

### Overview

This unit is for those with responsibility for carrying out routine sampling activities using prescribed standard operating procedures, involving the taking of samples and conveyance of samples to the point of analysis. Such samples require limited judgment and involve following standard operating procedures. The equipment to be used, the conditions necessary for taking the sample and the specific operations to be performed are defined in written instructions. Responsibility is limited to carrying out the defined procedure and recording the result. Any deviations from the standard operating procedures are referred to others for action.

This unit deals with the following:

- 1 preparing for sampling
- 2 checking equipment and conditions for sampling
- 3 conducting sample taking safely
- 4 obtaining the required sample
- 5 maintaining the integrity of the sample
- 6 recording details of the sample
- 7 identifying point of analysis

During this work you must take account of the relevant worksite operational requirements, procedures and safe working practices as they apply to you.

### Previous Version

None

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## Sample from water systems

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### Performance criteria

- You must be able to:*
- P1 work safely at all times, complying with health and safety procedures in line with company policies
  - P2 identify the samples that need to be taken for the task
  - P3 ensure that all required resources are ready and available
  - P4 ensure that the equipment selected is appropriate to sampling procedure
  - P5 check that the equipment is in serviceable condition
  - P6 ensure that the samples are taken following sampling plans and company operating procedures
  - P7 assess the conditions for sampling against the sampling plans and the impact on sample quality
  - P8 deal with contingencies in line with company policy
  - P9 control the conditions for sampling in accordance with the procedures
  - P10 label the sample legibly in line with the procedures
  - P11 record information about the sample accurately and legibly using documentation in line with company procedures
  - P12 stabilise and maintain the condition of the sample
  - P13 progress the sample to the point of analysis in accordance with the work plan

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### Knowledge and understanding

*You need to know and understand:*

- K1 what your personal responsibilities with regard to health and safety in the working area are
- K2 what your legal responsibility for your own health and safety, and the health and safety of others is
- K3 what working practices ensure that the working environment is conducive to good health
- K4 what the approved codes of practice/working practices are and why it is important to follow them
- K5 how and when to complete a work task risk assessment
- K6 when specific site requirements are in place and what to do to comply with them
- K7 what are the essential features of a sampling plan
- K8 what are the procedures for sampling
- K9 what are the principles of sampling systems
- K10 the location of sample point
- K11 what are the purposes of sampling and the specific use to which the sample is to be put
- K12 what resources are required for the task
- K13 what equipment should be used for sampling
- K14 how to identify defective equipment and the action to take
- K15 the different methods that could be used for sampling
- K16 existing standards and guidelines which apply to sampling
- K17 why it is important to control sampling conditions and methods for establishing them
- K18 the impact of different sampling conditions on sample quality
- K19 what factors can affect sample quality
- K20 how to compare the conditions of sampling against the sampling plan
- K21 how to amend the sample plan and deal with problems
- K22 how to complete documentation legibly
- K23 what documentation and labelling systems should be used to ensure traceability during sampling

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- K24 what factors influence the integrity of the sample
- K25 what are the basic principles and techniques of maintaining sample integrity
- K26 when to clean sampling equipment and materials and dispose of other equipment and materials according to working practices
- K27 the different ways of transporting, storing and packaging of samples in a stable condition

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### Additional Information

#### Glossary

##### **Conditions**

Access, location, sampling points, health and safety, environment, hazards and risks

##### **Company operating procedures**

Includes company requirements, instructions and method statements

##### **Sampling plans**

Time, frequency, sequence, location and methodology

##### **Standards and guidelines**

Includes relevant health, safety and environmental regulations, COSHH, Codes of Practice, British, European and International standards, site procedures

##### **Resources**

Personal protective equipment, sampling equipment and materials, documentation, packaging, sampling plan

##### **Documentation**

Reports, records, labelling and identification sheet

##### **Equipment**

Sample containers, ladders, sample coolers, pumps, sample collectors

##### **Point of analysis**

On-site test kit, external or internal laboratory

##### **Samples**

Analysis for chemical parameters, Legionella bacteria, other micro organisms, physical conditions

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**Developed by** Cogent SSC

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**Status** Original

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**Originating organisation** Cogent SSC

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**Relevant occupations** Engineering and manufacturing technologies; Manufacturing technologies; Process, Plant and Machine Operatives; Process Operatives

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**Suite** Water Treatment Management

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**Key words** Water; treatment; sample; systems

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