

NATIONAL INSTITUTE FOR NBC PROTECTION

KAMENNÁ 71, 262 31 MILÍN, CZECH REPUBLIC

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CALIBRATION LABORATORY no. KL 2265 Certified Czech Accreditation Institute according **ČSN EN ISO/IEC 17025:2018**

CALIBRATION REPORT no. 6531

| Client | IGU Institut für angewandte Isotopen-,Gas- und Umweltuntersuchungen Wörthseestrasse 34 a 82237 Wörthsee tel: 08143 8583 mobile: 0172 823 79 72 e-mail: sav.igu@t-online.de |
|--------------------------------|--|
| Client's representative person | Dr. J. Salvamoser |
| Calibrated device | EQF 3200, Production Number: EQF2-00271 |
| Date of device receiving | 17.3.2021 |
| Date of the calibration | 19.3 10.4.2021 |
| Location of calibration | Calibration laboratory - radon chamber |
| Personnel | M.ENG. J.Vošahlík |
| Standard device | Equipment for radon concentration calibration 19182 |
| Methodology specification | AMS-R (measurement of Radon Concentration) AMS-E (measurement of EER) |

DECLARATION:

The result of calibration apply to the device of these calibrated device only.

The report shall not be reproduced except in full, without the written permission of the laboratory.

Calibration report is not valid without stamp and signature.

Calibration report was issued after accreditation of laboratory by Czech Institute for accreditation - reg. no. KL 2265.

Calibration report is closed by the signature of the head of laboratory.

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| Client (device owner) | IGU, Wörthseestr. 34 a, Wörthsee | |
|-----------------------|--|--|
| Device | EQF 32000 | |
| Device producer | SARAD GmbH, Dresden | |
| Device S/N | EQF2-00271 | |
| Device funcition | The EQF 3200 is equipped with instrument grade semiconductor radiation detectors, both in the radon measurement chamber and the sampling head for the decay products. This allows a perfect separation of the different decay products of radon, using alpha spectroscopy. | |

Results:

1) Measurement of EER

| Level | Client's results [Bq.m ⁻³] | Calibration lab's results [Bq.m ⁻³] | |
|-------|--|---|--|
| 1 | 2735 | 2090 ± 190 | |
| 2 | | | |
| | 3414 | 2640 ± 210 | |

Ratio of result (related to Calibration laboratory) is:

1,31 (for level 1),

1,29 (for level 2).

2) Measurement of Radon Concentration

| Client's results [Bq.m ⁻³] | Calibration lab's results [Bq.m ⁻³] |
|--|---|
| 11353 | 10050 ± 520 |
| 1263 | 1158 ± 62 |
| 379 | 356 ± 25 |
| | [Bq.m -3] 11353 1263 |

Ratio of result (related to Calibration laboratory) is:

1,13 (for level 1),

1,09 (for level 2),

1,06 (for level 3).

Remarks:

Calibration laboratory is traceable to BfS Berlin, Germany.

Uncertainty of Calibration laboratory was estimated using document SMS-N-R-T and using coefficient k=2 (for Gaussian distribution it corresponds 95 per cent probability covering). Standard uncertainty was estimated in accordance with document EA 4/02.

M.ENG. Josef Vošahlík Head of Calibration laboratory no. KL 2265

| Ref. No.: SÚJCHBO/863/J-4.5.3/27/Vos | | | |
|---|---------------------------------|---------------|---|
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