

2020-07-02 at 10:00 UTC



**IAEA**

International Atomic Energy Agency

Incident and Emergency Centre

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**Technical Attachment  
Status of Ruthenium and Cesium detections in  
air in Europe**

## Measurement data

Table 1 to 8 are a compilation of all measurement data of Ru- 103, Cs-134, Cs-137 and all other artificial radionuclides reported to the IAEA, as of 2020-07-02 at 10:00 UTC.

### NOTE

*Unless the data were reported as associated with a specific date/time, the reported data have been associated in the Tables with the midpoint date/time between the beginning and ending of the sampling period. All data in the Tables are presented in chronological order of the estimated midpoint of the sampling period.*

**Table 1. Cs-134 Measurement data provided to the IAEA as of 2020-07-02 at 10:00 UTC**

Country name	Location name <sup>1</sup>	Measured Value (microBq/m <sup>3</sup> ) <sup>2,3</sup>	Latitude <sup>1,3</sup>	Longitude <sup>1,3</sup>	Start Sampling <sup>1,4</sup> (UTC)	End Sampling <sup>1,4</sup> (UTC)	Estimated Midpoint of the Sampling Period (UTC)	Uncertainty <sup>1</sup> (%)
Spain	La Laguna	<0.601	28.456667	-16.291111	2020-06-01 00:00:00	2020-06-08 00:00:00	2020-06-04 12:00:00	
Spain	Sevilla	<1.57	37.360278	-5.985278	2020-06-01 00:00:00	2020-06-08 00:00:00	2020-06-04 12:00:00	
Spain	Bilbao	<0.7998	43.262222	-2.948056	2020-06-02 00:00:00	2020-06-09 00:00:00	2020-06-05 12:00:00	
Spain	Cáceres	<0.40	39.482778	-6.3475	2020-06-02 00:00:00	2020-06-09 00:00:00	2020-06-05 12:00:00	
Spain	Barcelona	<4.2	41.384722	2.117222	2020-06-03 00:00:00	2020-06-10 00:00:00	2020-06-06 12:00:00	
Spain	Madrid	<0.605	40.456389	-3.724444	2020-06-03 00:00:00	2020-06-10 00:00:00	2020-06-06 12:00:00	
Spain	La Laguna	<0.550	28.456667	-16.291111	2020-06-08 00:00:00	2020-06-15 00:00:00	2020-06-11 12:00:00	
Spain	Sevilla	<1.34	37.360278	-5.985278	2020-06-08 00:00:00	2020-06-15 00:00:00	2020-06-11 12:00:00	
Sweden	Visby	0.77	57.61000	18.32000	2020-06-08 08:00:00	2020-06-15 07:45:00	2020-06-11 19:52:30	5
Spain	Bilbao	<0.181	43.262222	-2.948056	2020-06-09 00:00:00	2020-06-16 00:00:00	2020-06-12 12:00:00	
Spain	Cáceres	<0.33	39.482778	-6.3475	2020-06-09 00:00:00	2020-06-16 00:00:00	2020-06-12 12:00:00	
Spain	Barcelona	<6.4	41.384722	2.117222	2020-06-10 00:00:00	2020-06-17 00:00:00	2020-06-13 12:00:00	
Spain	Madrid	<0.3857	40.456389	-3.724444	2020-06-10 00:00:00	2020-06-17 00:00:00	2020-06-13 12:00:00	
Finland	Helsinki	22.0	60.209255	25.053707	2020-06-16 08:01:00	2020-06-17 07:55:00	2020-06-16 19:58:00	5
Estonia	Harku	2.8	59.3969625	24.6017629	2020-06-14 00:00:00	2020-06-21 00:00:00	2020-06-17 12:00:00	4
Finland	Kotka	1.7	60.48320	26.91810	2020-06-15 00:00:00	2020-06-22 00:00:00	2020-06-18 12:00:00	4
Spain	La Laguna	<0.687	28.456667	-16.291111	2020-06-15 00:00:00	2020-06-22 00:00:00	2020-06-18 12:00:00	
Spain	Sevilla	<1.44	37.360278	-5.985278	2020-06-15 00:00:00	2020-06-22 00:00:00	2020-06-18 12:00:00	
Switzerland	CERN	<0.3			2020-06-15 07:31:00	2020-06-22 09:06:00	2020-06-18 20:18:30	
Switzerland	Cadenazzo	<0.3			2020-06-15 08:32:00	2020-06-22 08:33:00	2020-06-18 20:32:30	
Sweden	Visby	0.61	57.61000	18.32000	2020-06-15 07:45:00	2020-06-22 09:45:00	2020-06-18 20:45:00	7

