

SCHEDULE 4

Sampling and analysis

PART 1

General

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.