

## SCHEDULE 2

### METHODS OF ANALYSIS

#### 9a.

#### *EXTRACTION OF TOTAL PHOSPHORUS BY MINERAL ACIDS*

##### **1 SCOPE**

1. This method is for the determination of phosphorus soluble in mineral acids.

##### **2 FIELD OF APPLICATION**

2. Applicable exclusively to the phosphate fertilisers listed 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 (Northern Ireland) 1990(1).

##### **3 PRINCIPLE**

3. Extraction of the phosphorus in the fertiliser with a mixture of nitric acid and sulphuric acid.

##### **4 REAGENTS**

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4.1 Sulphuric acid (d = 1.84 g/ml).

4.2 Nitric acid (d = 1.40 g/ml).

##### **5 APPARATUS**

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- 5.1 A Kjeldahl flask, with a capacity of at least 500 ml, or a 250 ml round-bottomed flask with a glass tube forming a reflux condenser.

##### **6 PREPARATION OF THE SAMPLE**

6. See Method 1.

##### **7 PROCEDURE**

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##### *Extraction*

- 7.1 Weigh to the nearest 0.001 g, 2.5 g of the prepared sample and place it in a dry Kjeldahl flask. Add 15 ml water and stir so as to suspend the substance. Add 20 ml nitric acid (4.2) and carefully add 30 ml sulphuric acid (4.1). When the initial violent reaction has ceased, slowly bring the contents of the flask to boiling and boil for 30 minutes. Allow to cool and then carefully add with mixing about 150 ml water and boil for 15 minutes.

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Cool completely and transfer the liquid quantitatively to a 500 ml graduated flask. Make up to volume, mix and filter through a dry fluted filter, discarding the first portion of the filtrate.

*Determination*

7.2 Determine the phosphorus according to Method 10 on an aliquot part of the clear filtrate.