



## **Organic Mineral Water**

Organic mineral water represents the highest degree of water purity for both humans and the environment – it is a guarantee of purity, safety and sustainability.

*Qualitätsgemeinschaft Bio-Mineralwasser e.V.*

## **Standard**

**for Organic Mineral Water, Organic Spring Water  
and as an Ingredient in Organic Beverages**

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# Foreword

## **Who We Are and What We Want**

The *Qualitätsgemeinschaft Bio-Mineralwasser e.V.*, referred to in English as the Organic Mineral Water Quality Association, was founded by a community of people who have for decades been committed to sustainability and the production of high-quality beverages. The spark that finally led to the foundation of the association began with Dr. Franz Ehrnsperger, who was the owner of Neumarkt-Lammsbräu at that time.

An important objective of the association is to secure, as a human right, access to high-quality water for everyone. Therefore, the Organic Mineral Water Quality Association wants to guarantee pure water of the highest possible quality while also protecting every single person's basic needs. Organic mineral water is an appeal for society to comprehensively practice organic farming, in order to preserve and renew our most important staple. The extraction of water of an especially high quality should lead to the protection of all our natural resources.

This association's primary objective is to ensure the quality of organic mineral water and organic spring water as well as to develop a standard for the ecological quality of these waters and the products created from them, that is, organic mineral water, organic spring water and other organic beverages. All of the products created according to these standards would be designated with a seal of quality. The association unselfishly performs this service. It is not a business venture.

On September 13th 2012, the Federal Supreme Court in Germany declared the organic mineral water concept put forth by the Organic Mineral Water Quality Association as legally valid. According to this decision, organic mineral water must satisfy three central criteria. It must be:

- produced and bottled in an environmentally friendly manner
- free of residues and pollutants to the greatest possible extent
- certified by an association according to reasonable and relevant criteria

The catalog of requirements drawn up by the Quality Association guarantees these stipulations are met – and even goes above and beyond them.

## **Roots in Organic Farming**

Organic farmers interfere as little as possible with the natural world while striving to protect natural processes. All organic guidelines follow this principle. However, this standard only

creates a general framework within which they can operate. “Organic” only succeeds if all of the participants pursue common goals.

Both drinking water and mineral water are extracted as natural resources. They are “mined” so to speak. In order to protect their new formation, i.e. their “cultivation”, bottlers of organic mineral water must become “organic water farmers”. They have to develop a sense of responsibility for water conservation through practicing and endorsing organic farming!

“Organic” is a holistic ideal, which derives its *raison d'être* from not only the significance and the relevance of the products but also from the actions of the participants. These aspirations entail treating the basis for our existence carefully and responsibly, managing resources sustainably, conserving the natural world, including the climate, safeguarding and preserving the quality of the soil, air and water as well as protecting the consumer. All of these facets comprise the holistic approach to the production of organic food.

The experts in the association involved in the development of the standard for the Quality Association never back down from the challenges facing them and remain current with new insights into changing environmental conditions. In doing so, they follow the four principles issued by IFOAM – Organics International, a global organization promoting organic farming:

- I. The principle of health: Human health cannot be separated from the health of ecosystems.
- II. The principle of ecology: Everyone involved in creating organic products is obliged to protect and preserve the environment, including the water and air.
- III. The principle of fairness: This requires systems of production that ensure fairness and account for real environmental and social costs.
- IV. The principle of care: The environmental impact of agricultural and production processes should be managed in a precautionary and responsible manner to safeguard the health of present and future generations.

### The Standard – The Basis for Certification

Through its standard, the Quality Association makes a promise to the consumer, which requires that the association upholds the quality of products displaying the seal. It is therefore the responsibility of the Quality Association to constantly monitor compliance with these standards. For this purpose, internal monitoring processes have been developed to regularly check those displaying the seal on their products.

On the whole, the privately developed system for monitoring organic production practices was included in the state directives of the European Union’s *Öko-Verordnung* (the regulation governing organic farming). Since these do not apply to organic mineral water, the Quality Association has set up its own private certification system, which – true to its origins –

ensures neutral and unbiased monitoring of organic mineral water suppliers and those granted use of the seal.

