

# The European Commission's science and knowledge service

## Joint Research Centre

Directorate for Nuclear Safety and Security  
Unit G.2, JRC Geel

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# Questionnaires to Member States on methods and legislation for REM

EURATOM Art. 35-36 meeting  
Ispra, 19/09/2018

# Background information

- Agreed during the Euratom Treaty Art. 35-36 meeting in Geel (2013)
- List of monitoring laboratories supplied by Art. 35-36 MS representatives
- Prepared using an online tool (EUSurvey)
- Addressed to all environmental monitoring laboratories and Euratom Art. 35-36 representatives
- Lack of standards
- Establishment of the best practices

# Questionnaire to establish an inventory of information on the regulatory framework for the radioactivity in food, feed and drinking water

Fields marked with \* are mandatory.



## Questionnaire

To establish an inventory of information on the regulatory framework for the radioactivity in food, drinking water and feed

<https://ec.europa.eu/eusurvey/runner/FoodFeedLegislation>

# Questionnaire to establish an inventory of food, drinking water and feed radioactivity measurement methods

Fields marked with \* are mandatory.



## Questionnaire

To establish an inventory of food, drinking water and feed  
radioactivity measurement methods

<https://ec.europa.eu/eusurvey/runner/FoodFeedMeasurement>

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## Laboratory Measurements

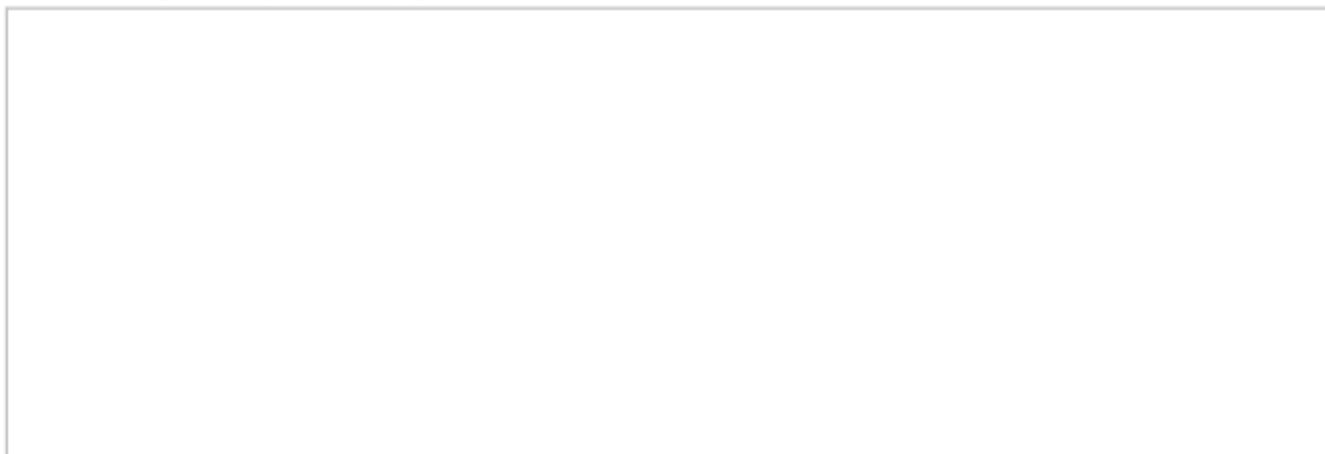
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**\* 1. Describe in detail the method(s) of sample preparation used (in English, if possible).**

Provide sampling methods used.

Provide references if the methods used are published in the literature.

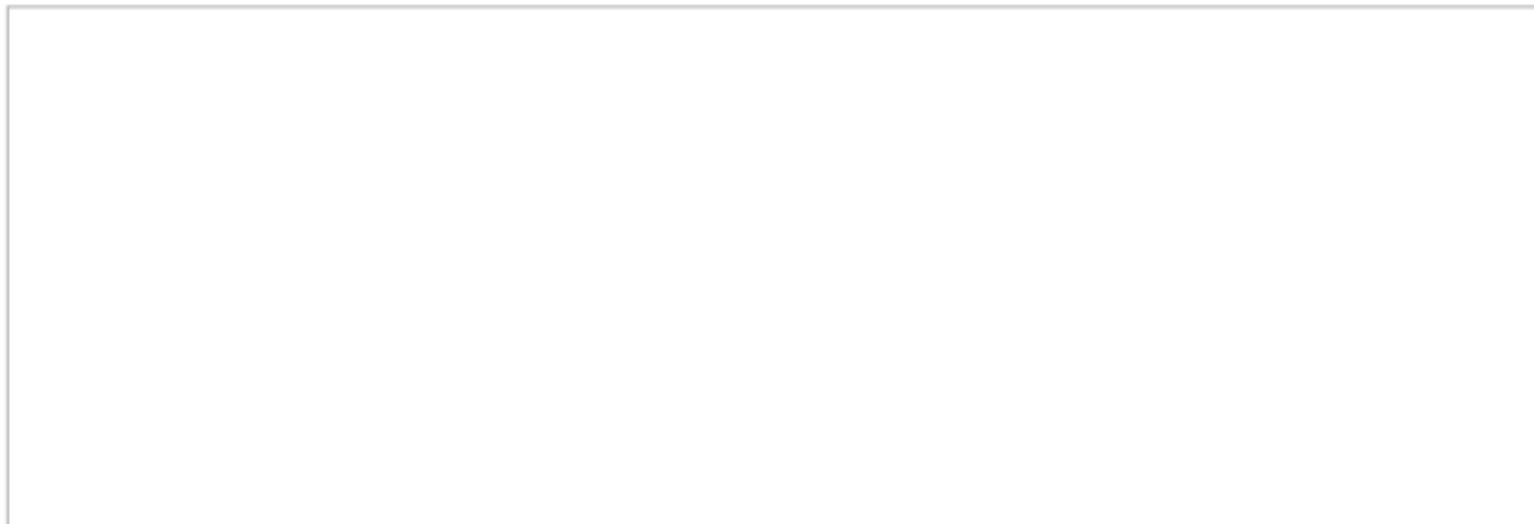
You can also upload separate file(s) below.



