

Deviating Sample Policy

Holding Times, Storage Conditions & Sample Containers

The definition of a deviant sample is one which, by virtue of handling conditions or time elapsed between taking the sample and analysis, is suspect as regards giving a result which is representative of the circumstances prevailing at the time of sampling. In this respect, since storage requirements and maximum elapsed time between sampling and analysis differ for each determinand, a sample may be classified as deviant for some determinands but not others.

If the sampling time and the storage conditions since sampling are known then a definitive decision may be made as to whether the sample is deviant, and for which determinands, when it reaches the laboratory.

If there is no information on sampling time/date and/or about storage conditions before the sample is received at the laboratory then a sample must automatically be classed as deviant for all determinands in the first instance. If information can be obtained from the client on storage conditions or sampling time which allows the assumption of deviancy to be lifted, for some or all determinands, then the sample may be reclassified as non-deviant for relevant determinands.

Please be aware that a sample which is not classed as deviant when received at the laboratory may become so for one or more determinands by virtue of being held within the laboratory system as part of routine testing procedures.

Information for Determination of Deviancy

The tables below are used when determining whether a sample is, or may be, deviant as regards specific determinands. Note that the 'maximum holding time' in these tables refers to the time between *sampling and analysis*. Hence a sample, *on receipt*, will only be deviant as regards holding time if the time from sampling to receipt *already* exceeds the maximum holding time.

We will carry out a further check at sample authorisation/reporting to detect instances where a sample has become deviant due to the time elapsed as per the routine laboratory procedures involved as part of the analysis.

Additional requirements for the assessment of sample deviancy are based upon the type of container(s) used and the temperature recorded on receipt at the laboratory.





Deviating Sample Codes





- a** – The date and /or time of sampling has not been provided, therefore it is not known if the time lapse between sampling and analysis has exceeded the acceptable holding time(s)*.
- b** – The test item was received in a container which has not been recommended*.
- c** – On receipt, the temperature of the sample received was found to fall outside the recommendations of BS ISO 18512:2007, Soil Quality. Guidance on long and short term storage of soil samples*.
- d** – The sample was received in a container that had not been filled as recommended*.
- e** – The delay between sampling and sample receipt is greater than the recommended holding time for the analyte of interest in this matrix*.
- f** – The delay between sampling and analysis is greater than the recommended holding time for the analyte of interest in this matrix*.

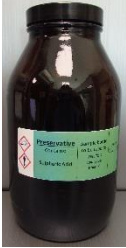

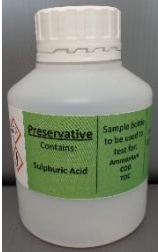

* In accordance with the requirements of Technical Policy Statement TPS 63; UKAS Policy on Deviating Samples, all UKAS accredited testing laboratories are required to notify their clients that calibration or test results may be invalid where samples are found to be deviating. It is the opinion of ACSE that the term invalid should be interpreted as 'not fully representative of the sample taken at source'.

Table 1: Accredited Water Analysis

Determinand	Method Ref	Acceptable Container	ACSE Container	Preservation	Maximum Holding Time	Other Comments
Anions (Cl, F, SO₄)	MT/ACSE/204	Plastic or glass.	1 Litre Plastic Bottle 	Cool 5±3°C	28 days	If F to be determined do not use PTFE container.

Determinand	Method Ref	Acceptable Container	ACSE Container	Preservation	Maximum Holding Time	Other Comments
Anions (PO₄)	MT/ACSE/204	Polyethylene, PVC or glass. Glass preferred.	250ml Plastic Bottle + Preservative 	Acidify to pH 1-2 with HNO ₃ . Cool 5±3°C	28 days	
Anions (NO₃)	MT/ACSE/204	Plastic or glass.	250ml Plastic Bottle + Preservative 	Acidify to pH 1-2 with HCl. Cool 5±3°C	7 days	
Anions (NO₂)	MT/ACSE/204	Plastic or glass.	1 Litre Plastic Bottle 	Cool 5±3°C	24 hours	
Electrical Conductivity	MT/ACSE/303	Plastic or borosilicate glass.	1 Litre Plastic Bottle 	Cool 5±3°C	24 hours	Fill container completely to exclude air.