The independent committees within the Quality Association, which consist of the panel on quality, the board of directors and the general assembly, are staffed with recognized experts from organic organizations as well as by mineral water specialists. Independent monitoring and consistent implementation of the organic mineral water standard form the foundation for the production of mineral water of a particularly high quality, which also encompasses aspects important for nature and the environment. This high standard of quality is conveyed visually with the organic mineral water seal.

### Quality Assurance at the Highest Level

The Quality Association has commissioned Kiwa BCS Öko-Garantie GmbH of Nuremberg, Germany to certify companies according to the criteria it has developed for organic water. Kiwa BCS is an independent inspection and certification agency which has been approved to monitor and test organic products. Furthermore, it also holds EN ISO 17065 accreditation. Kiwa BCS, as an internationally qualified institution, conducts the annual comprehensive evaluation in addition to performing announced and unannounced inspections. Further verification of products through testing complements and expands on the customary monitoring procedure for organic products.

## Objectives

The Organic Mineral Water Association plans to sow the seeds of its ideals and interests fundamental to the organic movement in this sector of the food industry, which in terms of quantity represents the largest share of the population's food supply, namely its water.

The association is involved in the following:

- I. More sustainability  
This means conserving the natural composition and structure of the topsoil through ecological soil management in such a way that risks to water sources are reduced and sustainably safeguarded. Furthermore, sustainable methods in the production chain minimize CO<sub>2</sub> emissions and optimize the utilization of resources. More sustainability, however, also entails taking on social responsibility and engaging in fair business practices.
  
- II. A purity law for water  
The scandals involving undesirable ingredients and environmental pollution in mineral water are rapidly on the rise. It is essential to set new and sustainable standards for this valuable foodstuff and likewise to lessen the impact of harmful substances and influences in order to ensure a level of quality capable of promoting good health.

### III. Consumer orientation

Those purchasing products should be able to instantly recognize dependable quality. This will lead to greater trust in the product. Quality encompasses not only the product itself but consumers' health along with environmental aspects. The highest possible level of transparency ensures safety and fosters trust.

## The Scope of the Standard

The following standard applies only to "natural mineral water" and to "spring water" as defined by the definition in Directive 2009/54/EC of the European Parliament and of the Council from June 18th 2009 on the exploitation and marketing of natural mineral waters and their use as an ingredient in organic beverages certified according to EC legislation on organic products.

### Part A: General Regulations

#### I. Requirements for Granting the Organic Mineral Water Seal

Upon receiving the application for certification of organic mineral water and signing the license agreement for use of the organic mineral water seal, the company is obliged to provide all information necessary to ensure compliance with the stipulations for organic mineral water. For this purpose, the company completes the checklist in Appendix IV and provides the necessary proof, including in particular an analysis of the mineral water by independent institutes.

If deficiencies are believed to exist, further evaluation or analysis may be required. After satisfactory review of the documents, the on-site audit is carried out by an independent inspection and certification agency. Upon confirmation that the documentation and analysis results are in compliance with the standard, an inspection report will be prepared and, where necessary, a request for corrective action will be submitted. If all the requirements of the organic mineral water standards are then met, the assessment with regard to certification will be shared with the Quality Association's panel on quality and also with the company. The results of the assessment of the criteria for organic production must be made publicly available on the internet.

#### II. Licensing Agreement

By signing the licensing agreement, the company is bound to comply with the organic mineral water standard at all times and to only release mineral water to the market or to use it as an ingredient in organic beverages that constantly and consistently meets the requisite standards of quality. In the instance of a violation, the Quality Association is entitled to immediately terminate the company's use of the seal.

### III. Standard

This standard becomes binding for all companies who have signed a licensing agreement with the Quality Association. The panel on quality advises the general assembly concerning further development of the standard and evaluates the results of certifications. The current version of the standard is the only valid one and is approved by the Quality Association's general assembly. Participating companies are promptly informed of any changes to the standard. Changes to the standard may be subject to transition periods. Within the duration of these periods, these changes must be implemented by all of the companies who have signed the licensing agreement.

Violations of the standard are punishable under the list of sanctions (points 1.6, 2.5 and 2.6 in Appendix III). The validity of federal laws and regulations remains unaffected by this standard.

