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WHISPER PUMPS
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Your water analysis results explained

Conductivity A measure of the total dissolved salts in the water. Generally naturally present. Levels above the standard could give rise to abnormal taste and contribute to corrosion.
Maximum concentration or value 2500 µS/cm at 20˚C

pH (Hydrogen ion) An indication of acidity or alkalinity. 7.0 is neutral, below 7.0 is acid and above 7.0 is alkaline. Many naturally occurring waters in this area are acidic and may contribute to the corrosion of pipes and fittings. This can result in high levels of copper and lead in particular being dissolved into the drinking water. Acidity can be reduced by dosing equipment.
pH value minimum 6.5 maximum 9.5

Odour &Taste The odours and tastes of water supplies derived from surface water sources can be of a kind generally described as “earthy” or “musty”. This is associated with the presence of organic compounds produced naturally, largely by algae and micro-organisms. Adsorption on activated carbon is generally the most effective method for their removal and colour. It should be noted that the taste test is not carried out when coliforms are detected in the sample due to the potential danger.

Turbidity The standard requires that there should be no cloudiness caused by fine particles in the water. Turbidity may result from naturally occurring particulate iron, manganese or aluminium. In other supplies, rainfall may lead to the presence of fine clay or sand particles in suspension. Sometimes, tiny air bubbles can make water look “milky”, but the water clears if left to stand.
Maximum concentration or value 4 NTU

Nitrate High nitrate levels may result from bacterial contamination or the use of fertilisers in agriculture. Equipment can be obtained to reduce nitrate levels.
Maximum concentration or value 50 mg/l

Iron

Iron is usually naturally occurring but can be picked up from old iron pipes or tanks. The standard is set for aesthetic reasons (a bitter taste or staining of laundry or sanitary fittings). It can be removed by filtration.

Maximum concentration or value 200 µg/l

Aluminium

Again, often naturally occurring, aluminum can be picked up by acidic waters, particularly in peaty moorland areas. As with iron, the standard is set for aesthetic reasons only. Aluminum can be removed by filtration.

Maximum concentration or value 200 µg/l

Manganese

Likely to be naturally occurring and often found in association with iron in private water supplies. High levels can cause a black discolouration of the water. Manganese can be removed by filtration.

Maximum concentration or value 50 µg/l

Lead

Lead is a cumulative toxin and may be naturally occurring. However, it is more likely that high levels of lead in a water supply are associated with the action of acidic water on lead pipework or lead soldered pipe fittings. The obvious priority in cases of excessive lead is the removal of obsolete lead plumbing and fittings.

Maximum concentration or value 10 µg/l

Arsenic

Arsenic is a metal naturally found as a mineral in rock, although rare it is know to be detrimental to health. The majority of maximum concentrations are set well below the level that would cause actual illness. If arsenic is found the first option should be to find an alternative source. Other options are to blend with arsenic free supplies to lower the concentrations or to use a treatment system.

Maximum concentration or value 10 µg/l

Ammonium

Ammonium is not a health related parameter but its presence indicates possible contamination from sewage or animals wastes. Where ammonia is present there may also be pathogenic organisms. If ammonia is found the source of the contamination should be found as quickly as possible.

Maximum concentration or value 50 µg/l

Colour

Colour is naturally occurring in many upland sources. It can be removed by treatment and is not health related.

Maximum concentration or value 20mg/l Pt/Co

Total Coliforms & Faecal Coliforms

These organisms inhabit the bowels of humans and animals and are often found in raw waters. Their presence in water is therefore an indication of faecal contamination and it is therefore likely that other pathogenic bacteria are present. Boiling the water before consumption will destroy the organisms. However, the use of disinfection, such as UV or chlorine, is by far the best method of ensuring safe drinking water at all times.

Maximum concentration or value is 0 number/100ml
TVC 3 Day 22°C 100 number/ml
TVC 2 Day 37°C 20 number/ml

Treatment

There are a range of treatment systems available to reduce the level of a particular parameter below the prescribed concentration or value set by the Private Water Supplies Regulations 2009. Whisper Pumps supply a range of effective treatment systems relevant to each particular case, considering whether the elevated levels are due to the nature and structure of the ground or other external factors.

Before installing treatment systems, the supply should be examined for obvious causes of contamination, e.g. contamination by surface water or animals around the spring or borehole. Wherever possible the supply should be fenced off to prevent faecal contamination by animals, and storage or settlement tanks should be fully enclosed with tight fitting lids and cleaned regularly.