

SCHEDULE 2
METHODS OF ANALYSIS

PART I

9b.

EXTRACTION OF PHOSPHORUS BY 2% FORMIC ACID

1 SCOPE

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

2 FIELD OF APPLICATION

2. Applicable only to soft natural phosphate.

3 PRINCIPLE

3. To differentiate between hard natural phosphates and soft natural phosphates, phosphorus soluble in formic acid is extracted under specified conditions.

4 REAGENTS

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- 4.1 Formic acid, 2% (20 g per litre): dilute 82 ml formic acid (concentration 98 – 100% p = 1.22 g/ml) to 5 litres with distilled water.

5 APPARATUS

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- 5.1 500 ml graduated flask with a wide neck (eg Stohmann).
- 5.2 Rotary shaker, 35 – 40 turns per minute.

6 PREPARATION OF THE SAMPLE

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See Method 1.

7 PROCEDURE

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7.1 Extraction

Weigh to the nearest 0.001 g, 5 g of the prepared sample and place it in a dry 500 ml graduated flask (5.1). While continuously rotating the flask by hand, add the formic acid (4.1) (at 20±1 C) until it is approximately 1 cm below the graduation mark. Then make up to the volume. Close the flask with a rubber stopper and shake for 30 minutes (5.2). Filter the solution through a dry fluted filter, into a dry receiver, discarding the first portion of the filtrate.

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7.2. Determination

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