### IV. Transitions and Modifications

If a company draws water from several natural water springs and has only requested certification of organic mineral water for one natural water spring, a partitioning of this company's production must be implemented either over a reasonable amount of time or each part must be able to be physically isolated from the other. The simultaneous creation of products with different levels of approval, which are not clearly distinguishable, is not permitted.

If a company's operations are modified between two of the annual certification procedures, the Quality Association must be informed of these changes. Likewise, immediate notification is obligatory for any factors that may adversely influence the quality of the products. If the changes are relevant for fulfillment of the criteria, it may be deemed necessary to conduct a further certification procedure.

### V. Documentation and Monitoring

At least once annually, compliance with this standard is monitored by the inspection and certification agency at the behest of the Quality Association by means of scheduled and/or unannounced company audits. These audits necessitate that complete and unlimited access be granted to the inspection and certification agency. This includes admission to all relevant areas of the company and permission to view all necessary documentation.

The inspections described in Appendix IV shall be conducted and documented for every production facility and each of the natural water springs subject to certification.

In addition to the limit values stipulated in the organic mineral water standard, the Quality Association is entitled, if necessary, to introduce even lower alarm thresholds. When a company finds that one of these limit values has been exceeded, the Quality Association must be notified.

#### VI. Certification

After completing the annual certification and once the inspection and certification agency appointed by the Quality Association has issued its approval, compliance with this standard is to be confirmed by the company. Should a breach of the valid standard occur, sanctions may be imposed in accordance with Appendix III.

#### VII. Approval

On the basis of the decision following the annual certification by the inspection and certification agency, the board of directors of the Quality Association determines whether or not to award the company the quality seal. The board of directors is bound to honor the decision of the certification agency. The approval of the mineral water under consideration serves as proof of the successful completion of organic mineral water certification.

#### VIII. Labelling and Marketing

The use of the quality seal for organic mineral water is regulated by the licensing agreement. Responsibility for compliance with the legal regulations lies with the company as the product distributor. When using the organic mineral water seal for organic beverages produced with organic mineral water, there must be a clear distinction made between federal law and private certification. This must be denoted on the label with the following or a similar annotation: "Organic mineral water certified according to the private standard of the *Qualitätsgemeinschaft Bio-Mineralwasser e.V.*"

## Part B: Regulations for Organic Mineral Water

Naturally, the legal requirements for "natural mineral water" must always be strictly observed for organic mineral water. The following criteria surpass the legal requirements.

Major and minor criteria appear on the list below. At least 50 % of the minor criteria must be met for organic certification. Minor criteria can become major criteria over time and are therefore intended to provide incentives for improvement.

The regulations apply equally for organic spring water.

### **I. Sustainability**

#### Guiding Principles

The organic sector once formulated the slogan: "Healthy soil, healthy plants, healthy environment, healthy people." The quality of water is crucial for the health of humanity. A sound environment is essential for good water quality. Promoting and practicing organic farming are key elements in long-term water conservation. This is the reason the following minimum standards for sustainability are in place for organic mineral water and the companies bottling it:

- Lasting protection of water can only be achieved with 100 % organic farming. Though it is well-understood to be in the self-interest of organic mineral water bottlers to promote and to increase the share of organic farming, they must go to considerable effort in their endeavors to do so.
- Striving for and engaging in systematic and continuous improvement of environmental protection is imperative.
- Water resources must be used sparingly, in order to minimize water consumption and to avoid pollution.
- Measures to protect water must be taken beyond a company's own domain. In particular, it is important to educate the public regarding water and its inherent value.
- In utilizing renewable resources, companies should always be cognizant of their role in the circular economy. This fosters conservation of finite resources and the reduction of greenhouse gas emissions. Production processes should be amended until they are climate-neutral.
- The rules of social sustainability must also be observed within a company.

