



# Potable Water Quality For Food Businesses

## Background

As the definition of food under (EC) Regulation 178/2002 on General Food Law and the Food Safety Authority of Ireland Act, 1998, includes water intentionally incorporated into food during its manufacture, preparation or treatment, food business operators have a responsibility for the quality of water used directly, e.g. as an ingredient in food production, or indirectly, e.g. in cleaning or processing during the manufacture of foods.

The quality of the water used by food business operators in food production must meet the basic standards governing the quality of drinking water, i.e. potable water, intended for human consumption as set out in Council Directive 98/83/EC and implemented in Ireland under the European Union Drinking Water Regulations, 2014 (S.I. No. 122 of 2014).

The European Drinking Water Regulations, 2014 (S.I. No. 122 of 2014) set standards for 48 individual microbiological, chemical and indicator parameters which are outlined in three tables under the Schedule; Part 1 of the Regulations which all drinking water must comply with:

- Table A Microbiological parameters (2 parameters listed)
- Table B Chemical parameters (26 parameters listed)
- Table C Indicator parameters (20 parameters listed)

The aim of this factsheet is to assist food business operators and the official agencies in verifying that the quality of the water<sup>1</sup> used by food business operators in food production meets these basic standards of drinking water intended for human consumption.

## Water Supplier Responsibility

The majority of drinking water which is used by food business operators in Ireland is supplied by the following:

### Public Water Supplies

These water supplies are administered and maintained by 31 local authorities across Ireland on behalf of Irish Water.

Each relevant local authority will have responsibility for the testing and monitoring of the public water supply on behalf of Irish Water under service level agreements. The results of all testing and monitoring are available on most local authority websites for water supplies in their geographical area. These results can be used by the food business operator to confirm that the quality of the water supply where it enters the building at the tap where it is used in food production, **i.e. hereafter referred to as the point of compliance**, complies with the European Union Drinking Water Regulations, 2014 (S.I. No. 122 of 2014). Results are also available on the [Irish Water website](#).

<sup>1</sup> It does not include natural mineral waters, recognised as such by the responsible authority as defined in the European Communities (Natural Mineral Waters, Spring Waters and Other Waters in Bottles or Containers) Regulations, 2007 (S.I. No. 225 of 2007), water supplied in bottles or containers, waters which are medicinal products within the meaning of Council Directive 65/65/EEC of 26 January 1965, or an exempted supply. Note: All water supplies regardless of volumes used for food production are subject to the Drinking Water Regulations.

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The minimum annual frequencies for sampling and testing by local authorities for water intended for human consumption or use in food production are given under the Schedule; Part 2: Table B of the Regulations.

The Environmental Protection Agency (EPA) currently recommends that Check monitoring (Schedule; Part 2: Table A) plus any of the 48 individual microbiological, chemical and indicator parameters identified by the local authority through its own risk assessment as requiring testing, is carried out at least twice per year by the local authority.

**After the point of compliance, the food business operator is responsible for the maintenance and verification of the quality of the water supply they use.**

**Note:** The EPA is the supervising agency for all public water supplies supplied by Irish Water. The EPA is responsible for the enforcement of compliance by Irish Water with the monitoring provisions, the standards for drinking water quality and other requirements of the Regulations up to the point of compliance. The EPA must verify the compliance of water intended for human consumption supplied by Irish Water with the parametric values specified in the Drinking Water Regulations.

## Group Water Schemes

These water supplies can be provided in areas where a local authority does not provide a public water supply. A group water scheme can be established by two or more properties coming together to provide their own common drinking water supply. This scheme may then supply water to a food business operator.

Group water schemes source their drinking water supply either through the public mains (Public Group Water Scheme) or through a private source such as a lake, river or groundwater source (Private Group Water Scheme).

Generally, in group water schemes, the relevant local authority does not have responsibility for maintenance of the scheme water system, e.g. distribution network, pipes, checking for leaks etc. However, the members of a group water scheme can request for their local authority to take over the running of the scheme and in this case if the local authority takes over the scheme, it is then responsible for maintaining the water system. However, if a group water scheme remains fully private, it may get technical and grant assistance from the local authority for any necessary upgrading works.

In both types of group water scheme, the relevant local authority has the responsibility to test and monitor the water supply up to the point of compliance, i.e. where it enters the building at the tap where it is used in food production. The minimum annual frequencies for sampling and testing by local authorities for water intended for human consumption or use in food production is given under the Schedule; Part 2: Table B of the Regulations.