<sup>1</sup> The field is blank if no relevant information was provided by the Member State.

<sup>2</sup> The value after the sign “<” (less than) indicates the Minimum Detectable Activity (MDA) as provided by the Member State.

<sup>3</sup> The number of significant digits is as was provided by the Member State.

<sup>4</sup> When no time zone was indicated by the Member States, it was assumed that the reported timing was in UTC. When no time in the format HH:MM was provided by the Member State, the time 00:00 was assumed.

Country name	Location name <sup>1</sup>	Measured Value (microBq/m <sup>3</sup> ) <sup>2,3</sup>	Latitude <sup>1,3</sup>	Longitude <sup>1,3</sup>	Start Sampling <sup>1,4</sup> (UTC)	End Sampling <sup>1,4</sup> (UTC)	Estimated Midpoint of the Sampling Period (UTC)	Uncertainty <sup>1</sup> (%)
Switzerland	Liebefeld	<0.3			2020-06-15 10:11:00	2020-06-22 09:50:00	2020-06-18 22:00:30	
Switzerland	Güttingen	<0.3			2020-06-15 13:10:00	2020-06-22 13:10:00	2020-06-19 01:10:00	
Spain	Bilbao	<1.041	43.262222	-2.948056	2020-06-16 00:00:00	2020-06-23 00:00:00	2020-06-19 12:00:00	
Serbia	Belgrade – Institute “Vinca”	<1			2020-06-12 00:00:00	2020-06-28 00:00:00	2020-06-20 00:00:00	
Serbia	Belgrade - Zeleno brdo	<1			2020-06-12 00:00:00	2020-06-28 00:00:00	2020-06-20 00:00:00	
Spain	Barcelona	<4.6	41.384722	2.117222	2020-06-17 00:00:00	2020-06-23 00:00:00	2020-06-20 00:00:00	
Switzerland	Klingnau	<0.3			2020-06-17 07:38:00	2020-06-24 07:30:00	2020-06-20 19:34:00	
Sweden	Stockholm (IMS-SEP63)	9.7	59.39000	17.96000	2020-06-22 08:58:00	2020-06-23 08:56:00	2020-06-22 20:57:00	10

