

What do you know about Bottled Water?

Q&A

1. What are the different kinds of bottled water?

Under EU legislation there are three official types of bottled water: natural mineral water, spring water and bottled drinking water, also known as table water.

In Europe almost all bottled water sold is either natural mineral water or spring water, as opposed to other continents, where treated bottled drinking water is more common.

2. Where do natural mineral water and spring water come from?

Natural mineral water and spring water can only come from specifically designated groundwater sources. That is natural springs, wells or boreholes. Groundwater is water that derives from rain and melting snow that has filtered beneath the earth's surface and flows through minute pores and cracks within layers of underground rock. The rocks act as a natural filter and by virtue of its location under the earth, groundwater is well protected from surface pollution.

3. What is the origin of bottled drinking water (table water)?

Bottled drinking water, sometimes called 'table water' is the description given to water that may come from various origins including surface waters or municipal supply. It is generally treated and disinfected. Minerals may be restored or added.

4. What is the origin of tap water?

Tap water comes from various possible sources, this ranges from surface waters such as lakes, rivers, reservoirs) to groundwater (boreholes, horizontal galleries) or a combination of both. Tap water may also derive from seawater by way of desalination.

Filtration and treatment is always required for surface water sources and commonly applied to groundwater. Chlorination is common to provide microbiological protection during distribution via pipelines, though also giving an undesirable taste. Some countries prohibit chlorination, but on the condition that distribution networks are of a much higher standard.

5. What exactly are natural mineral and spring waters?

One of the defining characteristics of natural mineral water and spring waters is their naturalness. They originate from underground water sources and must be safe to drink at source, in their natural state, without prior disinfection or chemical treatment.

Characteristic constituents, represented by the main minerals (such as calcium, magnesium, chloride, sodium, sulphate) giving the water its natural balance and taste, must remain unaltered from the point of origin at source right to the final consumer.

6. Is there a difference between mineral water and spring water?

Both natural mineral water and spring water must originate from a designated groundwater source or deposit and be safe to drink at source, where they must be bottled directly. However, natural mineral water must guarantee a stable mineral composition as indicated on the label whereas the mineral composition of spring water may fluctuate. The chemical composition of spring water need not be stated on the label.

7. What are the differences between NMW and SW on the one hand, and tap water on the other hand?

In Europe 97% of all bottled water sold is either natural mineral water or spring water.

Origin: Natural mineral water and spring water can only come from designated groundwater sources.
Tap water on the other hand can come from various sources ranging from surface water, ground water, or a combination of both, or may even derive from seawater.

Treatment: European natural mineral and spring waters must be safe to drink at source and may not be chemically treated nor disinfected.
In the EU, tap waters meet strict drinking water safety requirements, however a wide range of treatments are allowed and often required.

Though tap water has to be always supplied as safe drinking water, the water may contain residues from treatment chemicals and by-products, disinfectants such as chlorine, as well as other trace contaminants (and increasingly pharmaceutical residue)

Distribution: Natural mineral water and spring water must be bottled directly at source. They are transported to the bottling plant in state-of-the art pipes and packaged directly into bottles that are fitted with a tamper proof seal. Transport in containers other than packages destined for the final consumer is prohibited. The entire distribution of natural mineral and spring water is controlled from the source right to the final consumer.

Tap water is supplied as safe drinking water transported to the final consumer via a wide piped distribution system, typically many kilometres long. While suppliers have monitoring and maintenance programmes to protect the network, they commonly have little or no control on the private premises of the final consumer, where there may be some risk of contamination.

Consumer Information:

For bottled water, detailed labels provide consumers with very precise information on the water they purchase. For natural mineral water in particular, labels state the place where the spring is exploited, the stable mineral composition and in some cases their beneficial health effects.

Tap water provides the consumer with no information at the point of consumption, though legal compliance can be assumed and water quality information should be available on request or via the supplier's website.

Consumer Choice:

Natural mineral and spring water come in a wide variety of brands, tastes and compositions which range from very low to very high mineral content. Bottled water can be still or sparkling.

Tap water on the other hand offers consumers with no choice at any given location. Though legal compliance is required, taste can vary significantly from place to place, and sometimes from day to day.

