

TECHNICAL DATASHEET

Zooplankton and Veligers

Do Algal blooms affect the safety of drinking water?

In England and Wales over 50% of drinking water is derived from surface water i.e. rivers and reservoirs. Surface water may contain small plants (algae) and animals, all of which are present in a healthy aquatic environment.

When surface water is treated, the vast majority of these animals and plants are removed. However there are some occasions when animals and algae can pass through water filters and enter the water distribution system, which conveys water to homes and workplaces. There are also some harmless animals which live within water mains. On rare occasions these may be noticed by consumers in a glass of water drawn from their tap.

These animals and algae are normally not visible to the naked eye, however certain species such as Asellus (fresh water shrimps) or Chironomids (midge fly larvae) are slightly larger and may be seen without a microscope.

These animals are harmless and do not pose any risk to human health. They are part of the natural environment and an essential part of the ecosystem. Indeed many are 'indicators' of healthy, good quality rivers, lakes and streams.

Water companies are required, on aesthetic grounds, to take steps to ensure animals do not accumulate in such numbers that they appear in tap water.

Method

The ALS method for the detection and enumeration of Zooplankton is suitable for the analysis of treated and surface waters.

After the sample is taken it is fixed with Lugol's iodine solution. The sample is then poured through a mesh with a pore capture size of 140µm (50µm for Veligers) a note of the sample volume is taken (some samples are concentrated net or filter backwashes and as such the client will provide the sample volume), Zooplankton are then enumerated using a Low power Stereo zoom microscope and expressed as numbers per unit Volume.

Identification of Zooplankton

ALS Coventry are able to undertake the enumeration and identification of Zooplankton at the genus level with a full identification report being produced which details the Zooplankton type by genus, the associated count and a total algal count.

