

SCHEDULE 2

METHODS OF ANALYSIS

PART II

5b.

EXTRACTION OF PHOSPHORUS BY 2% CITRIC ACID

1 SCOPE AND FIELD OF APPLICATION

1. This method is applicable to fertilisers in Groups 2(b), 3(b) and 4(b) of Section A of the Table in Schedule 1 of the Fertilisers Regulations (Northern Ireland) 1990 in respect of which an indication of the phosphorus soluble in 2% citric acid is required.

2 PRINCIPLE

2. The phosphorus is extracted from the fertiliser with a 2% citric acid solution (20 g per litre) in given conditions.

3 REAGENT

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3.1 2% citric acid solution (20 g per litre), prepared from citric acid monohydrate.

4 APPARATUS

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4.1 Rotary shaker: 35 — 40 turns per minute.

5 PREPARATION OF THE SAMPLE

5. The analysis is carried out on the product as received after carefully mixing the original sample to ensure it is homogeneous.

See Method 1.

6 PROCEDURE

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Extraction

6.1 Weigh to the nearest 0.001 g, 5 g of the prepared sample, and place it in a dry flask with a sufficiently wide neck, with a capacity of 600 ml, allowing the liquid to be shaken thoroughly. Add 500 ml of the citric acid solution (3.1) at $20 \pm 1^\circ\text{C}$. When adding the first few ml of the reagent, shake vigorously by hand to stop the formation of lumps and to prevent the substance sticking to the sides of the flask. Close the flask with a rubber stopper and shake it in the rotary shaker (4.1) for exactly 30 minutes at a temperature of $20 \pm 2^\circ\text{C}$. Filter immediately through a dry fluted filter, into a dry glass receiver and discard the first 20 ml of the filtrate. Continue the filtering until a sufficient quantity of filtrate is obtained to carry out the phosphorus determination.

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Determination

6.2 Determine the phosphorus according to Method 6a or Method 6b on an aliquot part of the clear filtrate.