### **Organic Mineral Water Standard**

<b>No.</b>	<b>Requirements</b>	<b>Criteria</b>
I.1	The company promotes systematic water protection through organic farming. Additionally, at the latest, one year after the initial certification as an organic mineral water producer, a survey of the farming practices in the catchment area of the recognized natural spring must be produced and the number of areas under organic cultivation is to be determined.	major
I.2	<p>At the latest, three years after the initial certification, measures for promoting more organic farming of level "A" have to be done continuously. If this kind of program proves to be impossible measures for promoting of level "B" have to be done. If also this kind of program proves to be impossible measures for promoting of level "C" have to be done. The Quality Association determines what kind of measures will be part of the separate levels. Currently are:</p> <ul style="list-style-type: none"> <li>• Level "A": On the initiative of the company accomplished and initiated conversions of whole farms or areas to organic farming in the catchment area of the natural spring.</li> <li>• Level "B": On the initiative of the company accomplished and initiated conversions of whole farms or areas of specifically named farmers to organic farming outside of the catchment area. Furthermore these are realised measures from the programs the Quality Association developed - e.g. with the organic farming associations – for promoting organic farming and the improvement of soil to lead conventional farmers to organic farming.</li> <li>• Level "C": Financial contributions to a foundation or to projects for promoting organic farming, named by the Quality Association. The</li> </ul>	major

	QA determines the financial amounts, to secure an engagement adequate to the production of organic mineral water and the size of the company.	
I.3	Likewise, at the latest, one year after the initial certification, the company should create a program for communicating the significance of protecting water and of organic farming to its customers and the general public.	minor
I.4	The company must produce a scientific study of the catchment area of the spring or a project plan for a study as precise as possible of the same, in order to optimize long-term protection of the spring.	minor
I.5	The company is to put an environmental management system into practice; meaning, it must become certified according to EMAS (EC-VO 1221/2009) or ISO 14001.	major
I.6	An expansion of these certified environmental management processes provides the company with progressive, verifiable objectives for improving energy and resource efficiency (material and water usage). Evidence of these improvements must be submitted.	major
I.7	The mineral water supply is to be utilized sparingly, i.e. only the overflow of artesian or free-flowing wells is to be collected. Only less than 80 % of the water flowing naturally into the wells equipped with pumps is to be extracted from the well.	major
I.8	The company must promote regional and/or international protection of water through established projects, e.g. through support of water projects in developing countries or through measures implemented regionally for protecting drinking water. Support of educational programs teaching about protection of water also represents an option.	minor
I.9	Organic mineral water must be filled in ecologically optimal packaging. The following containers are permissible: returnable glass, beverage cartons, returnable or returnable-recyclable PET bottles (e.g. rPET, Petcycle) with a minimum of 60 % recycled material or a minimum of 30 % of the material from renewable raw materials in the bottles.	major
I.10	The company has created a strategic climate protection program as defined in Appendix I, in which the minimum requirements must be fulfilled and verifiably implemented.	major
I.11	At the latest, one year after the initial certification for organic mineral water, the company will develop and implement a program to train and educate its employees on environmental protection, nutrition and physical activity. Implementation of this educational program will be checked annually as part of subsequent certifications.	major
I.12	The company provides vocational education and reserves at least 5 % of the job positions for apprentices or reserves at least 10 % of its job positions for persons with limited access to the labor market.	major

I.13	The company produces an annual sustainability report to document its progress in this area. For companies which already issue an environmental report, appropriate additions will suffice.	major
I.14	The company promotes ecological and fair farming practices by ensuring that at least 50 % of the food it provides in-house (for employees and guests visiting the company) is certified organic.	minor

Comments:

With the criteria providing support for sustainability, organic mineral water should satisfy the concept of a sustainable economy on a regionally fiscal, ecological and social level.

Organic mineral water companies assertively claim, in effect, to be organic water farmers, primarily in the catchment area of the springs. For this to hold true, it is necessary to be very well-acquainted with this catchment area and to take as many measures as possible to safeguard these resources.

In the case of mineral water, it is most especially the packaging and product transport that contribute to greenhouse gas emissions. Therefore, the ecological minimum requirement for environmental compatibility of the packaging system for organic mineral water is stipulated as a specifically designed type of returnable-recyclable bottle or a returnable PET or glass bottle.

The production and distribution of mineral water are associated with significant greenhouse gas emissions. Thus, a company bottling organic mineral water must have a comprehensive strategic program in place and constantly improve its climate protection measures. This program and its implementation must be verified by an independent agency or institute.

**II. A Natural Product**

Guiding Principles

Mineral water is a product of nature. Increasingly, however, the harmful effects of human development, pollution and the residues of unwanted impurities can be found in our springs. Organic mineral water should be as genuine as possible. For this reason, organic mineral water producers must preserve its original properties to the greatest extent possible. The water should only be treated using methods very similar to natural processes. Natural carbon dioxide is the only additive permitted.

