



Euratom Drinking Water Directive (E-DWD)

Directive 2013/51/EURATOM of 22 October 2013 laying down requirements for the protection of the health of the general public with regard to radioactive substances in water intended for human consumption

- Legal basis Euratom Treaty Chapter III 'Health and safety'
- Published in the EU Official Journal on 7 November 2013
- Transposition in the Member States before 28 November 2015
- All Member States have indicated complete transposition – Commission assessment is on-going





Introduction

- **The E-DWD lays down parametric values and frequencies and methods for monitoring radioactive substances in drinking water**
Directive does not apply to natural mineral waters and medicinal products
- **Member States need to establish monitoring programmes and take remedial action if needed**
Parameters for Radon, Tritium and Indicative Dose
- **The E-DWD is closely linked to the WHO drinking water guidance and Directive 98/83/EC on the quality of water intended for human consumption.**
Directive 98/83/EC refers to Tritium and Indicative Dose among indicator parameters

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Introduction

- **E-DWD sets a minimum quality standard for levels of radioactivity in drinking water**
Member States may apply also more stringent standards
- **Directive focus is on monitoring quality of water on an average annual basis**
There is no requirement for continuous 'on-line' monitoring of radioactivity to detect possible malicious actions
- **Directive stresses the importance of informing the public concerned**
If parametric values are exceeded, the Member States are required to (1) assess the situation without delay, (2) take (if needed) remedial action to reduce radiation exposure and (3) notify/advise the public concerned

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Radon

- **For radon, the E-DWD has the same scope as the Recommendation 2001/928/Euratom on the protection of the public against exposure to radon in drinking water supplies**
- **Representative surveys need to be undertaken**
- **Member States may choose to adjust the parametric value for radon between 100 and 1000 Bq/l**

A remedial action is justified without further consideration above 1000 Bq/l

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Tritium

- **Tritium monitoring is required where a source of tritium or other artificial radionuclides is present**
- **If tritium concentration exceeds the parametric value (100 Bq/l) an investigation of other radionuclides is required**

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Indicative dose (ID)

- **Monitoring of ID shall be carried out where a source of artificial or elevated natural radioactivity is present**
- **Screening strategy for the ID is gross alpha, gross beta or individual radionuclides**
- **ID criteria: <0.1 mSv/y, calculated for 730 litres of annual intake**

The directive provides nuclide specific derived concentration values for this annual dose

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Interaction with Directive 98/83/EC (DWD)

- **DG ENV has prepared an adaptation of the monitoring Annexes II and III of the Drinking Water Directive**
- **The revision was intended to take into account the E-DWD, remove the provisions related to radioactive substances in the Annexes and clarify in particular that monitoring programmes for radioactive substances fall in the remit of the E-DWD**
- **In October 2015 Commission Directive (EU) 2015/1787 of 6 October 2015 amending Annexes II and III to Council Directive 98/83/EC on the quality of water intended for human consumption was adopted**
 - According to Recital (9): "Council Directive 2013/51/Euratom introduced specific arrangements for monitoring for radioactive substances. Monitoring programmes for radioactive substances should therefore exclusively be established under that Directive".

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Monitoring requirements

- **E-DWD lays down guiding principles and minimum frequencies for monitoring radioactivity in drinking water**
 - Radon
 - Tritium
 - Indicative dose
- **Sampling and analysis frequency is based on the volume of water produced by the facility**
 - Distributed in time and location to give a picture of the average annual status
- **Laboratories need a quality control system checked by an external organisation**

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On-line continuous radioactivity monitor with alarm on drinking water supply



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Automatic sampling of drinking water supply



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Conclusion

- **Euratom Drinking Water Directive is the basis for controlling quality of drinking water in terms of radioactivity content in the EU**
Directive focus is on routine sampling, not on security aspects on water quality
- **The Commission will pay specific attention to drinking water monitoring when implementing the 2017-19 Euratom verification programme**
- **Information about the E-DWD is available at the DG Energy unit ENER D3 website**

<http://ec.europa.eu/energy/en/topics/nuclear-energy/radiation-protection>

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