

SCHEDULE 4

Sampling and analysis

PART 1

General

Samples: general

1.—(1) The local authority must ensure, so far as reasonably practicable, that the appropriate requirements are satisfied when—

- (a) taking, handling, transporting and storing a sample required to be taken in accordance with this Schedule;
- (b) analysing such a sample; or
- (c) causing any such sample to be taken, handled, transported, stored or analysed.

(2) In this paragraph, “the appropriate requirements” means such of the following as are applicable—

- (a) the sample is representative of the quality of the water at the time of sampling;
- (b) the person taking a sample is subject to a system of quality control to an appropriate standard checked from time to time by a suitably accredited body;
- (c) the sample is not contaminated when being taken;
- (d) the sample is kept at such a temperature and in such conditions as secure that there is no material alteration of the concentration or value for the measurement or observation of which the sample is intended;
- (e) the sample is analysed as soon as reasonably practicable after it has been taken—
 - (i) by, or under the supervision of, a person who is competent to perform that task; and
 - (ii) with the use of such equipment as is suitable for the purpose;
- (f) the collection and transportation of samples, or measurements recorded by continuous monitoring must be subject to a system of quality control to an appropriate standard checked from time to time by a suitably accredited body.

(3) When undertaking the activity described in—

- (a) sub-paragraph (1)(a), the local authority must demonstrate compliance with any of EN ISO/IEC 17024, EN ISO/EIC 17025, or another equivalent standard accepted at international level;
- (b) sub-paragraph (1)(b), the local authority must demonstrate compliance with EN ISO/EIC 17025 or another equivalent standard accepted at international level.

(4) Implementation of the requirement in sub-paragraph (3)(a) may be delayed for a period of no more than 24 months beginning on the day on which these Regulations come into force.

(5) In this paragraph, “suitably accredited body” means any person accredited by the United Kingdom Accreditation Service⁽¹⁾.

(1) See S.I. 2009/3155 for the appointment of the United Kingdom Accreditation Service as the national accreditation body.

Analysing samples: microbiological parameters

2. For each parameter specified in the first column of Table 1 in Part 2 of this Schedule the method of analysis is specified in the second column of that table.

Analysing samples: chemical and indicator parameters

3.—(1) On or before 31 December 2019, the local authority may apply the method of analysis for chemical and indicator parameters in either sub-paragraph (3) or sub-paragraph (4).

(2) After 31 December 2019, the local authority must apply the method of analysis for chemical and indicator parameters in sub-paragraph (4).

(3) For each parameter specified in the first column of Table 2 in Part 2 of this Schedule the method is one that is capable of—

- (a) measuring concentrations and values with the trueness and precision specified in the second and third columns of that table, and
- (b) detecting the parameter at the limit of detection specified in the fourth column of that table.

(4) For each parameter specified in the first column of Table 3 in Part 2 of this Schedule the method is one that is capable of measuring concentrations equal to—

- (a) the parametric value with a limit of quantification of 30% or less of the relevant parametric value (as contained in Schedule 1), and
- (b) the uncertainty of measurement in the second column of that table.

(5) The method of analysis used for odour and taste parameters must be capable of measuring values equal to the parametric value with a precision of 1 dilution number at 25°C.

(6) For these purposes—

- (a) “limit of detection” is—
 - (i) three times the relative within-batch standard deviation of a natural sample containing a low concentration of the parameter; or
 - (ii) five times the relative within-batch standard deviation of a blank sample;
- (b) “precision” (the random error) is twice the standard deviation (within a batch and between batches) of the spread of results about the mean. Acceptable precision is twice the relative standard deviation. Further specifications are set out in ISO 17025;
- (c) “trueness” (the systematic error) is the difference between the mean value of the large number of repeated measurements and the true value. Further specifications are set out in ISO 17025;
- (d) “uncertainty of measurement” is a non-negative parameter characterising the dispersion of the quantity values being measured, based on the information used.

Authorisation of alternative methods of analysis

4.—(1) The Welsh Ministers may authorise a method different from those set out in paragraph 3(2) or 3(3) if satisfied that it is at least as reliable.

(2) An authorisation may be time-limited and may be revoked at any time.

Sampling and analysis by persons other than local authorities

5.—(1) A local authority may enter into an arrangement for any person to take and analyse samples on its behalf.

(2) A local authority must not enter into an arrangement under sub-paragraph (1) unless—

- (a) it is satisfied that the task will be carried out promptly by a person competent to perform it, and
- (b) it has made arrangements that ensure that any breach of these Regulations is communicated to it immediately, and any other result is communicated to it within 28 days.