For organic mineral water and the companies producing it, the following represents the minimum standards for a truly pure, authentically natural product:

- Ensure that the water from the spring is handled as gently and utilized as sparingly as possible.

- Substances, which are naturally occurring but are undesirable, should only be removed by natural methods and without any risk of residues remaining in the water.
- Any external influences, particularly irradiation, must be minimized.
- Any carbon dioxide that is added must be natural.
- Evidence of a holistically natural, high level of quality must be provided.
- Residues, e.g. from conventional agriculture, wastewater and pollution, should not be present in the water and must conform to strict limits.

### **Organic Mineral Water Standard**

<b>No.</b>	<b>Requirements</b>	<b>Criteria</b>
II.1	The use of ozone for the removal of undesirable substances in organic mineral water is not permitted.	major
II.2	The removal of fluoride with activated aluminum oxide from organic mineral water is not permitted.	major
II.3	Exposing the final product to any type of radioactivity, e.g. subjecting the product to x-rays or gamma rays, is not permitted with organic mineral water.	major
II.4	Only certified, organically produced carbon dioxide generated through fermentation or carbon dioxide captured from a spring, captured from air or from food production can be added to organic mineral water.	major
II.5	To reduce any negative influences on the water, the degree to which it must move through piping should be minimized. Transport of the water through piping on-site from the spring or well to the filling line should not exceed 2 km.	minor
II.6	At the very least, comprehensive proof of the quality of organic mineral water must be provided, in order to express its life-giving, inner structure, which is superior to ordinary tap water. Proof is provided by an evaluation of the water crystal imagery. The rating of the water should at least be "good", i.e. $\leq 2.5$ , or produce a correspondingly positive result for biophoton analysis, drip image methodology, sensory descriptive analysis, among others.	minor
II.7	Residues of pesticides, of the degradation products of pesticides (pesticide metabolites), of drugs and of perfluorinated surfactants should not be present in the water. The effective concentration limits for these substances are listed in Appendix II. The scope of the analysis is subject to constant adjustment by the panel on quality. Refer to the current list in Appendix II.	major
II.8	Artificial sweeteners are not permitted. The concentration limits for acesulfame K, saccharin, cyclamate and sucralose are listed in Appendix II. The scope of the analysis is subject to constant adjustment by the panel on quality.	major

II.9	Further pollutants may not exceed the values supplied for orientation, which serve as concentration limits according to the provisions as outlined in the German AVV, Appendix 1a.	major
II.10	The nitrate content must be $\leq 5.0$ mg/l, since higher values indicate that it does not originate from a natural source.	major

Comments:

The purpose of this standard is to safeguard this unadulterated, natural product. Preserving nature instead of necessitating treatment is the objective of organic mineral water processing. This clearly distinguishes it from tap water, which is subject to a wide variety of treatment methods.

Exposing the final product to radioactivity is widespread in the beverage industry. Excluding such treatment avoids the accompanying risk of negative effects on the mineral water, the employees and the environment.

Since the significance of the influences on the physical properties of water quality, as specified in II.5 and II.6, are not scientifically uncontested, they were classified as minor criteria. This means that they play a role in ensuring the smallest impact possible on mineral water from external influences, especially given the nature of organic mineral water. This should further reinforce consumer expectations that organic mineral water is highly natural and authentic product.

At the time of the emergence of the stipulation in mineral water law that the water can be packaged on the site where the water is extracted, long stretches of piping were unthinkable, but this has changed and is often the case at modern mineral water bottling plants. Therefore, issuing limits on the lengths of such piping was overlooked in the law. On the other hand, filling qualitatively excellent mineral water from pristine natural areas is not possible without suitably long stretches of piping leading to the bottling plant.

The methods listed under II.6 have proven their reliability in practice many times over.

Organic does not mean “free of residues”. In our modern world, this is no longer possible. However, the intention of setting strict limits for residues in organic mineral water is not to pursue the goal of safeguarding the health of the people who drink it. This is what the legal limits are for. Organic mineral water is about achieving the highest quality possible.

Organic mineral water is a means for halting catastrophic trends and to reverse them.

