

Appendix II

Analysis Requirements and Concentration Limits

No.	Requirement
II.7	Water is considered free of pesticide residues if the limit value of 0.02 µg/l is not exceeded for pesticides, their degradation products, drugs and perfluorinated surfactants.
II.8	Water is considered free of artificial sweeteners if the limit value of 0.025 µg/l is not exceeded.
IV.1	Aluminum \leq 0.2 mg/l
IV.1	Arsenic \leq 0.005 mg/l
IV.1	Lead \leq 0.005 mg/l
IV.1	Boron \leq 1.0 mg/l; Since EFSA has recommended a concentration limit of 1.5 mg/l for boron in mineral water, the more strict limit value for boron as stipulated in the German <i>Trinkwasserverordnung</i> (regulations governing drinking water) is preferred for organic mineral water.
IV.1	Chromium, total $<$ 0.025 µg/l
IV.1	Chromium VI \leq 0.3 µg/l This is the recommendation as an acceptable risk value from a toxicology standpoint.
IV.1	Cyanide \leq 0.05 mg/l Here as well, the stricter limit value for cyanide as stipulated in the German <i>Trinkwasserverordnung</i> (regulations governing drinking water) is preferred for organic mineral water.
IV.1	Fluoride \leq 1.5 mg/l Although higher values in mineral water are allowed by law, official warnings have been issued for teenagers for concentrations starting at 1.5 mg/l. For adults, values $>$ 1 mg/l may promote health.
IV.1	Copper \leq 0.5 mg/l This represents 25 % of the limit value for drinking water and 50 % of the limit value for mineral water. This is necessary due to concerns regarding the effect on small children.
IV.1	Manganese \leq 0.05 mg/l
IV.1	Nitrites \leq 0.02 mg/l
IV.1	The sum of inorganic nitrogen (calculated as N) from ammonia, nitrates and nitrites should be \leq 2 mg/l. In contrast to the regulations governing drinking water in Germany, which set a concentration limit for ammonia content for hygiene reasons, it makes more sense to limit the total nitrogen in mineral water, i.e. that occurring through geogenic uptake.
IV.1	TOC \leq 2 mg/l A collective measure of the quantity of organic substances in water.
IV.1	Radium 226 \leq 125 mBq/l
IV.1	Radium 228 \leq 20 mBq/l; in addition, the cumulative rule should be observed.
IV.1	Uranium \leq 2 µg/l
IV.3	The absence of PVC/ PVDC/chlorinated plastics in bottle cap liners must be confirmed using the Beilstein test.

	The BHT value in organic mineral water must be $\leq 2 \mu\text{g/l}$. The concentration of bisphenol A may not exceed $0.05 \mu\text{g/l}$.
IV.4	The content of acetaldehyde is measured after storing bottles at $40 \text{ }^\circ\text{C}$ for longer than 10 days. In addition, bottle preforms must be tested for AA (acetaldehyde) and NIAS (non-intentionally added substances).
IV.5	Confirmation that the water is more than 50 years old and therefore also older than most of the anthropogenic environmental pollutants can be obtained by measuring the amount of tritium in the water: tritium $< 1 \text{ TU}$. A complete isotope analysis may also be carried out. For a tritium content of $> 1 \text{ TU}$, the analyses described in II.7-II.9 must be performed every two years.
V.4	Evidence of attributes promoting health should be documented by expert medical assessment, by making reference to the lists found in the EC health claim regulation or through fulfilling one criterion in Directive 2009/54/EC, Appendix III.

Scope of analyses for pesticides and their metabolites in organic mineral water

These are as specified in the list provided in Appendix IIa.

Scope of Analyses for Drug Residues in Organic Mineral Water

At the very minimum, screening should be carried out for the following substances:

- Amidotrizoate
- Carbamazepine
- Clofibric acid
- Diclofenac
- 10,11-Dihydrocarbamazepine
- Fenofibrat
- Ibuprofen
- Iopamidol
- Phenazone
- Primidone
- Sulfamethoxazole
- Tolfenamic acid

Scope of Tests for Perfluorinated Surfactants in Organic Mineral Water

- Perfluorobutanoic acid (PFBA)
- Perfluorobutanesulfonic acid (PFBS)
- Perfluoropentanoic acid (PFPA)
- Perfluoropentanesulfonic acid (PFPeS)
- Perfluorohexanoic acid (PFHxA)
- Perfluorohexanesulfonic acid (PFHxS)

- Perfluoroheptanoic acid (PFHpA)
- Perfluoroheptanesulfonic acid (PFHpS)
- Perfluorooctanoic acid (PFOA)
- Perfluorooctanesulfonic acid (PFOS)
- Perfluorononanoic acid (PFNA)
- Perfluorodecanoic acid (PFDA)