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# INTERNATIONAL STANDARD



# 5316

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INTERNATIONAL ORGANIZATION FOR STANDARDIZATION • МЕЖДУНАРОДНАЯ ОРГАНИЗАЦИЯ ПО СТАНДАРТИЗАЦИИ • ORGANISATION INTERNATIONALE DE NORMALISATION

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## Fertilizers — Extraction of water-soluble phosphates

*Engrais — Mise en solution des phosphates solubles dans l'eau*

First edition — 1977-08-01

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UDC 631.8 : 543.217.4

Ref. No. ISO 5316-1977 (E)

**Descriptors :** fertilizers, chemical analysis, determination of content, phosphorus oxides.

## FOREWORD

ISO (the International Organization for Standardization) is a worldwide federation of national standards institutes (ISO member bodies). The work of developing International Standards is carried out through ISO technical committees. Every member body interested in a subject for which a technical committee has been set up has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work.

Draft International Standards adopted by the technical committees are circulated to the member bodies for approval before their acceptance as International Standards by the ISO Council.

International Standard ISO 5316 was developed by Technical Committee ISO/TC 134, *Fertilizers*, and was circulated to the member bodies in March 1976.

It has been approved by the member bodies of the following countries :

|                |                |                       |
|----------------|----------------|-----------------------|
| Chile          | Ireland        | Poland                |
| Czechoslovakia | Israel         | Portugal              |
| Finland        | Italy          | South Africa, Rep. of |
| France         | Korea, Rep. of | Spain                 |
| Germany        | Netherlands    | Turkey                |
| Hungary        | New Zealand    | United Kingdom        |
| India          | Norway         | U.S.S.R.              |
| Iran           | Philippines    | Yugoslavia            |

The member body of the following country expressed disapproval of the document on technical grounds :

Brazil

# Fertilizers — Extraction of water-soluble phosphates

## 1 SCOPE AND FIELD OF APPLICATION

This International Standard specifies a method for the extraction of water-soluble phosphorus(V) oxide from fertilizers.

It is applicable to all fertilizers for which the determination of water-soluble phosphorus(V) oxide content is required.

## 2 REFERENCE

ISO . . ., *Fertilizers — Sampling*.<sup>1)</sup>

## 3 PRINCIPLE

Dissolution in water of the phosphorus(V) oxide in a test portion by shaking, using a rotary shaker under specified conditions.

## 4 REAGENT

**Distilled water**, or **deionized water** of equivalent purity.

## 5 APPARATUS

Ordinary laboratory apparatus and in particular

**5.1 Wide-necked one-mark volumetric flask** (for example Stohmann flask), of capacity 500 ml.

**5.2 Rotary shaker**, capable of being controlled at a rotational frequency of 35 to 40 min<sup>-1</sup>.

## 6 SAMPLING

See ISO . . .

## 7 PROCEDURE

### 7.1 Test portion

Weigh, to the nearest 0,001 g, about 5 g of the laboratory sample and place in the volumetric flask (5.1).

### 7.2 Extraction

Add 400 ml of the water (clause 4) at between 20 and 25 °C.

Shake gently by hand to disperse particulate matter and to prevent the test portion sticking to the sides of the flask. Place the flask on the shaker (5.2), controlled at 35 to 40 min<sup>-1</sup>, and shake for 30 min.

Dilute to the mark with the water, mix carefully by hand shaking, and filter through a dry folded filter paper of medium speed, free from phosphate, collecting the filtrate in a dry receiver clean and free from phosphate. Reject the first 50 ml of filtrate.

1) In preparation.

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