



MCERTS Performance Standard for Organisations Undertaking Sampling and Chemical Testing of Water

Version 1.1, briefing note 4
December 2010

Temperature control of samples during transportation

The MCERTS standard states (section 5.5.6):

“If preservation of samples by refrigeration is required, then during transportation and subsequent storage of samples, including retention time in an automatic sampling device, the sample storage environment shall maintain a temperature of 5 ± 3 °C. An organisation carrying out sampling shall have appropriate procedures for demonstrating this. It is recognised that some time may be required to bring the sample temperature to within this range.”

This temperature range was chosen because it is reasonably easy to achieve and significantly reduces microbiological activity in unpreserved samples, therefore minimising any changes to determinands such as BOD, COD, ammonia etc.

However, we have been notified that on some occasions the temperature has been recorded at 1 °C, which strictly is a failure to meet MCERTS requirements. We have decided that exposure of the samples to a temperature of 1 °C is acceptable, but samples shall not be allowed to freeze. The acceptable temperature range for the sample storage environment is now 1-8 °C.

Note: The temperature range is to allow for the cycling of the refrigeration devices, their opening and closing during normal operation, and effects of adding a number of warm samples. For most analytical purposes best practice is to keep the samples at a constant temperature of not more than 5 °C.