**Table 2. Cs-137 Measurement data provided to the IAEA as of 2020-07-02 at 10:00 UTC**

Country name	Location name <sup>1</sup>	Measured Value (microBq/m <sup>3</sup> ) <sup>2,3</sup>	Latitude <sup>1,3</sup>	Longitude <sup>1,3</sup>	Start Sampling <sup>1,4</sup> (UTC)	End Sampling <sup>1,4</sup> (UTC)	Estimated Midpoint of the Sampling Period (UTC)	Uncertainty <sup>1</sup> (%)
Spain	La Laguna	<0.629	28.456667	-16.291111	2020-06-01 00:00:00	2020-06-08 00:00:00	2020-06-04 12:00:00	
Spain	Sevilla	<1.65	37.360278	-5.985278	2020-06-01 00:00:00	2020-06-08 00:00:00	2020-06-04 12:00:00	
Spain	Bilbao	<0.23	43.262222	-2.948056	2020-06-02 00:00:00	2020-06-09 00:00:00	2020-06-05 12:00:00	
Spain	Cáceres	<0.76	39.482778	-6.3475	2020-06-02 00:00:00	2020-06-09 00:00:00	2020-06-05 12:00:00	
Spain	Barcelona	<4.2	41.384722	2.117222	2020-06-03 00:00:00	2020-06-10 00:00:00	2020-06-06 12:00:00	
Spain	Madrid	<0.6928	40.456389	-3.724444	2020-06-03 00:00:00	2020-06-10 00:00:00	2020-06-06 12:00:00	
Ireland		<0.136					2020-06-10 00:00:00	
Spain	La Laguna	<0.585	28.456667	-16.291111	2020-06-08 00:00:00	2020-06-15 00:00:00	2020-06-11 12:00:00	
Spain	Sevilla	<1.41	37.360278	-5.985278	2020-06-08 00:00:00	2020-06-15 00:00:00	2020-06-11 12:00:00	
Sweden	Visby	1.34	57.61000	18.32000	2020-06-08 08:00:00	2020-06-15 07:45:00	2020-06-11 19:52:30	6
Spain	Bilbao	<0.2012	43.262222	-2.948056	2020-06-09 00:00:00	2020-06-16 00:00:00	2020-06-12 12:00:00	

Country name	Location name <sup>1</sup>	Measured Value (microBq/m <sup>3</sup> ) <sup>2,3</sup>	Latitude <sup>1,3</sup>	Longitude <sup>1,3</sup>	Start Sampling <sup>1,4</sup> (UTC)	End Sampling <sup>1,4</sup> (UTC)	Estimated Midpoint of the Sampling Period (UTC)	Uncertainty <sup>1</sup> (%)
Spain	Cáceres	<0.48	39.482778	-6.3475	2020-06-09 00:00:00	2020-06-16 00:00:00	2020-06-12 12:00:00	
Spain	Barcelona	<7.1	41.384722	2.117222	2020-06-10 00:00:00	2020-06-17 00:00:00	2020-06-13 12:00:00	
Spain	Madrid	<0.3871	40.456389	-3.724444	2020-06-10 00:00:00	2020-06-17 00:00:00	2020-06-13 12:00:00	
Ireland		<0.394					2020-06-16 00:00:00	
Finland	Helsinki	16.9	60.209255	25.053707	2020-06-16 08:01:00	2020-06-17 07:55:00	2020-06-16 19:58:00	9
Estonia	Harku	2.5	59.3969625	24.6017629	2020-06-14 00:00:00	2020-06-21 00:00:00	2020-06-17 12:00:00	6
Finland	Kotka	2.4	60.48320	26.91810	2020-06-15 00:00:00	2020-06-22 00:00:00	2020-06-18 12:00:00	5
Spain	La Laguna	<0.716	28.456667	-16.291111	2020-06-15 00:00:00	2020-06-22 00:00:00	2020-06-18 12:00:00	
Spain	Sevilla	<1.48	37.360278	-5.985278	2020-06-15 00:00:00	2020-06-22 00:00:00	2020-06-18 12:00:00	
Switzerland	CERN	<0.3			2020-06-15 07:31:00	2020-06-22 09:06:00	2020-06-18 20:18:30	
Switzerland	Cadenazzo	0.5 <sup>5</sup>			2020-06-15 08:32:00	2020-06-22 08:33:00	2020-06-18 20:32:30	36
Sweden	Visby	0.69	57.61000	18.32000	2020-06-15 07:45:00	2020-06-22 09:45:00	2020-06-18 20:45:00	10
Switzerland	Liebefeld	<0.3			2020-06-15 10:11:00	2020-06-22 09:50:00	2020-06-18 22:00:30	
Switzerland	Güttingen	<0.3			2020-06-15 13:10:00	2020-06-22 13:10:00	2020-06-19 01:10:00	
Spain	Bilbao	<0.3632	43.262222	-2.948056	2020-06-16 00:00:00	2020-06-23 00:00:00	2020-06-19 12:00:00	
Serbia	Belgrade – Institute “Vinca”	<3			2020-06-12 00:00:00	2020-06-28 00:00:00	2020-06-20 00:00:00	
Serbia	Belgrade - Zeleno brdo	<3			2020-06-12 00:00:00	2020-06-28 00:00:00	2020-06-20 00:00:00	
Spain	Barcelona	<4.8	41.384722	2.117222	2020-06-17 00:00:00	2020-06-23 00:00:00	2020-06-20 00:00:00	
Switzerland	Klingnau	<0.3			2020-06-17 07:38:00	2020-06-24 07:30:00	2020-06-20 19:34:00	
Sweden	Stockholm (IMS-SEP63)	9.6	59.39	17.96	2020-06-22 08:58:00	2020-06-23 08:56:00	2020-06-22 20:57:00	9
Estonia	Harku	<0.683	59.3969625	24.6017629	2020-06-21 00:00:00	2020-06-28 00:00:00	2020-06-24 12:00:00	

