: 1/2" and 3/4"
- Dimensions: 985 x 585 x 852 mm (wxdxh)
- Weight: approx. 600 kg

### DETECTOR AND MEASURING ELECTRONICS

- 63 x 160 mm (dxh) NaI(Tl) scintillation detector
- 992 channel spectral resolution
- Sensitivity: 0.5 Bq Cs-137 (measurement duration 1 h)

### OPTIONAL EXPERT SUPPORT

- Various on-call service models available, up to guaranteed 24h/7d availability
- Analysis of spectra with radionuclide determination and activity estimate
- Consultation about approach/countermeasures

### COMMUNICATION

- LAN connection through Fast Ethernet interface
- Automated transmission of measuring data to server (option)
- Intermediate storage of spectra up to several years
- Automated alerts via email or SMS (option)

## DATA ACQUISITION AND DATA FUSION

Every minute, the new data acquisition system collects thousands of measurement values. 992 channels are used to provide high resolution in the energy domain. To combine high sensitivity and fast response rate, these channels are analyzed by calculating the running average for various integration times and 10 different energy ranges.

By using a special algorithm, based on the threshold limits, the large amount of data is processed and compressed into one single number. This value reflects the amount of activity or radiation detected.

## EXPERT SUPPORT

For quality assurance purposes, we can periodically analyze the measurement data (spectra) generated by DWM-3 to ensure that the system works properly. Experts at Seibersdorf Laboratories are automatically notified in event of an alarm. Via remote maintenance, they can then access the spectra and immediately analyze them.

A precise assessment of the situation is facilitated by determining the radionuclides or the activity concentration, and conclusions can then be drawn about the source or cause, for example natural fluctuation, nuclear power plant accident, terrorist attack etc.



## CONTACT

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