



SCOTTISH EXECUTIVE

Environment Group

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Information Letter 3/2005

Dear George

Guidance on sample and sample extract stability trials and the preservation and preparation of samples for metals analysis

Background

1. Scottish Water are required to ensure that samples are kept at such temperature and in such conditions as will secure that there is no material alteration of the concentration or value for the measurement or observation of which the sample is intended in accordance with the requirements set out in the Water Supply (Water Quality)(Scotland) Regulations 2001.
2. ISO 5667 Part 3:2003 gives general guidance on recommended sample storage conditions and times. It also states that storage time starts from when the sample is taken and not when it is received by the laboratory. Some analytical methods specify alternative preservation conditions, which should be followed when using that method.
3. In his summary report for the Drinking Water Inspectorate vertical audits for non microbiological parameters carried out in England and Wales in 2004 Dr Peter Whittle, a consultant, recommended that:
 - Consideration should be given to issuing guidance on sample preparation for metals analysis. Furthermore a specialist in trace metals analysis should be asked to follow up the concerns regarding high lead blanks.
 - The analysis of hydrogen ion is worthy of further attention in the future, with particular emphasis on testing in relation to sample stability and field testing.



- Consideration should be given to issuing guidance on sample storage times and stability which have been a re-occurring theme in the audits of the past three years.

Purpose

4. The purpose of this letter is to share with Scottish Water the DWQD's response to Dr. Whittle's recommendations. Although they are the result of audits undertaken on analytical facilities belonging to the water companies in England and Wales, it is expected that the recommendations will be equally valid in Scotland. The "Guidance on sample and sample extract stability analysis trials" and "Guidance on sample preservation and preparation for metals analysis" which are attached take account of Dr. Whittle's concerns and are intended to provide a pragmatic way forward for the UK water industry.

5. The guidance takes the form of two stand alone documents, copies of which are attached. The guidance will be reviewed and revised at regular intervals and in the light of experience. The DWQD expects Scottish Water to take account of the guidance in formulating their procedures for ensuring sample stability and the preservation and preparation of samples for metals analysis and to have suitable procedures in place by 31 January 2006. An excel spreadsheet is attached, which gives a worked example of the calculation of sample stability. It may be used to assist the calculation of real stability trials.

Further Information and Enquiries

6. A copy of this letter and enclosures is being sent to Mrs Margaret McGuinness and Mr Willie Rowbottom. Enquiries about this letter should be addressed to Matthew Bower (Tel 0131 244 0743) or Email matthew.bower@scotland.gsi.gov.uk. Please acknowledge receipt of this letter to the following mailbox drinkingwater@scotland.gsi.gov.uk. Hard copies are not being issued.

Yours sincerely

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Drinking Water Quality Division



The Environment Group is part of the Scottish Executive Environment and Rural Affairs Department