8. Is it true that mineral water and spring water do not need to be chemically treated or disinfected?

Natural mineral water and spring water must be safe and wholesome to drink at source without treatment or disinfection. There are very limited authorisations for removing elements, but on the strict condition that these do not alter the characteristic constituents giving water its inherent mineral balance, taste and health benefits (where relevant).

It is authorised to separate out ‘unstable elements’ (such as iron and manganese) which, though at harmless levels, can precipitate out when some deep groundwater come into contact with oxygen in the air. In addition, it is authorised to selectively reduce the natural fluoride concentration, where this is above health-based limits.

9. How are the sources of natural waters and tap water protected from pollution?

To ensure absence from pollution, protecting the source is critical. Catchment areas around the NMW and SW sources are strictly protected zones. These areas commonly cover up to several thousand hectares of pristine landscape. In addition, special equipment to extract NMW and SW must be installed to safeguard the source and the outlet from any further risk of pollution.

Protection of their water sources by tap water suppliers is a requirement of the EU Water Framework Directive. However, given that comprehensive treatment is an option, these need not necessarily remain pristine and unpolluted.

10. How do the safety requirements of natural mineral and spring water compare to those of tap water?

All bottled waters are classified as food products and as such, must comply with strict EU and national food safety requirements, as well as industry guides to good hygiene practices.

Bottled waters are subject to a high frequency of tests and analysis based on HACCP¹ and good hygiene practices as recognised by the FVO².

In addition, bottled waters must meet specific water quality requirements as defined by the relevant EU Directives. Safety and quality are guaranteed by bottling natural waters directly into a high quality sealed package for final delivery to the consumer.

Under the EU Drinking Water Directive, tap water must also meet strict safe drinking water requirements at the point of delivery to private properties. This is achieved through monitoring, maintenance and risk management. The supplier however, has little or no control over the state of the piped distribution system on the consumer’s own property where contamination could be a risk.

¹ Hazard Analysis and Critical Control Points (HACCP) is an internationally recognised and recommended system of food safety management for all sectors of the food industry.

² Food and Veterinary Office (NMW inspections only 2007-2008)

11. Can the quality of natural mineral and spring water be guaranteed?

The quality of natural waters is secured through a tightly controlled process to ensure the protection of the water from the source, right to distribution to the end consumer. In addition to frequent tests and analysis, the quality is maintained by securely extracting the underground waters. NMW and SW can only be bottled directly at source. Water is transported to the bottling plant by state-of-the-art pipes and filled directly into hermetically sealed and tamper proof bottles.

In Europe, transport in containers other than in packaging intended for the end consumer is prohibited. Bottled waters offer consistently safe, high quality water.

12. Can bottled water be traced? What about tap water?

Bottled water is traceable per batch code like any other food product. Every bottle can be traced through to specific quality and safety tests.

Tap water is of drinking water quality and can be traced to the supplier, who must routinely publish quality results. The supplier has little or no control over quality on the consumer's private property.

13. Where do I find the legislation regulating natural mineral water and spring water?

Framework legislation includes:

Natural mineral water:

-Directive 2009/54/EC on the exploitation and marketing of natural mineral waters

Spring water:

-Regulated partly by Directive 2009/54/EC on the exploitation and marketing of natural mineral waters and Directive 98/83/EC on the quality of water intended for human consumption

Other bottled drinking water:

-Directive 98/83/EEC relating to the quality of water intended for human consumption.

Other regulations on food safety and food hygiene apply (Regulation 178/2002/EC as well as Regulation 852/2004/EC and Regulation 882/2004/EC).

In addition bottled waters must conform to specific EU labelling and packaging requirements.

14. Is natural mineral water less regulated than tap water?

Some people believe that natural mineral waters are less regulated than tap water because there are fewer parameters or substances to check. Fewer mentioned parameters does not mean less safety. NMW is required to be free of pollution at source and in the finished product. This means routinely testing for a comprehensive range of commonly known pollutants, such as organics and pesticides, to demonstrate their absence, amounting to a full list of more than 100. As disinfection is not allowed, there is no risk of disinfection by-products.

