

SCHEDULE 2

METHODS OF ANALYSIS

9b.

EXTRACTION OF PHOSPHORUS BY 2% FORMIC ACID

1 SCOPE

1. This method is for the determination of phosphorus soluble in 2% formic acid (20 g per litre).

2 FIELD OF APPLICATION

2. Soft natural phosphate exclusively.

3 PRINCIPLE

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

4 REAGENT

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

5 APPARATUS

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- 5.1 500 ml graduated flask (for example Stohmann).
- 5.2 Rotary shaker, 35 — 40 turns per minute.

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, 5 g of the prepared sample and place it in a dry 500 ml graduated Stohmann flask (5.1) with a wide neck. While continuously rotating the flask by hand, add the formic acid (4.1) (at $20 \pm 1^\circ\text{C}$) until it is approximately 1 cm below the graduation mark and make up to the volume. Close the flask with a rubber stopper and shake for 30 minutes at $20 \pm 2^\circ\text{C}$ on the rotary shaker (5.2). Filter the solution through a dry fluted filter, into a dry receiver, discarding the first portion of the filtrate.

Determination

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