The database was constructed based on the *Excel* application due to its availability and widespread use. It contains information about radon, thoron and their decay products. In addition, you can also include information on doses and how they are calculated. When assessing doses, information about the size distribution of aerosols is important. Therefore, the constructed database also contains fields in which these distributions can be characterized. Sometimes the value of the conversion such as effective dose per exposure can be evaluated based on the size distribution of ambient aerosols, and that is why the database contains two separate panels, one of which relates to the size distribution of radioactive aerosols and the other to the size distribution of ambient aerosols.

In general, the sheet should be considered as a tool for systematic data collection. On the other hand, it can be taken as a base for unified procedure for dose evaluation at worksites where radon decay products properties play an important role in exposure scenario. Depending on the method used, only information relevant to it may be entered into the database.

Contents of the Excel database and recommended values

| No | Field name | Recommended values |
| --- | --- | --- |
|  | Country | - |
|  | Contact person (company, name, e-mail) | - |
|  | Object name | - |
|  | Object location | Underground, Above ground |
|  | Workplace type | Cave, Dwellings, Indoor workplace, Kindergarten,School, Show mine, SPA, Water treatment plant, Wine cellar, Working mine  |
|  | Measurement site (only for buildings) | Cellar, Ground floor |
|  | Measurement period (date, range, year) |  |
|  | Exposure type | Existing, Planned, Emergency, Medical |
|  | Number of object (if cumulative results are provided) | - |
| 1.
 | Radon air activity concentration |  |
|  | * Reference level
 | - |
|  | * Average
 | - |
|  | * Range
 | - |
|  | * Equipment applied
 | - |
|  | * Type of measurements
 | Grab sampling, Continuous (1 month), Continuous (3 month), Continuous (annual average) |
|  | Thoron air activity concentration | - |
|  | * Reference level
 | - |
|  | * Average
 | - |
|  | * Range
 | - |
|  | * Equipment applied
 | - |
|  | * Type of measurements
 | Grab sampling, Continuous (1 month), Continuous (3 month), Continuous (annual average) |
|  | Radon: Short lived radon progeny | - |
|  | * Potential alpha energy concentration: Average
 | - |
|  | * Potential alpha energy concentration: Range
 | - |
|  | * Potential alpha energy concentration: Unit
 | - |
|  | * Unattached fraction: Average
 | - |
|  | * Equipment applied
 | - |
|  | * Type of measurement
 | Grab sampling, Continuous (1 month), Continuous (3 month), Continuous (annual average) |
|  | Radon: Equilibrium factor | - |
|  | * Average
 | - |
|  | * Range
 | - |
|  | Thoron: Thoron progeny | - |
|  | * Potential alpha energy concentration: Average
 | - |
|  | * Potential alpha energy concentration: Range
 | - |
|  | * Potential alpha energy concentration: Unit
 | - |
|  | * Unattached fraction: Average
 | - |
|  | * Equipment applied
 | - |
|  | * Type of measurement
 | Grab sampling, Continuous (1 month), Continuous (3 month), Continuous (annual average) |
|  | Radon: Evaluation of the annual effective dose | - |
|  | * Equilibrium factor accepted (if radon based assessment)
 | - |
|  | * Effective dose per exposure: Value
 | - |
|  | * Effective dose per exposure: Unit
 | - |
|  | * Effective dose per exposure: Source
 | - |
|  | * Annual exposure time (h)
 | - |
|  | * Effective dose: Average (mSv)
 | - |
|  | * Effective dose: Range (mSv)
 | - |
|  | Thoron: Evaluation of the annual effective dose | - |
|  | * Effective dose per exposure: Value
 | - |
|  | * Effective dose per exposure: Unit
 | - |
|  | * Effective dose per exposure: Source
 | - |
|  | * Annual exposure time (h)
 | - |
|  | * Effective dose: Average (mSv)
 | - |
|  | * Effective dose: Range (mSv)
 | - |
|  | Radioactive aerosols (Based on short -lived radon progeny concentration measurement) | - |
|  | * Equipment applied
 |  |
|  | * Measurement range
 |  |
|  | * Total concentration
 |  |
|  | * Percentage of total concentration: Range 1
 | Split proposal: Ultrafine1: <0.01 µm, Ultrafine2: 0.01 - 0.1µm, Fine: 0.1–2.5µm, Coarse: 2.5–10µm, Supercoarse: >10µm |
|  | * Percentage of total concentration: Range 2
 |
|  | * Percentage of total concentration: Range 3
 |
|  | * Percentage of total concentration: Range 4
 |
|  | * Percentage of total concentration: Range 5
 |
|  | * Statistical parameters: Geometric mean
 | Please specify if any other statistical parameters |
|  | * Statistical parameters: Geometric standard deviation
 |
|  | * Statistical parameters: Activity median diameter (µm)
 |
|  | * Statistical parameters: Activity median aerodynamic diameter (µm)
 |
|  | * Effective dose per exposure( evaluated) – mSv/mJ/m3⋅h)
 |  |
|  | Ambient aerosols | - |
|  | * Equipment applied
 |  |
|  | * Measurement range
 |  |
|  | * Total concentration
 |  |
|  | * Percentage of total concentration: 0.005 – 0.1 µm
 | Split proposal: Ultrafine1: <0.01 µm, Ultrafine2: 0.01 - 0.1µm, Fine: 0.1–2.5µm, Coarse: 2.5–10µm, Supercoarse: >10µm |
|  | * Percentage of total concentration: 0.1 – 2.5 µm
 |
|  | * Percentage of total concentration: 2.5 – 10 µm
 |
|  | * Percentage of total concentration: 10 – 20 µm
 |
|  | * Percentage of total concentration: Range 5
 |
|  | * Statistical parameters (ambient aerosol): Geometric mean
 | Please specify if any other statistical parameters |
|  | * Statistical parameters (ambient aerosol): Geometric standard deviation
 |
|  | * Statistical parameters (ambient aerosol): Count median diameter (µm)
 |
|  | * Statistical parameters (ambient aerosol): Count median aerodynamic diameter (µm)
 |
|  | * Statistical parameters (radioactive aerosol): Geometric mean
 |  |
|  | * Statistical parameters (radioactive aerosol): Geometric standard deviation
 |  |
|  | * Statistical parameters (radioactive aerosol): Activity median diameter (µm)
 |  |
|  | * Statistical parameter (radioactive aerosol): Activity median aerodynamic diameter (µm)
 |  |
|  | * Effective dose per exposure( evaluated) – mSv/mJ/m3⋅h)
 |  |
|  | Comments | - |