Within the EU, tap water, spring water and bottled drinking waters are regulated under Directive 98/83/EC which sets the quality standards for drinking water. Tap water is also legislated under the Water Framework Directive³ which protects and enhances the quality of surface freshwater and groundwater. More parameters need to be checked due to the diverse origins and chemical treatments allowed.

15. What do I know about the mineral composition of natural mineral water and tap water?

The content of minerals varies from one brand of natural mineral water to the other, depending on the geological environment from where it is drawn.

Natural mineral water has a stable mineral composition – the concentration of which elements is regulated by an upper level. Detailed information on the water's mineral content is indicated on the label providing consumers with an informed choice. Note that some minerals may be present at a very low (mg/l) or very high (g/l) level and drinking such water contributes to one's daily mineral intake of elements such as calcium or magnesium, bicarbonates or fluoride among others.

Tap water on the other hand has no requirement for stable mineral composition. For some supplies of tap water, the mineral content can change significantly when the sources are switched (from soft surface water to hard groundwater for example).

³ Water Framework Directive (WFD) Directive 2000/60/EC of the European Parliament and Council establishing a framework for Community action in the field of water policy.

16. Does bottled water have specific health advantages?

Historically throughout Europe many natural waters were drunk in thermal establishments because of their specific health properties. In addition to taking thermal baths, water was also applied externally to the body in various ways.

Water is a source of hydration par excellence and is essential to the proper functioning of our body. Water has zero calories, is sugar free and has no additives. Bottled water provides a convenient and healthy way to stay hydrated throughout the day and helps to meet the recommended daily intake of 1.5 L -2 L of water per day⁴.

NMW is the most *natural* way to hydrate and different health benefits may be claimed according to the composition based on pharmacological, physiological and clinical studies.

NMW has a unique mineral composition which can help to meet particular health needs. Depending on tastes or dietary requirements, consumers can choose water with a specific mineral content: calcium, magnesium, bicarbonates, fluoride or water that is low in sodium for example.

17. Aren't all bottled waters the same?

Though they may all look the same, there are many different types of bottled water and each is unique to its underground origin and offers a variety of different tastes and compositions! In fact it is the specific mineral composition that gives each water its own distinct quality, character and taste. Bottled waters can be still or sparkling (naturally effervescent or with added carbon dioxide).

18. What type of information is available to the consumer?

All NMW and SW must be labelled with compulsory information, indicating the name, origin and source of the water. In addition, the labels for NMW must include the mineral composition of the water. The origin of carbon dioxide is also indicated as either natural or added. Like other food products, all bottled water is fully traceable to the producer.

Tap water on the other hand offers consumers with very little or no information on the origin at point of consumption. Water quality information is usually available publicly and upon request.

⁴ European Food and Safety Authority dietary reference values, March 2010.

19. Why pay more for bottled water when tap water is so cheap?

The price of bottled water reflects the many investments made in protecting the resources for NMW and SW), upholding safety and quality standards, removal of unstable elements, payment of taxes and duties, establishing a recognition dossier, (a list of NMW officially recognised by Member States) as well as for providing safe, convenient and durable packaging. European consumers drink on average a third of a litre a day.

The low price of tap water reflects the fact that we use it in comparatively large quantities (in Europe up to 200 L/day per person) and has a multitude of uses other than for drinking. (Consumption and food use represents only 1% of all tap water use.)

In addition, tap water is often not easily available when “on-the-move”, a time when bottled water can offer a cost-effective alternative to other drinks.

20. Is bottled water necessary when tap water is available?

Bottled water offers consumers a healthy beverage option that has the advantage of being portable, providing an easy way to stay hydrated throughout the day, anywhere, anytime, and provides consumers with the possibility of making an informed choice based on convenience, taste and health benefits. Bottled water is commonly consumed as an alternative to other beverages such as tea, coffee, soft drinks.

21. Why is bottled water considered to be a strategic resource?

Bottled water provides a vital supply of drinking water in the event of an emergency or a natural disaster (flooding, severe drought or following contamination at source or at municipal treatment plants). Utility companies are required to provide safe drinking water at all times. In the event of a supply failure, tap water suppliers have to provide temporary alternatives, such as bottled water.