



**RWANDA
STANDARD**

**DRS
472**

First edition

2021-mm-dd

**Calcium phosphates feed grade —
Specification**

ICS 65.120

Reference number

DRS 472: 2021

© RSB 2021

In order to match with technological development and to keep continuous progress in industries, standards are subject to periodic review. Users shall ascertain that they are in possession of the latest edition

© RSB 2021

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm, without prior written permission from RSB.

Requests for permission to reproduce this document should be addressed to:

Rwanda Standards Board

P.O Box 7099 Kigali-Rwanda

KK 15 Rd, 49

Tel. +250 788303492

Toll Free: 3250

E-mail: info@rsb.gov.rw

Website: www.rsb.gov.rw

ePortal: www.portal.rsb.gov.rw

Contents

Page

Forewordiv

1 Scope 1

2 Normative references 1

3 Terms and definitions 1

4 Requirements 2

4.1 Description 2

4.2 Specific requirements 2

5 Heavy metal contaminants 2

6 Packaging 3

7 Labelling 3

8 Sampling 3

Copy for public comments

Foreword

Rwanda Standards are prepared by Technical Committees and approved by Rwanda Standards Board (RSB) Board of Directors in accordance with the procedures of RSB, in compliance with Annex 3 of the WTO/TBT agreement on the preparation, adoption and application of standards.

The main task of technical committees is to prepare national standards. Final Draft Rwanda Standards adopted by Technical committees are ratified by members of RSB Board of Directors for publication and gazettment as Rwanda Standards.

DRS 472 was prepared by Technical Committee RSB/TC 008 on *Animal feeding stuffs*.

In the preparation of this standard, reference was made to the following standards:

- 1) IS 5470: Dicalcium Phosphate, Animal Feed Grade — Specification
- 2) KS 2577: Calcium phosphates Feed Grade — Specification

The assistance derived from the above source is hereby acknowledged with thanks.

Committee membership

The following organizations were represented on the Technical Committee on *Animal feeding stuffs* (RSB/TC 008) in the preparation of this standard.

Agrotech Ltd

Cheeter Group Ltd

Gasabo District

Gorilla Feeds Ltd

Intertek Morocco

Nyabihu TVET School

Nyarutarama Business Incubation Centre

Prodev Ltd

Rwanda Agriculture and Animal Resources Development Board (RAB)

Rwanda Best Farm

DRS 472: 2021

Rwanda Food and Drug Authority (RFDA)

Zamura Feeds Ltd

Rwanda Standards Board (RSB) – Secretariat

Copy for public comments

Calcium phosphates Feed Grade — Specification

1 Scope

1.1 This Draft Rwanda Standard specifies the requirements, sampling and test methods for calcium phosphates feed grade for use in animal feeding.

1.2 This standard applies to all calcium phosphates fed directly to the animal or used for manufacturing mineral mixtures and feeds.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

AOAC 952.14, *Mercury in food — Colorimetric dithizone method*

AOAC 957.22, *Arsenic (Total) in Feeds — Colorimetric Test*

AOAC 974.27, *Cadmium, Chromium, Copper, Iron, Lead, Magnesium, Manganese, Silver, and Zinc in Water — Atomic Absorption Spectrophotometric Method*

AOAC 975.08, *Fluorine in animal feed — Distillation method*

AOAC 999.11, *Lead, Cadmium, Copper, Iron, and zinc in foods. Atomic absorption spectrophotometry after dry ashing*

RS ISO 5985, *Animal feeding stuffs — Determination of ash insoluble in hydrochloric acid*

RS ISO 6490-1, *Animal feeding stuffs — Determination of calcium content — Part 1: Titrimetric method*

RS ISO 6491, *Animal feeding stuffs — Determination of phosphorus content — Spectrometric method*

RS ISO 6496, *Animal feeding stuffs — Determination of moisture and other volatile matter content*

RS ISO 6497, *Animal feeding stuffs — Sampling*

3 Terms and definitions

For the purposes of this standard, the following terms and definitions apply.

3.1

MonoCalcium Phosphate (MCP)

inorganic compound with chemical formula: $\text{Ca}(\text{H}_2\text{PO}_4)_2$

3.2

Di-Calcium Phosphate (DCP)

type of calcium phosphate which is di-basic. It is usually found as dihydrate, with the chemical formula but can be thermally converted into anhydrous form

4 Requirements

4.1 Description

4.1.1 The material shall consist of naturally occurring or synthetic Calcium Phosphate. It shall be in the form of free flowing per or granules. It shall be free from visible foreign matter and toxic substances.

4.1.2 The per form shall be of such fineness that not less than 98.5 percent by weight of the material shall pass through 45 Micron sieve.

4.2 Specific requirements

Calcium phosphates Feed Grade shall comply with the specific requirements given in table 1 when tested in accordance with test methods specified therein.

Table 1—Specific requirements for Calcium phosphates Feed Grade

S/N	Parameter (Percentage by weight)	Limits		Test method
		DCP	MCP	
i.	Moisture percentage by weight, (Max)	5	5	RS ISO 6496
ii.	Calcium (as Ca) percentage by weight,	20-23	20-23	RS ISO 6490-1
iii.	Phosphorus (as P) percentage by weight, (Min)	18	18	RS ISO 6491
iv.	Fluorine(as F) percentage by weight, (Max)	0.2	0.2	AOAC 975.08
v.	Acid insoluble ash percentage by weight, Max	1.0	1.0	RS ISO 5985

5 Heavy metal contaminants

The heavy metal contaminants, if present, shall not exceed the limits stipulated in Table 2 when tested in accordance with test methods specified therein.

Table 2— Heavy metal contaminants limits for Calcium phosphates Feed Grade

S/N	Parameter	Maximum limits, mg/kg	Test method
i.	Arsenic, As	20.0	AOAC 957.22
ii.	Cadmium, Cd	30.0	AOAC 999.11
iii.	Mercury, Hg	1.0	AOAC 952.14
iv.	Lead, Pb	30.0	AOAC 999.11
v.	Chromium	500	AOAC 974.27

6 Packaging

5.1 Calcium phosphates feed grade for sale shall be packed in containers which are of sufficient strength and sufficiently sealed so as to withstand reasonable handling without tearing, bursting or falling open during normal handling and transportation.

5.2 Each container for Calcium phosphates feed grade shall be clean and free from visible indications of contamination and infestations

7 Labelling

Each package of Calcium phosphates feed grade shall be legibly and indelibly labelled with the following:

- a) name of the feed as “Mono Calcium Phosphate (MCP), Di-Calcium Phosphate (DCP)”;
- b) name and physical address of the manufacturer;
- c) net weight in metric units;
- d) directions and precautions for use;
- e) batch number /lot identification;
- f) manufacturing date;
- g) expiry date; and
- h) storage instructions.

8 Sampling

Sampling of calcium phosphates feed grade shall be in accordance RS ISO 6497

Copy for public comments

Price based on 3 pages

©RSB 2021 - All rights reserved