The EPA currently recommends that Check monitoring plus any of the 48 individual microbiological, chemical and indicator parameters identified by the local authority through its own risk assessment as requiring testing, is carried out at least twice per year by the local authority.

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The results of all testing and monitoring are readily available on most local authority websites and can be used by the food business operator to confirm that the quality of the water supply where it enters the building at the tap where it is used in food production, i.e. point of compliance, complies with the European Union Drinking Water Regulations, 2014 (S.I. No. 122 of 2014).

**After the point of compliance, the food business operator is responsible for the maintenance and verification of the quality of the water supply they use.**

## Small Private Water Supplies

If a public water supply or group water scheme is not available, a small private water supply (private well) may be required by the food business operator, typically by boring out a well and drawing out the groundwater.

The relevant local authority will have the remit to test the quality of this small private water supply. However, the responsibility for the maintenance and/or treatment of the small private water supply, e.g. pipe network, treatment systems, storage tanks etc. is with the food business operator, not the local authority. The EPA currently recommends that Check monitoring plus any of the 48 individual microbiological, chemical and indicator parameters identified by the local authority through its own risk assessment as requiring testing, is carried out at least twice per year by the local authority.<sup>2</sup>

**After the point of compliance, the food business operator is responsible for the maintenance and verification of the quality of the water supply they use.**

## Food Business Operator Responsibility

Regardless of the water source, i.e. public supply, group water scheme or private supply, the food business operator is responsible for the quality of the water after the point of compliance. The food business operator is required to maintain the distribution system within the establishment in such a way that it does not cause or potentially cause, contribute to or give rise to a risk of non-compliance with tables A, B and C under the Schedule; Part 1 of the Regulations.

Under the Regulations, a food business operator must take remedial action immediately to restore the water under their control, to compliance with the microbiological or chemical parameters specified in the Regulations. Irish Water or the relevant local authority must ensure that appropriate action is taken promptly by the food business operator or the water supplier or both, to immediately prevent or restrict the further supply of water for human consumption to the public through the internal distribution system until the system is restored so it is no longer a risk and the internal distribution system is deemed to be compliant.

Where the water, i.e. public supply, group water scheme or private supply, goes through an internal distribution system, storage or treatment prior to use in the food business, the food business operator will need to carry out additional monitoring (Check monitoring (Schedule; Part 2: Table A) plus any of the 48 individual microbiological, chemical and indicator parameters) which is recommended to be at least twice a year based on their own risk assessment identified as part of their food safety management system.

<sup>2</sup> The Health Service Executive (HSE) recommends that private wells should be tested at least once a year for microbial contamination and at least once every three years for chemical contamination. The HSE also has a statutory role under the drinking water regulations. Irish water and local authorities (for private supplies) must consult with the HSE in relation to drinking water non-compliances or instances where there is a public health risk. Where Irish Water or the local authority (in consultation with the HSE) considers that the non-compliance, risk or treatment failure constitutes a potential danger to human health, Irish Water or the local authority (subject to agreement of the HSE) must inform consumers promptly and provide the necessary advice.

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The food business operator must document their sampling programmes and record all results and the corrective action taken in the event of non-compliances. This is not necessary if it has been established, documented and agreed with the supervisory authority that its quality will not affect the safety of the finished food product.

If drinking water is stored prior to use rather than supplied directly from the rising main, the food business operator must ensure that the water is suitably protected throughout and remains at drinking water quality, i.e. potable water, when used in food production. This is not necessary if it has been established and documented that its quality will not affect the safety of the finished food product.

Where the food business operator uses its own private supply, e.g. a private well, it must ensure that the source of the water is appropriately sited, constructed, and maintained by suitably qualified persons.

The food business operator is also responsible for its quality as outlined previously and its compliance with the Drinking Water Regulations.<sup>3</sup>

It must also be cognisant that monitoring and maintenance of the supply may not be sufficient to ensure its quality. The food business operator should be vigilant to any change in conditions that puts the private supply at risk such as heavy rains and agricultural practices, near the private supply source. The food business operator should know that where the food business operator is considering drilling a new private well, siting and construction should be carried out in such a way as to minimise the potential for contamination. The EPA and the Institute of Geologists of Ireland provide guidance on the siting, construction and protection of private wells.

