

SCHEDULE 2
METHODS OF ANALYSIS

PART I

9c.

EXTRACTION OF PHOSPHORUS BY 2% CITRIC ACID

1 SCOPE

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This method is for the determination of phosphorus soluble in 2% citric acid.

2 FIELD OF APPLICATION

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Subject to regulation 6(3) only applicable to basic slag fertilisers in Group 2(a) of Section A and Groups 1, 2 and 4 of Section B of the Table in Schedule 1 of the Fertilisers Regulations 1991.

3 PRINCIPLE

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Extraction of the phosphorus in the fertiliser with a 2% citric acid solution under specified conditions.

4 REAGENT

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4.1 2% citric acid solution (20 g per litre), prepared from citric acid monohydrate.

Note: Verify the concentration of this citric acid solution by titrating 10 ml with a 0.1M sodium hydroxide standard solution using phenolphthalein as an indicator. If the concentration is correct, the titre should be 28.55 ml.

5 APPARATUS

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5.1 Rotary shaker: 35 – 40 turns per minute.

PREPARATION OF THE SAMPLE

6. The analysis is carried out on the product as received, without grinding, after carefully mixing the original sample to ensure it is homogeneous. See Method 1.

7 PROCEDURE

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Status: This is the original version (as it was originally made). This item of legislation is currently only available in its original format.

Extraction

7.1 Weigh to the nearest 0.001 g, 5 g of the mixed sample and place it in a dry flask with a sufficiently wide neck, with a capacity of 600 ml, to allow the liquid to be shaken thoroughly. Add 500 ml+1 ml of the citric acid solution (4.1) at 20+1 C. When adding the first portion of the reagent shake vigorously by hand to stop the formation of lumps and to prevent the sample sticking to the sides. Close the flask with a rubber stopper and shake it on the rotary shaker (5.1) for exactly 30 minutes at a temperature of 20+2 C.

Filter immediately through a dry fluted filter, into a dry glass receiver and discard the first 20 ml of the filtrate. Continue the filtration until a sufficient quantity of filtrate is obtained to carry out the phosphorus determination.

Determination

7.2 Determine the phosphorus using Method 10 on an aliquot portion of the clear filtrate.