Enquiries into the justifications for specific requirements can be submitted to the Quality Association’s panel on quality.

### III. Microbiology and Product Safety

#### Guiding Principles

“Organic” is an initiative which revolves around quality. As such, it is not intended to be a safety concept. It goes without saying that the bottling company must take the relevant precautions and measures to fill and package organic mineral water so that its authentic nature is preserved.

Furthermore, consumers justifiably have the right to expect a high degree of food safety in their organic beverages. This level of safety results from intensive monitoring and analysis accompanied by preventative and hygienic operations on the part of the company processing the beverage. This goes a long way toward avoiding bacterial contamination. After the mineral water has officially been granted approval as such, there is no legislation which dictates the frequency of subsequent testing. However, water is a product that is at risk of microbiological contamination. Therefore, the following minimum standard for microbiological product safety is applicable to organic mineral water and the companies that produce it:

- A high level of hygiene in production and filling operations must be ensured over the long term through implementation of numerous measures.
- Organic mineral water must be free of any dangerous bacteria. This should be established through more extensive testing than is currently required by law.
- A comprehensive series of microbiological tests are required for water collected at the spring and bottled water products.

#### Organic Mineral Water Standard

No.	Requirements	Criteria
	The company has a system in place for ensuring proper hygiene conditions in the production facility. In addition to the requirements stipulated by law, this system must include the criteria listed below:	
III.1	In order to ensure the appropriate levels of hygiene are upheld, step-wise microbiological analyses must be performed at every relevant point in the production process at least once a year. There should be no critical results found from these microbiological tests. In addition to the company’s own routine monitoring program, an independent laboratory must perform a step-wise microbiological analysis at all relevant process steps starting at the head of the well, throughout the entire production process, up to and including the filled bottles. A sufficient number of swab samples should also be collected from the filler and the surrounding production areas for analysis as well.	major

III.2	In order to ensure the appropriate levels of hygiene are present, all areas located in close proximity to production must be tested on an annual basis. There should be no critical results found from these microbiological tests. As part of this review, a walkthrough of the relevant areas should be carried out and documented by someone who possesses the necessary training and expertise in hygiene problems related specifically to facilities that produce and fill mineral water products.	major
III.3	The routine microbiological testing of the water exiting the well and of bottled products bottles as mandated by article 5 of the Directive 2009/54/EC should yield no grounds for complaint. Independent microbiological testing of the water at the point it leaves the well must be performed at least once per year, while the filled products must be tested on a quarterly basis.	major
III.4	Routine microbiological analysis of bottled water products performed by the company laboratory should yield no grounds for complaint with respect to colony counts and <i>E. coli</i> / coliforms. These tests should be conducted for each filling run and a minimum of once per week for facilities with continuous production.	major
III.5	Since <i>Staph. aureus</i> is a microbe of relevance in terms of hygiene, there should be zero cells detected per 250 ml of product. This analysis should be conducted on a quarterly basis as mandated by article 5 of the Directive 2009/54/EC (refer to III.3).	major

Comments:

Above all, maintaining a high standard of hygiene in filling operations is a decisive factor in achieving a high degree of microbiological safety and thus overall quality. Naturally, this is supplemented by a comprehensive monitoring program rooted in analysis and testing. Therefore, the relevant requirements are reflected in the criteria.

The organic mineral water criteria do not require sterile or nearly microbe-free mineral water, as is required by the current German regulations governing the quality of water for infants, for example. Sterile conditions are in direct contradiction to the natural qualities of mineral water drawn from a well, which may contain harmless, or even beneficial bacteria.

The requirement of “no critical results” yielded from microbiological analysis means that there should be no evidence of any contamination of the mineral water and naturally, no results which could pose a risk to human health.