<sup>5</sup> Comment by the reporting Member State: Traces of Cs-137 originating from the 1986 Chernobyl NPP accident.

**Table 3. Ru-103 Measurement data provided to the IAEA as of 2020-07-02 at 10:00 UTC**

Country name	Location name <sup>1</sup>	Measured Value (microBq/m <sup>3</sup> ) <sup>2,3</sup>	Latitude <sup>1,3</sup>	Longitude <sup>1,3</sup>	Start Sampling <sup>1,4</sup> (UTC)	End Sampling <sup>1,4</sup> (UTC)	Estimated Midpoint of the Sampling Period (UTC)	Uncertainty <sup>1</sup> (%)
Spain	La Laguna	<0.591	28.456667	-16.291111	2020-06-01 00:00:00	2020-06-08 00:00:00	2020-06-04 12:00:00	
Spain	Sevilla	<1.68	37.360278	-5.985278	2020-06-01 00:00:00	2020-06-08 00:00:00	2020-06-04 12:00:00	
Spain	Bilbao	<0.08439	43.262222	-2.948056	2020-06-02 00:00:00	2020-06-09 00:00:00	2020-06-05 12:00:00	
Spain	Cáceres	<0.68	39.482778	-6.3475	2020-06-02 00:00:00	2020-06-09 00:00:00	2020-06-05 12:00:00	
Spain	Barcelona	<3.5	41.384722	2.117222	2020-06-03 00:00:00	2020-06-10 00:00:00	2020-06-06 12:00:00	
Spain	Madrid	<0.7207	40.456389	-3.724444	2020-06-03 00:00:00	2020-06-10 00:00:00	2020-06-06 12:00:00	
Ireland		<0.161					2020-06-10 00:00:00	
Spain	La Laguna	<0.548	28.456667	-16.291111	2020-06-08 00:00:00	2020-06-15 00:00:00	2020-06-11 12:00:00	
Spain	Sevilla	<1.25	37.360278	-5.985278	2020-06-08 00:00:00	2020-06-15 00:00:00	2020-06-11 12:00:00	
Sweden	Visby	0.1	57.61000	18.32000	2020-06-08 08:00:00	2020-06-15 07:45:00	2020-06-11 19:52:30	42
Spain	Bilbao	<0.1977	43.262222	-2.948056	2020-06-09 00:00:00	2020-06-16 00:00:00	2020-06-12 12:00:00	
Spain	Cáceres	<0.69	39.482778	-6.3475	2020-06-09 00:00:00	2020-06-16 00:00:00	2020-06-12 12:00:00	
Spain	Barcelona	<5.9	41.384722	2.117222	2020-06-10 00:00:00	2020-06-17 00:00:00	2020-06-13 12:00:00	
Spain	Madrid	<0.4016	40.456389	-3.724444	2020-06-10 00:00:00	2020-06-17 00:00:00	2020-06-13 12:00:00	
Ireland		<0.41					2020-06-16 00:00:00	
Finland	Helsinki	5.1	60.209255	25.053707	2020-06-16 08:01:00	2020-06-17 07:55:00	2020-06-16 19:58:00	18
Estonia	Harku	0.28	59.3969625	24.6017629	2020-06-14 00:00:00	2020-06-21 00:00:00	2020-06-17 12:00:00	28
Finland	Kotka	0.3	60.48320	26.91810	2020-06-15 00:00:00	2020-06-22 00:00:00	2020-06-18 12:00:00	10
Spain	La Laguna	<0.671	28.456667	-16.291111	2020-06-15 00:00:00	2020-06-22 00:00:00	2020-06-18 12:00:00	
Spain	Sevilla	<1.52	37.360278	-5.985278	2020-06-15 00:00:00	2020-06-22 00:00:00	2020-06-18 12:00:00	
Switzerland	CERN	<0.3			2020-06-15 07:31:00	2020-06-22 09:06:00	2020-06-18 20:18:30	
Switzerland	Cadenazzo	<0.3			2020-06-15 08:32:00	2020-06-22 08:33:00	2020-06-18 20:32:30	
Sweden	Visby	0.71	57.61000	18.32000	2020-06-15 07:45:00	2020-06-22 09:45:00	2020-06-18 20:45:00	10
Switzerland	Liebefeld	<0.3			2020-06-15 10:11:00	2020-06-22 09:50:00	2020-06-18 22:00:30	
Switzerland	Güttingen	<0.3			2020-06-15 13:10:00	2020-06-22 13:10:00	2020-06-19 01:10:00	

