

2.123 In cold water systems, samples should also be taken as required:

- from the point of entry (or nearest outlet) if the water is supplied from a private water supply or where the temperature of the incoming mains supply is above 20 °C from the cold water storage tank or tanks;
- from the furthest and nearest outlet on each branch of the system (far and near sentinel outlets).

2.124 In hot water systems, samples should also be taken as required:

- from the calorifier hot water outlet and from the base of the calorifier, if it safe to do so, as some systems are under considerable pressure;
- from the furthest and nearest outlet on each branch of a single pipe system (far and near sentinel outlets);
- from the furthest and nearest outlet on each loop of a circulating system (far and near sentinel outlets).

Info box 2.5: Analysis of water samples

Analysis of water samples for legionella should be performed in UKAS-accredited laboratories with the current ISO standard methods for the detection and enumeration of legionella included within the scope of accreditation. These laboratories should also take part in a water microbiology proficiency testing scheme (such as that run by PHE or an equivalent scheme accredited to ISO 17043:2010). Alternative quantitative testing methods may be used as long as they have been validated using ISO 17994:2004 and meet the required sensitivity and specificity.

2.125 Table 2.2 gives guidance on action to take if legionella is found in the water system. However, for healthcare premises with vulnerable patients, the action levels and recommended actions in Table 2.3 should be considered.

Table 2.2 Action levels following legionella sampling in hot and cold water systems

Legionella bacteria (cfu/l)	Recommended actions
>100 cfu/l and up to 1000	Either: <ul style="list-style-type: none"> ■ if the minority of samples are positive, the system should be resampled. If similar results are found again, a review of the control measures and risk assessment should be carried out to identify any remedial actions necessary or ■ if the majority of samples are positive, the system may be colonised, albeit at a low level. An immediate review of the control measures and risk assessment should be carried out to identify any other remedial action required. Disinfection of the system should be considered
>1000 cfu/l	The system should be resampled and an immediate review of the control measures and risk assessment carried out to identify any remedial actions, including possible disinfection of the system. Retesting should take place a few days after disinfection and at frequent intervals afterwards until a satisfactory level of control is achieved.

Table 2.3 Actions to be taken following legionella sampling in hot and cold water systems in healthcare premises with susceptible patients

Legionella bacteria (cfu/l)	Recommended actions
Not detected or up to 100 cfu/l	In healthcare, the primary concern is protecting susceptible patients, so any detection of legionella should be investigated and, if necessary, the system resampled to aid interpretation of the results in line with the monitoring strategy and risk assessment
>100 cfu/l and up to 1000 cfu/l	Either: <ul style="list-style-type: none"> ■ if the minority of samples are positive, the system should be resampled. If similar results are found again, review the control measures and risk assessment to identify any remedial actions necessary or ■ if the majority of samples are positive, the system may be colonised, albeit at a low level. An immediate review of control measures and a risk assessment should be carried out to identify any other remedial action required. Disinfection of the system should be considered
>1000 cfu/l	The system should be resampled and an immediate review of the control measures and risk assessment carried out to identify any remedial actions, including possible disinfection of the system. Retesting should take place a few days after disinfection and at frequent intervals thereafter until a satisfactory level of control is achieved

Scalding

2.163 There is a risk of scalding where the water temperature at the outlet is above 44 °C. In certain facilities with ‘at risk’ patients this is especially so where there is whole body immersion in baths and showers of vulnerable patients, including the very young, elderly people, and people with disabilities or those with sensory loss who may not be able to recognise high temperatures and respond quickly. Where there are vulnerable individuals and whole body immersion, testing of outlet temperatures using a thermometer can provide additional reassurance.

2.164 The potential scalding risk should be assessed and controlled in the context of the vulnerability of those being cared for. The approach will depend on the needs and capabilities of patients or residents. For most people, the scalding risk is minimal where water is delivered up to 50 °C at hand washbasins and using hot water signs may be considered sufficient, where a TMV is not fitted. However, where vulnerable people are identified and have access to baths or showers and the scalding risk is considered significant, TMV Type 3 (TMV3) are required. Further advice on safe bathing can be found in the UK Homecare Association (UKHCA) guidance *Controlling scalding risks from bathing and showering*.³³

2.165 Where the risk assessment considers fitting TMVs appropriate, the strainers or filters should be inspected, cleaned, descaled and disinfected annually or on a frequency defined by the risk assessment, taking account of any manufacturers’ recommendations. To maintain protection against scald risk, TMVs require regular routine maintenance carried out by competent individuals in accordance with the manufacturer’s instructions. HSE’s website provides further information at www.hse.gov.uk/healthservices/scalding-burning.htm.