## IV. Chemicals and Product Safety

### Guiding Principles

The consumer also expects a greater degree of safety with respect to chemicals when purchasing organic products. The legal requirements for drinking water and mineral water are often directed exclusively to the needs of adults. The aim of organic mineral water is to ensure that this safety is also extended to children and adolescents by utilizing the latest scientific findings and establishing even more stringent limit values in case of doubt. Also, after the mineral water has officially been granted approval as such, the legislation governing mineral water does not require very strict analysis of these products from a chemical standpoint. Therefore, the following minimum standard for product safety with regard to chemicals is applicable to organic mineral water and the companies that produce it:

- Limit values for chemicals are to be updated to reflect the latest scientific findings.
- Limit values for chemicals should take potential risks and risks for long-term hazards into account.
- Packaging material must be inert for the most part and must not pose any danger.
- A comprehensive series of chemical tests are required for water wells and bottled water products.
- Older mineral water, which has been underground more than 50 years, is considered to be particularly safe. Younger water which has not been underground for this length of time must be analyzed for environmental pollutants at shorter time intervals.
- Organic mineral water must be free of hazardous substances originating in bottling operations.
- Product safety must be increased and continuously guaranteed through the implementation of a certified quality assurance system.

### Organic Mineral Water Standard

No.	Requirements	Criteria
	In general, the legal limit values for antimony, barium, lead, cadmium, total chromium, nickel, mercury and selenium are considered sufficient for organic mineral water.	
IV.1	The limit values given in Appendix II for arsenic, boron, chromium VI, cyanide, fluoride, copper, manganese, nitrite, inorganic nitrogen, TOC, radium 226, radium 228 and uranium are to be observed for organic water.	major
IV.2	In rare cases of high radon content at the well or spring, i.e. over 50 Bq/l, for further protection against exposure to radiation, tests for Pb 210 and Po 210 should be carried out. As a means for evaluating the effects of water on human health, a total indicative dose of 0.1 mSv/a has been set as a reference value for infants and should not be exceeded.	major

IV.3	<p>The packaging into which the organic mineral water is filled must be inert to the greatest extent and should not influence the mineral water. In particular, the packaging should not have an impact on the water's sensory attributes. Glass is the preferred packaging material for organic mineral water, since the various materials comprising packaging can easily taint water.</p> <p>PVC/PVDC/chlorinated plastics in cap liners are not permitted. Bisphenol A free lacquer of caps has to be used. BHT (butylated hydroxytoluene) and Bisphenol A may not be present in organic mineral water. Methods of determination and concentration limits can be found in Appendices II and IV.</p>	major
IV.4	<p>For PET containers, the acetaldehyde content in mineral water should be less than 10 µg/l. Acetaldehyde is an indicator for the migration of substances from the PET container. The benzene content in mineral water should be less than 0,3 µg/l.</p>	major
IV.5	<p>In order to increase consumer safety, organic mineral water must be at least 50 years old or it must be tested at more frequent intervals for environmental contaminants. The instructions for conducting the relevant analyses are provided in Appendix II.</p>	major
IV.6	<p>A chemical analysis of the packaged mineral water for characteristic minerals must be carried out by an independent laboratory at least once per year, according to Directive 2003/40/EC, Appendix I. Grounds for complaint cannot be present.</p>	major
IV.7	<p>Every two years, a chemical analysis of the water at the outlet of the spring or well must be performed, in order to provide evidence of its so-called "original purity" according to the provisions as outlined in the German AVV. Grounds for complaint cannot be present.</p>	major
IV.8	<p>No contaminants originating from operational conditions may appear in mineral water. The company must possess a corresponding risk analysis, i.e. a HACCP concept, consistent with legal requirements and the Codex Alimentarius.</p> <p>In mineral water the limit value of chlorate and perchlorate of 1 µg/l has to be observed.</p>	major
IV.9	<p>A quality management system must be in place, meaning that the company must be certified according to ISO 9001, the IFS standard or comparable standards.</p>	major

## Comments:

In 2003, several of the legal concentration limits for undesirable substances in mineral water were tightened in the EC legislation. Some of them can be considered as sufficient. New findings have resulted in the establishment of stricter concentration limits for organic mineral water.

Under points IV.3 and IV.4, the Quality Association responds to numerous critical assertions concerning packaging and thus is constantly adapting the standard to reflect the latest findings relevant to this topic. However, new findings must be verifiable, i.e. there must also be laboratory-tested evidence that appears in scientific publications. For example, methods for the detection of hormonally active substances in mineral water could therefore not be implemented in the criteria for organic mineral water.

In contrast to the law governing drinking water in Germany (TWVO Appendix 4), the legislature did not impose any requirements regarding how frequently mineral water must be tested. The regulations governing organic mineral water also establish precise specifications from a chemical standpoint. A consistent and high level of product safety is paramount here, which is why a corresponding quality management system is obligatory.