\* Typical sample size (for each method please provide a range)

\* Please provide detailed procedure of sample preparation (including chemical separation and source preparation, if needed) for each measurement method used. Provide references if the methods used are published in the literature.

You can also upload separate file(s) below.



**Please upload your file(s) here.**

The maximum file size is 1 MB

## 2. Provide details regarding all measurement methods used.

Please download the file and fill it in with details regarding all measurement methods used.

[Measurement\\_methods.xls](#)

\* Please upload the filled-in file here.

The maximum file size is 1 MB

\* 3. Do you apply special methods for measurements in emergency conditions?

- Yes
- No

\* If yes, please, explain in detail below.



#### **4. Methods for calculating the activity.**

(e.g. peaks included for gamma-ray spectrometry, formulae, equations)

Please download the file below and fill it in.

Provide references if the methods used are published in the literature or attach files, e.g. work instructions (in English, if possible).

[Activity\\_calculations.xls](#)

\* Please upload the filled-in file here.

The maximum file size is 1 MB

#### **5. Tools used for calculating the activity.**

(e.g. commercial software, custom-made software, other)

Please download the file and fill it in.

[Tools\\_for\\_activity\\_calculation.xls](#)

## Uncertainty calculations

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**\* 6. Which type of uncertainty do you routinely use while reporting results?**

(e.g. standard, expanded, other)

**7. Wich confidence level do you apply?**

**\* 8. Do you follow the Guide to the Expression of Uncertainty in Measurement (GUM)\*?**

\*Available in two versions:

- JCGM 100:2008, GUM 1995 with minor corrections. Evaluation of measurement data — Guide to the expression of uncertainty in measurement; and
- ISO/IEC Guide 98-3:2008 Uncertainty of measurement - Part 3: Guide to the expression of uncertainty in measurement (GUM:1995)

- Yes  
 No

**9. Uncertainty budget calculation.**

Please download the file and fill it in with information for each method used adding rows for each of the

## Quality assurance

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**\* 10. Which standard operating procedures (SOPs) do you follow (in English, if possible)?**

If possible, provide references to national or international standards or SOPs.

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If possible, upload a separate file with the SOPs.

The maximum file size is 1 MB

**11. Which quality assurance (QA) procedures do you apply?**

\* a) Stability tests

\* b) Efficiency calibrations, mass and volume calibrations, etc.

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\* c) Special training of the staff

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**\* 12. Are these QA measures performed internally (by your laboratory) or by an external laboratory or company (e.g. in case of calibrations, trainings)?**

**\* 13. What kind of reference materials do you use? (Indicate the matrices, the radionuclides, the activity level, etc.)**

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**\* 14. In how many Proficiency Testing (PT) exercises does your laboratory participate each year?**

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## Additional information and comments

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**\* 15. What kind of reference material would be useful to have in your laboratory?**

(Indicate the matrices, the radionuclides of interest, the activity level, etc.)

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**\* 16. What kind of proficiency testing (PT) exercise would your laboratory be interested in participating?**

(Indicate the matrices, the radionuclides of interest, the activity level, etc.)

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**\* 17. What kind of training would be useful to improve the work performed of your laboratory?**

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**\* 18. Are you involved in the development of international or European standards in the field of radioactivity measurements/instrumentation?**

Yes

No

**\* If yes, please list the ISO, IEC, CEN or CENELEC committees and working groups you are a member of (e.g. ISO/TC 85/SC 2).**

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**\* If no, do you have an interest in the development of international or European standards in the field of radioactivity?**

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# Expected outcome

- Harmonisation of European legislation
- Better understanding of the needs of the monitoring laboratories
- Enhance emergency preparedness
- Input to standardisation
- Establish best practices
- Workshop to discuss the results
- Publication of a report



# Thank you

Any questions?

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