If a food business operator decides to switch from a public to a private water supply, it is critical that there is evidence that the supply is suitable for use in a food business. The HSE has issued guidance to commercial and public enterprises which they supervise about the health risks of switching from a public to a private water supply. This information should be documented in their food safety management system.

If non-potable water is in use by a food business operator during food production, the food business operator must be able to ensure that it is not mixed with potable water. The potable water supply must be properly segregated and marked. Non-return valves must be fitted where necessary.

Where a food business operator has a private supply or collects and stores waste waters for flushing toilets etc. it should not be connected to a distribution network or internal plumbing system in such a way that it can compromise a drinking water supply. If non-return valves are used to separate the two supplies, there is still a risk of contamination if the valve fails.

<sup>3</sup> The local authority monitoring as the supervisory authority is in addition to this and not instead of the more extensive monitoring required as the water supplier.

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## Purpose of Sampling

When taking a sample, it is important to know the purpose for which it is being taken. If the purpose is to check the quality of the water as supplied at the point of compliance, samples should be taken from metal taps that have been disinfected. Where only plastic taps or mixer taps are available, they should be cleaned and disinfected. All external fittings such as anti-splash devices and hoses should be removed. Internal inserts should also be removed if possible, without damaging the tap. Mixer taps should be avoided if possible and only sampled if there is no other choice available.

If the purpose is to check the quality of the water as used (internal distribution system), the taps should not be disinfected and the water may need to be tested at various points.

## Non-Compliant Water Results

All non-compliances with microbiological, chemical and/or indicator parameters must be investigated immediately and the appropriate remedial action taken.

Where samples taken by the supervisory authority, e.g. local authority, are non-compliant with indicator parameters only as outlined in Table C of the Schedule; Part 1 of the Regulations, these must be assessed by them to determine the level of risk posed to human health. If the supervisory authority considers the non-compliant result as indicative of a risk, the remedial action necessary is determined by them, in consultation with an agreement by the Health Service Executive (HSE) in order to protect public health. The EPA must be also notified.

Where the supervisory authority takes a sample of water for microbiological, chemical or indicator parameters and the sample is non-compliant, Sections 6 and 8 of the EPA Handbook and relevant protocols in place must be followed in line with the risk assessment carried out.

If the non-compliance is considered to be an incident or an emergency, then the supervising authority's Drinking Water Incident Response Plan is activated (see EPA Handbooks for further guidance).

Where samples taken by the food business operator are non-compliant with microbiological, chemical or indicator parameters, they must immediately inform the supervisory authority. The reason for the non-compliance must be investigated and the appropriate corrective action taken.

The food business operator must have provision in their procedures based on HACCP to deal with any notification from their water supplier if there is a problem with the incoming water.

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## References

[Food Safety Authority of Ireland Act, 1998 as amended](#)

[Council Directive 98/83/EC on the quality of water intended for human consumption](#)

[European Communities \(Drinking Water\) Regulations, 2014 \(S.I. No. 122 of 2014\)](#)

[Regulation \(EC\) No 178/2002 – general food law](#)

[Regulation \(EC\) No 852/2004 on the hygiene of foodstuffs](#)

[Regulation \(EC\) No 882/2004 on official controls performed to ensure the verification of compliance with feed and food law, animal health and animal welfare rules](#)

[Environmental Protection Agency Handbook on the Implementation for Water Services Authorities for Public Water Supplies, 2010](#)

[Environmental Protection Agency Handbook on the Implementation for Water Services Authorities for Private Water Supplies, 2010](#)

National Federation of group Water Schemes 'What's in your water? A GWS guide to the drinking water parameters. This document is available on the NFGWS website [www.nfgws.ie](http://www.nfgws.ie)

HSE guidance to commercial and public enterprises about the health risks of switching from a public to a private water supply

HSE Guidance '*Drinking Water and Health, a review and guide for Population Health*' – 2008

HSE Guidance '*Guidelines proposed by the Health Service Executive as a template document between the Health Service Executive and Water Services Authorities for Dealing with Exceedances and Incidents in Water Supplies*' – 2010

[World Health Organization – Guidelines for Drinking-water Quality, 4th Edition](#)

[EPA Drinking Water Report 2013](#)

Federation of Group Water Schemes

[A GWS Guide to the Drinking Water Parameters](#)