## **V. Good Food**

### Guiding Principles

A principle of organic food production is to generate healthful and enjoyable food. The health of individuals depends on the balance of the whole. An individual's well-being depends upon the health of the natural world. Organic mineral water should contribute to a lifestyle that better balances the natural world and the individual. Therefore, organic mineral water has to be beneficial to the health of consumers. Due to the level of diversity in nature and in the physical requirements of humans, these benefits can vary highly between types of mineral water. This is why organic mineral water sets a minimum standard for ensuring wholesome, healthful food:

- Organic mineral water should possess at least one characteristic proven to be beneficial to human health.
- The pH of the water must be neutral, alkaline or at the very least slightly acidic.
- The flavor of the bottled water must be flawless.

### **Organic Mineral Water Standard**

<b>No.</b>	<b>Requirements</b>	<b>Criteria</b>
V.1	The sensory characteristics of the bottled products are flawless. This means that the bottled mineral water should be refreshing, not exhibit any atypical odors or flavors or have a musty or stale character.	major

V.2	Redox potential, rH2 value $\leq 28$  Mineral water or spring water should possess a low redox potential so that it can catch free radicals in the body.	minor
V.3	The pH value of the water at the source $\geq 6.0$ .  For health reasons, the water at the source or immediately after deacidification should only be slightly acidic or alkaline.	minor
V.4	The mineral water should possess at least one characteristic proven to be beneficial to human health. The options for supplying evidence of this are provided in Appendix II.	major

Comments:

Mineral water can possess a diverse range of health-promoting and beneficial properties. By following this standard, consumers' expectations of the health benefits of organic mineral water are fulfilled.

In classic scientific discourse, the significance of points V.2 and V.3 are in dispute; however, they are relevant among practitioners of natural medicine. For this reason, these criteria have been classified as minor.

## **VI. Transparency in Declarations and Labelling**

### Guiding Principles

Food should possess a known provenance and be created through a transparent production process. This is one of the original concerns of the organic movement. Legal regulations for the declaration of mineral water in Germany only address these concerns in a very limited way. Organic mineral water producers must therefore warrant that comprehensive information is available to the consumer about the product and the production processes. Therefore, organic mineral water sets a minimum standard for guaranteeing transparency and providing information:

- The results of the evaluation according to the criteria for organic mineral water are to be published.
- The declarations on the labels must be comprehensive and current. The provenance of the mineral water must be clear and easily recognizable.
- The agency monitoring the organic water and the basis for certification are to be designated.
- Direct, rapid information for the consumer and procedures for answering queries must be in place.

## Organic Mineral Water Standard

No.	Requirements	Criteria
VI.1	All results from the testing of organic mineral water criteria are to be published on the internet.	major
VI.2	The summary of the analysis results contains comprehensive information for consumers. This means that the declaration is valid and acceptable according to current legislation. In addition to the six minerals (Na, Ca, Mg, Cl, SO <sub>4</sub> , HCO <sub>3</sub> ), the analysis summary must contain further information helpful to consumers; at the very minimum, the content of fluoride, nitrate and carbonic acid should be provided as well as the name of the institution that performed the analysis.	major
VI.3	The analysis results provided in the declaration are current.  The date of the previous analysis to determine the quality of the mineral water, which preceded the current print run of the labels, is to be included on the label.	major
VI.4	The provenance of the mineral water must be easily recognizable.  A clear brand declaration according to consumer-friendly specifications is to be provided (refer to Appendix I).	major
VI.5	When referring to certificated organic mineral water, this private standard according to which it was certified and the agency responsible for it, must be cited.	major
VI.6	The company is responsible for ensuring transparency and that consumer information is available. The company must therefore offer tours of their facility at regular intervals. The requirements of consumer organizations for direct consumer information are to be met by maintaining an information hotline.	major

### Comments:

Organic foods generally offer consumers claims of truth and openness. For this reason, comprehensive and concrete specifications have been provided here to ensure better clarity on the various aspects of organic mineral water.

## **APPENDICES**

- I. Requirements for a Climate Protection Strategy and Declaration**
- II. Analysis Information and Concentration Limits**
- III. Description of the Certification System**
- IV. Verification Checklist for Certification**