Country name	Location name <sup>1</sup>	Measured Value (microBq/m <sup>3</sup> ) <sup>2,3</sup>	Latitude <sup>1,3</sup>	Longitude <sup>1,3</sup>	Start Sampling <sup>1,4</sup> (UTC)	End Sampling <sup>1,4</sup> (UTC)	Estimated Midpoint of the Sampling Period (UTC)	Uncertainty <sup>1</sup> (%)
Spain	Bilbao	<2.326	43.262222	-2.948056	2020-06-16 00:00:00	2020-06-23 00:00:00	2020-06-19 12:00:00	
Serbia	Belgrade – Institute “Vinca”	<1			2020-06-12 00:00:00	2020-06-28 00:00:00	2020-06-20 00:00:00	
Serbia	Belgrade - Zeleno brdo	<1			2020-06-12 00:00:00	2020-06-28 00:00:00	2020-06-20 00:00:00	
Spain	Barcelona	<4.1	41.384722	2.117222	2020-06-17 00:00:00	2020-06-23 00:00:00	2020-06-20 00:00:00	
Switzerland	Klingnau	<0.3			2020-06-17 07:38:00	2020-06-24 07:30:00	2020-06-20 19:34:00	
Sweden	Stockholm (IMS-SEP63)	4.3	59.39	17.96	2020-06-22 08:58:00	2020-06-23 08:56:00	2020-06-22 20:57:00	18

**Table 4. Ru-106 Measurement data provided to the IAEA as of 2020-07-02 at 10:00 UTC**

Country name	Location name <sup>1</sup>	Measured Value (microBq/m <sup>3</sup> ) <sup>2,3</sup>	Latitude <sup>1,3</sup>	Longitude <sup>1,3</sup>	Start Sampling <sup>1,4</sup> (UTC)	End Sampling <sup>1,4</sup> (UTC)	Estimated Midpoint of the Sampling Period (UTC)	Uncertainty <sup>1</sup> (%)
Sweden	Visby	1.44	57.61000	18.32000	2020-06-15 07:45:00	2020-06-22 09:45:00	2020-06-18 20:45:00	49