Determinand	Method Ref	Acceptable Container	ACSE Container	Preservation	Maximum Holding Time	Other Comments
pH	MT/ACSE/301	Plastic or glass.	1 Litre Plastic Bottle 	Cool 5±3°C	1 day	Fill container completely to exclude air.
Metals by ICP	MT/ACSE/205	Plastic.	250ml Plastic Bottle + Preservative 	Acidify to pH 1-2 with HNO ₃ . Cool 5±3°C	28 days	
Total Dissolved Solids	MT/ACSE/304	Plastic or glass.	1 Litre Plastic Bottle 	Cool 5±3°C	7 days	
Phenols	MT/ACSE/107	Borosilicate glass (amber) with PTFE liner. Solvent washed.	180ml Amber Glass Jar 	Acidify to <pH4 with H ₂ SO ₄ . Cool 5±3°C	21 days	

Determinand	Method Ref	Acceptable Container	ACSE Container	Preservation	Maximum Holding Time	Other Comments
Phenols (Low Level)	MT/ACSE/107	Borosilicate glass (amber) PTFE liner. Solvent washed.	1 Litre Amber Glass Jar 	Acidify to pH4 with H_2SO_4 . Cool $5\pm 3^\circ C$	21 days	
Mercury by Cold Vapour	MT/ACSE/202	Plastic or borosilicate glass.	250ml Plastic Bottle + Preservative 	Acidify to pH 1-2 with HNO_3 . Cool $5\pm 3^\circ C$	6 months	
Ammonium	MT/ACSE/203	Plastic or glass.	250ml Plastic Bottle + Preservative 	Water to be filtered. Acidify to pH 1-2 with H_2SO_4 . Cool $5\pm 3^\circ C$	21 Days	
BOD	MT/ACSE/306	Plastic or glass.	1 Litre Plastic Bottle 	Cool $5\pm 3^\circ C$	24 hours	Keep samples in dark.








Determinand	Method Ref	Acceptable Container	ACSE Container	Preservation	Maximum Holding Time	Other Comments
COD	MT/ACSE/307	Plastic or glass.	250ml Plastic Bottle + Preservative 	Acidify to pH 1-2 with H ₂ SO ₄ . Cool 5±3°C	6 months	
Suspended Solids	MT/ACSE/305	Plastic or glass.	1 Litre Plastic Bottle 	Cool 5±3°C	2 days	
TOC/DOC	MT/ACSE/103	Plastic or Glass.	250ml Plastic Bottle + Preservative 	Acidify to pH 1-2 with H ₂ SO ₄ . Cool 5±3°C	7 days	DOC: Waters shall be filtered before acidifying to pH 1-2 with H ₂ SO ₄ .

Table 2: Accredited Soils and Granular Waste Analysis

Determinand	Method Ref	Acceptable Container	ACSE Container	Preservation	Maximum Holding Time	Other Comments
pH	MT/ACSE/301	Glass or plastic.	1 Litre Plastic Tub 	Cool 5±3°C	7 days	For wet soil. Dried soil may be kept 6 months at 5±3°C.
Total Extractable Metals (ICP)	MT/ACSE/201	Glass or plastic.	1 Litre Plastic Tub 	Cool 5±3°C	6 months	
TPH	MT/ACSE/105	Glass.	180ml Amber Glass Jar 	Cool 5±3°C	7 days	Extended to 1 month if sample dried by adding sodium sulphate.
BTEX	MT/ACSE/101	Glass. Fill container to minimum headspace.	180ml Amber Glass Jar 	Cool 5±3°C	4 days	

Determinand	Method Ref	Acceptable Container	ACSE Container	Preservation	Maximum Holding Time	Other Comments
PAH	MT/ACSE/106	Glass.	180ml Amber Glass Jar 	Cool 5±3°C	14 days	
Loss on Ignition	MT/ACSE/302	Glass or plastic.	1 Litre Plastic Tub 	None	28 days	
WAC Leachate Preparation	LP/ACSE/101	Glass or plastic.	1 Litre Plastic Tub 	Cool 5±3°C	28 days	
TOC	MT/ACSE/102	Glass.	1 Litre Plastic Tub 	Cool 5±3°C	28 days	

Determinand	Method Ref	Acceptable Container	ACSE Container	Preservation	Maximum Holding Time	Other Comments
PCBs	MT/ACSE/104	Glass.	180ml Amber Glass Jar 	Cool 5±3°C	28 days	
Mercury (CVAA)	MT/ACSE/202	Glass or plastic.	1 Litre Plastic Tub 	Cool 5±3°C	6 months	

Please contact us if you require further information or assistance in the supply of suitable containers for your analysis.

ACS Environmental Testing Ltd. - Unit 14B Blackhill Road West, Holton Heath Trading Park, Poole, Dorset, BH16 6LE / Tel: 01202 628680