

**KENYA STANDARD**

**KS 2380: 2022**

**Chelated Micro Nutrient Fertilizers-  
Specification**

PUBLIC REVIEW DRAFT

**DRAFT STANDARD AUGUST 2022**

**SECOND EDITION**

## TECHNICAL COMMITTEE REPRESENTATION

The following organizations were represented on the Technical Committee:

Kenya Agricultural and Livestock Research Organization (KALRO)  
Government chemist  
Mea Ltd  
Amiran (K) Ltd  
Chemagro International Ltd.  
Yara East Africa  
Kenya Tea Development Agency.  
Kenya Plant Health Inspectorate Services (KEPHIS)  
State department of Crop Development and Agricultural Research  
State department of livestock  
Osho Chemicals Ltd  
Elgon chemicals Ltd  
Toyota Tshuso Fertilizers Africa  
University of Nairobi-Department of plant science and crop protection  
OCP Africa  
ICL Fertilizers  
Lachlan(K) Ltd  
Wanda Agriculture  
National Potato Council of Kenya  
Kenya Industrial Research and development Institute  
Top serve East Africa  
Elgon(K) Ltd  
Kenya flower council  
Kenya Chemical society  
SGS(K) Ltd  
BASF Chemicals  
Twiga Chemicals  
Sanergy Ltd  
SABIC Ltd  
Society of crop agribusiness advisors(SOCAA)  
Samsung C&T  
Kenya Bureau of Standards — Secretariat

## REVISION OF KENYA STANDARDS

In order to keep abreast of progress in industry, Kenya Standards shall be regularly reviewed. Suggestions for improvements to published standards, addressed to the Managing Director, Kenya Bureau of Standards, are welcome.

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### **Foreword**

This Kenya standard has been prepared by the Technical Committee on Fertilizers and soil conditioners under the guidance of standards project committee and it is in accordance with the procedures of the Kenya bureau of standards.

During the preparation of this standard limits for selenium were reviewed. The requirement on absence of sodium and chlorides was also removed as it seemed impractical due to the nature of the products.

In drafting this standard reference was made to the following documents

- 1.. FAO Mineral fertilizer specifications, 2012

Acknowledgement is hereby made for assistance derived from the above documents

## **Chelated Micro Nutrient Fertilizers-Specification**

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### **1.0 Scope**

This Kenya Standard specifies the requirements, and prescribes methods of sampling and tests for Chelated micro nutrient fertilizers.

### **2.0. Definitions and terms**

The terms and abbreviations used in this standard are in accordance with the explanations contained in this document: ISO 8157:2015; fertilizers and soil conditioners: vocabulary

### **3.0 Description**

The fertilizer shall be either a solid, a homogenous liquid, or a suspension concentrate

#### **3.1. Requirements**

- i) The fertilizer shall be chelated with the appropriate chelating agent for fast absorption of all individual micro elements in to the plants.
- ii) The chelating agent used shall not be harmful to plant

#### **3.2 Physical**

- a) The fertilizer shall be free from foreign matter
- b) It shall be free from hard lumps
- c) free from harmful substances

#### **3.3. Chemical.**

Each Chelated Micronutrient Fertilizer shall have a guarantee of the element(s) contained.

### 3.4 Heavy metal contaminants

The heavy metal contaminants, if present, shall not exceed the limits stipulated in Table 2.

**Table 2 — Heavy metal contaminants limits**

SL NO	Parameter	Limits in ppm	Test method
i)	Arsenic, As, max.	20.0	AOAC
ii)	Cadmium, Cd, max.	7.0	AOAC
iii)	Mercury, Hg, max.	0.1	AOAC
iv)	Selenium, Se, max.	10.0	AOAC
v)	Lead, Pb, max.	30.0	AOAC
Vi)	Chromium, Cr, max	500	AOAC

## 4 Packaging and marking /labelling

### 4.1 Packaging

4.1.1 The fertilizer shall be packaged in materials that ensures the product integrity and quality and protect it against physical damage, chemical and moisture contamination.

4.1.2. The fill of the package shall comply with the weight and measures act CAP 513 of the laws of Kenya

4.1.3 The disposal of used package and condemned fertilizer shall comply with EMCA 1999 no.8 of the disposal of solids and liquid wastes

### 4.2. Marking/ labelling

The following information shall be clearly and indelibly marked on each package or container.

- i. Name, address and physical location of manufacturer/packer/importer;
- ii. name of the fertilizer
- iii. date of manufacture,
- iv) expiry date
- v). batch/lot number
- Vi) the net weight of the fertilizer in the package; in metric units
- vii) Chelating agents
- viii) Active ingredients content
- ix) Storage and Handling instructions
- x) instructions for use where applicable.
- xi) disposal instructions

xii. Country of origin;

#### **4 Certificate of analysis**

Each consignment shall be accompanied by a certificate of analysis.

#### **5.**

##### **Sampling**

This shall be done as per the relevant ISO Standards ISO 8633 and ISO 8634

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