FCS FOOD CONSULTING SERVICES

NEWSLETTER




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Safe Drinking Water and SANS 241: What's the Deal?

Access to safe drinking water is a basic human right and vital to human health. The South African National Standard (SANS) 241 Drinking Water Specification states the minimum requirements for a water sample to be considered safe for human consumption. These requirements include microbiological, chemical and physical properties of the water. Safe drinking water (that complies with SANS 241) does not pose a significant risk to health over a lifetime of consumption, including life stages with increased sensitivity (infants, babies, elderly and the immuno-compromised). SANS 241 shows various properties of water need to be checked to determine if water is safe for consumption. SANS 241 categorises the properties of water into 4 main risk categories and states the minimum values that water must conform to before being considered safe drinking water:

Acute Health

These properties pose an immediate health risk when above the minimum concentration stated in SANS 241. This category includes properties such as the presence of E. coli (which indicates faecal pollution of the water), faecal coliforms (which are an indicator of unacceptable microbial water quality), protozoan parasites as well as harmful chemicals such as cyanide, nitrate and nitrite.

Chronic Health

These properties, when in concentrations above those stated in SANS 241, pose a health if ingested over an extended period of time. This includes harmful chemicals such as chlorine, lead, mercury, barium, chromium and arsenic. Some of these chemicals, such as chlorine, are used in the purification process and should be removed before consumption.

Aesthetic

These properties, such as conductivity, turbidity and the presence of dissolved salts, affect the taste, odour and colour of the water even though they don't pose a significant health risk.

Operational

While these properties do not pose any specific risk themselves they are used to indicate the efficiency of the water treatment process and can be used to determine risks and problems in the infrastructure of the treatment process. Properties such and total coliforms as well as total microbial count give an indication of the effectiveness of the purification while turbidity and pH can indicate the effectiveness of other treatment processes.

Water samples should be taken and tested at all points in any water treatment process to ensure the effectiveness of each step as well as help pinpoint any problems along the process. SANS 241 also details steps in when and how to measure all the values as well as how to implement water monitoring programs and perform accurate risk assessment.

While making sure water conforms to the many specifications laid out in SANS 241 can be costly and time consuming, we can see that all the factors measured are important and give an overall representation of if the water is safe to drink. Safe drinking water is something we are all entitled to and it is important to make sure that *any* water being consumed by a person meets the requirements set out in SANS 241.

Common Food Borne Pathogens:

Escherichia coli:

E. coli is the name of a type of bacteria that lives in the intestines of humans and animals. Most types of E. coli are harmless but some types can make you sick.

The worst type of E. coli, known as E. coli O157:H7, causes bloody diarrhoea and can sometimes cause kidney failure and even death. E. coli O157:H7 makes a toxin called Shiga toxin.

One severe complication associated with E. coli infection is hemolytic uremic syndrome (HUS). The infection produces toxic substances that destroy red blood cells, causing kidney injury. HUS can require intensive care, kidney dialysis, and transfusions.

Symptoms include:

- Severe diarrhoea (often bloody).
- Severe abdominal pain.
- Vomiting.
- Usually, little or no fever is present.

A big “THANK YOU” from all of us at FCS!

FCS would like to specially thank City Lodge Lynnwood for hosting our most recent “Auditor Calibration” training.

The training, which took place on 28 September 2017, is an essential part of providing the quality service that you, our clients, have come to expect from the auditing team at FCS.

This training involves all the auditors from around the country, who then come together and audit a single kitchen. After auditing various sections of the kitchen, penalties and points are discussed until a consensus is reached. This training is vital to the auditing team as it serves to minimise discrepancies between different auditors.

We are always looking for new venues to host our “calibration”; should you wish to host a future training at your facility please contact Adrian Carter.

Accreditation and affiliations

FCS received ISO/IEC 17025 accreditation through SANAS in August 2001. Being an accredited laboratory means that we not only have the confidence in our personnel, our quality of testing and the test results we provide to our clients, but also that we are competent in our duties and that our clients and other laboratories can have confidence in the services we render. Our testing methods are assessed on the same principles as other accredited laboratories throughout the world.