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AquaKIT

Fast method for the determination of Radon concentration in water

Key features

- Direct determination of Radon concentration in water samples
- Portable equipment for laboratory and field measurement
- Heat resistant active coat filter cartridge to minimize Radon background prior to precision measurements
- Comprehensive range of accessories

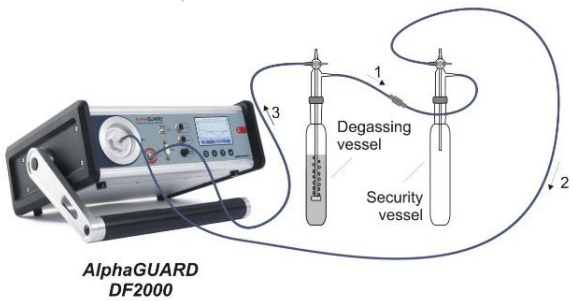
AquaKIT

AquaKIT is an accessory for Radon measurement in water, to be used with the benchmark Radon professional monitor AlphaGUARD.

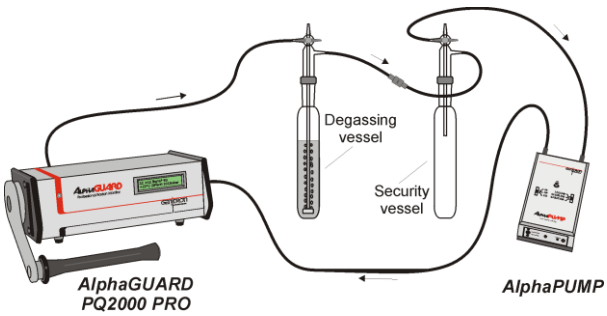
AquaKIT is an optional accessory for the Radon monitoring systems AlphaGUARD DF2000, AlphaGUARD PQ2000 PRO / P1000F. In combination with the Radon monitor (and the external electronic pump AlphaPUMP or LabPUMP needed for AlphaGUARD PQ2000 PRO / P1000F) the AquaKIT allows to determine the Radon concentration in water samples.

The portable combination AquaKIT – AlphaGUARD DF2000 or AquaKIT – AlphaPUMP – AlphaGUARD PQ2000PRO / P1000F can be used for operation on the field. The batteries of AlphaGUARD (and AlphaPUMP if needed) assist mains-independent operation of more than 12 hours.

Radon measurement of water samples using AquaKIT is precise and reliable. It is ensured by the calibration of AlphaGUARD, compliant with different national standards, and by an integrated quality assurance system. The glass vessels of the AquaKIT measuring equipment grant a hermetically sealed enclosure of Radon gas expelled from water samples. It also allows for fast change of samples which prevents incorrect measurements as a consequence of leakages.



AlphaGUARD DF2000



AlphaGUARD PQ2000 PRO

AlphaPUMP

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AQUAKIT MEASUREMENT SET-UP

Thanks to AquaKIT set-up, the AlphaGUARD user can determine Radon directly and Radium indirectly in water samples. In a closed gas cycle, Radon is expelled from the water sample thanks to the internal pump of the AlphaGUARD DF2000 (or with the AlphaPUMP or LabPUMP when using the AlphaGUARD PQ2000 PRO / P1000F). With the AlphaGUARD, whose ionization chamber is also part of the gas cycle, Radon concentration in the system is estimated and stored in its memory (1-resp. 10-min. cycle) as a Radon concentration time series.

CHARACTERISTICS

- Typ. operating range: 5 to 20 000 Bq/L (direct measurement)
- Time of execution: < 15 min / sample (sampling, degassing, measuring, analyzing)
- Statistical error: ≤ 10 % at Bq/L (1-sigma error)

Larger sampling volumes (up to 500 ml) and longer measuring times (≥ 45 min) decrease the statistical error band and increase the lower limit of the measuring range up to 0,1 Bq/L.

COMPONENTS

The complete AquaKIT measuring set-up is placed in a special transport – and storage case resistant to shocks. The set includes the following components:

- Degassing vessel for gas washing modified for the particular measuring task
- Security vessel for minimization of the stress for the Radon monitor
- Universal spare vessel if the degassing – or security vessel is lost or broken
- Storage vessels for the gastight storage of water samples (2 x 100 ml, 2 x 500 ml)
- Plastic injections for sampling (4 x 100 ml)
- Mounting socket for a stable set-up of the measuring equipment
- Connecting tubes (7 x)
- Measuring cylinder for the determination of sample volume
- Thermometer for laboratory use (-10° C to + 50° C)
- Heat resistant active coal filter cartridge to minimize Radon background in the system prior to precision measurements (volume; 1 000cm²)

RELATED PRODUCTS

- For more about Radon measurement, ask for information about the AlphaGUARD product range.

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