

**BUREAU OF INDIAN STANDARDS**

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*भारतीय मानक मसौदा*

**मोनोक्रोतोफॉस, सोल्यूबल कान्सन्ट्रेट (एस एल) — विशिष्टि**

*(आइ एस 8074 का तीसरा पुनरीक्षण)*

*Draft Indian Standard*

**MONOCROTOPHOS, SOLUBLE CONCENTRATE (SL) —  
SPECIFICATION**

*(Third Revision of IS 8074)*

**ICS No. 65.100.10**

Pesticides Sectional Committee, FAD 01

**Last Date of Comments: 3 July 2024**

**FOREWORD**

*(Formal clauses will be added later)*

Monocrotophos, soluble concentrate (SL) is largely used in the control of insect and acarine pests of agricultural crops. It is generally manufactured to contain 36 percent (*m/m*) of monocrotophos.

This standard was published in 1976, and first revised in 1983. The second revision was issued in 1990 to update the various requirements in the light of the experience gained.

In this revision, the standard has been brought out in the latest style and format of the Indian Standards, and references to Indian Standards wherever applicable have been updated. It also incorporates two amendments issued to the previous version of this standard.

In the preparation of this standard, due consideration has been given to the provisions of the *Insecticides Act*, 1968 and the Rules framed thereunder. However, this standard is subject to the restrictions imposed under these, wherever applicable.

For the purpose of deciding whether a particular requirement of this standard is complied with, the final value, observed or calculated, expressing the result of a test or analysis, shall be rounded off in accordance with IS 2 : 2022. 'Rules for rounding off numerical values (*second revision*)' This number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

## 1 SCOPE

This standard prescribes requirements and the methods of sampling and test for monocrotophos, soluble concentrate (SL).

## 2 REFERENCES

The following Indian Standards contain provisions which through reference in this text, constitute provision of this standard. At the time of publication, the editions indicated were valid. All standards are subject to revision and parties to agreements based on this standard are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below:

<i>IS No.</i>	<i>Title</i>
IS 1070 : 2023	Reagent grade water — Specification ( <i>fourth revision</i> )
IS 1448 (Part 20) : 2019	Methods of test for petroleum and its products: Part 20 Determination of flash point - Abel closed - Cup method ( <i>third revision</i> )
IS 6940 : 1982	Methods of test for pesticides and their formulations ( <i>first revision</i> )
IS 8025 : 202X	Monocrotophos, technical — Specification ( <i>third revision</i> ) [Under preparation Doc: FAD 01(25476)WC]
IS 8190 (Part 2) : 1988	Requirements for packing of pesticides: Part 2 Liquid pesticides ( <i>second revision</i> )
IS 10627 : 1983	Methods for sampling of pesticidal formulations

## 3 REQUIREMENTS

### 3.1 Description

The material shall consist of monocrotophos, technical, dissolved in suitable solvent(s). It shall conform to IS 8025.

### 3.2 Physical

The material shall comply with the following physical requirements.

#### 3.2.1 Description

The material shall be in the form of radish brown liquid, one percent (*m/v*) solution of the material in water can be turbid with small oily droplets.

#### 3.2.2 Cold Test

No turbidity or separation of solid matter shall occur when the material is subjected to cold test at 10 °C as prescribed in IS 6940 or any other lower temperature as agreed to between the purchaser and the vendor.

#### 3.2.3 Flash Point (Abel)

When determined by the method prescribed in IS 1448 (Part 20), the flash point of the material shall be above 24.5 °C.

### 3.3 Chemical

The material shall comply with the following chemical requirements:

#### 3.3.1 *Monocrotophos Content*

When determined by the method prescribed in Annex A of IS 8025, the observed monocrotophos content, percent by mass, shall not differ from the declared nominal value by more than the tolerance limits indicated below:

<i>Nominal Value, percent</i>	<i>Tolerance limit, percent</i>	
Up to 9	+10 - 5	} of the nominal value
Above 9 and below 50	±5	
50 and above	+5 - 3	

The actual value of monocrotophos content shall be calculated to two decimal places and then rounded off to one decimal place before applying the tolerance.

#### 3.3.2 *Free Aceto-Acetic Acid Monomethyl-Amide (MMA) Content*

When determined by the method prescribed in Annex B of IS 8025, the free MMA content shall be not more than 4.0 percent by mass.

#### 3.3.3 *Acidity*

When determined by the method prescribed in IS 6940, acidity (as H<sub>2</sub>SO<sub>4</sub>), shall be not more than 2.5 percent by mass.

### 4 PACKING

The material shall be packed as per the requirements given in IS 8190 (Part 2).

### 5 MARKING

5.1 The containers shall be securely closed and shall bear legibly and indelibly the following information:

- Name of the material;
- Name and address of the manufacturer;
- Batch number;
- Date of manufacture;
- Date of expiry;
- Net quantity;
- Nominal monocrotophos content, percent (*m/m*);
- Cautionary notice as worded in the *Insecticides Act*, 1968, and Rules framed thereunder; and

j) Any other information required under the *Legal Metrology (Packaged Commodities) Rules, 2011*.

## **5.2 BIS Certification Marking**

The product(s) conforming to the requirements of this standard may be certified as per the conformity assessment schemes under the provisions of the *Bureau of Indian Standards Act, 2016* and the Rules and Regulations framed thereunder, and the products may be marked with the Standard Mark.

## **6 SAMPLING**

When freshly manufactured material in bulk quantity is offered for inspection, representative samples of the material shall be drawn and tested as prescribed in IS 10627 within 90 days of its manufacture. When the material is offered for inspection after 90 days of its manufacture, sampling shall be done as prescribed in IS 10627. However, the criteria for conformity of the material when tested, shall be the limits of tolerances, as applicable over the declared nominal value and given under clause **3.3.1** of the standard.

## **7 TESTS**

**7.1** Tests shall be carried out by appropriate methods as referred in **3.2.1, 3.2.2, 3.2.3, 3.3.1, 3.3.2** and **3.3.3**.

**7.2** For determination of monocrotophos content and free aceto-acetic acid monomethyl amide (MMA) content, weigh about 8.0 g of sample. The absorbance of the complex formed may be measured at 544 nm.

## **8 QUALITY OF REAGENTS**

Unless specified otherwise, pure chemicals and distilled water (*see* IS 1070) shall be employed in tests.

NOTE – ‘Pure chemicals’ shall mean chemicals that do not contain impurities which affect the results of analysis.