**Table 5. Nb-95 Measurement data provided to the IAEA as of 2020-07-02 at 10:00 UTC**

Country name	Location name <sup>1</sup>	Measured Value (microBq/m <sup>3</sup> ) <sup>2,3</sup>	Latitude <sup>1,3</sup>	Longitude <sup>1,3</sup>	Start Sampling <sup>1,4</sup> (UTC)	End Sampling <sup>1,4</sup> (UTC)	Estimated Midpoint of the Sampling Period (UTC)	Uncertainty <sup>1</sup> (%)
Finland	Kotka	0.4	60.48320	26.91810	2020-06-15 00:00:00	2020-06-22 00:00:00	2020-06-18 12:00:00	10
Sweden	Visby	0.99	57.61000	18.32000	2020-06-15 07:45:00	2020-06-22 09:45:00	2020-06-18 20:45:00	6

**Table 6. Zr-95 Measurement data provided to the IAEA as of 2020-07-02 at 10:00 UTC**

Country name	Location name <sup>1</sup>	Measured Value (microBq/m <sup>3</sup> ) <sup>3</sup>	Latitude <sup>1,3</sup>	Longitude <sup>1,3</sup>	Start Sampling <sup>1,4</sup> (UTC)	End Sampling <sup>1,4</sup> (UTC)	Estimated Midpoint of the Sampling Period (UTC)	Uncertainty <sup>1</sup> (%)
Finland	Kotka	0.2	60.48320	26.91810	2020-06-15 00:00:00	2020-06-22 00:00:00	2020-06-18 12:00:00	20
Sweden	Visby	0.69	57.61000	18.32000	2020-06-15 07:45:00	2020-06-22 09:45:00	2020-06-18 20:45:00	9

**Table 7. Co-60 Measurement data provided to the IAEA as of 2020-07-02 at 10:00 UTC**

Country name	Location name <sup>1</sup>	Measured Value (microBq/m <sup>3</sup> ) <sup>3</sup>	Latitude <sup>1,3</sup>	Longitude <sup>1,3</sup>	Start Sampling <sup>1,4</sup> (UTC)	End Sampling <sup>1,4</sup> (UTC)	Estimated Midpoint of the Sampling Period (UTC)	Uncertainty <sup>1</sup> (%)
Sweden	Visby	0.22	57.61000	18.32000	2020-06-08 08:00:00	2020-06-15 07:45:00	2020-06-11 19:52:30	23
Finland	Helsinki	7.6	60.209255	25.053707	2020-06-16 08:01:00	2020-06-17 07:55:00	2020-06-16 19:58:00	13
Estonia	Harku	0.69	59.3969625	24.6017629	2020-06-14 00:00:00	2020-06-21 00:00:00	2020-06-17 12:00:00	16
Finland	Kotka	0.7	60.48320	26.91810	2020-06-15 00:00:00	2020-06-22 00:00:00	2020-06-18 12:00:00	5
Sweden	Visby	0.39	57.61000	18.32000	2020-06-15 07:45:00	2020-06-22 09:45:00	2020-06-18 20:45:00	18
Serbia	Belgrade – Institute “Vinca”	<3			2020-06-12 00:00:00	2020-06-28 00:00:00	2020-06-20 00:00:00	
Serbia	Belgrade - Zeleno brdo	<3			2020-06-12 00:00:00	2020-06-28 00:00:00	2020-06-20 00:00:00	

**Table 8. Ce-141 Measurement data provided to the IAEA as of 2020-07-02 at 10:00 UTC**

Country name	Location name <sup>1</sup>	Measured Value (microBq/m <sup>3</sup> ) <sup>3</sup>	Latitude <sup>1,3</sup>	Longitude <sup>1,3</sup>	Start Sampling <sup>1,4</sup> (UTC)	End Sampling <sup>1,4</sup> (UTC)	Estimated Midpoint of the Sampling Period (UTC)	Uncertainty <sup>1</sup> (%)
Finland	Kotka	0.2	60.48320	26.91810	2020-06-15 00:00:00	2020-06-22 00:00:00	2020-06-18 12:00:00	18