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**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

GB/T 24679.1-2017

**Equipment for crop protection -- Knapsack sprayers -- Part 1:
Test methods**

植物保护机械 背负式喷雾器 第1部分：试验方法

(English Translation)

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Foreword

--- GB/T 24679 "Plant Protection Machinery Knapsack Sprayer" to be divided into the following two parts.

--- Part 1. Test methods;

--- Part 2. Safety and environmental requirements.

This section GB/T 24679 Part 1.

This section drafted in accordance with GB/T 1.1-2009 given rules.

This Part replaces GB/T 24679.1-2009 "Plant Protection Machinery Knapsack Sprayer Part 1. Test requirements and methods." Compared with GB/T 24679.1-2009, in addition to editorial changes outside the main technical changes are as follows.

--- Modify the nominal volume of the tank, from 5L to 3L (see Chapter 1);

--- Increased fall height (600 ± 20) mm (see 4.5);

--- Modify the pressure gauge range, from $2\text{MPa} \pm 0.012\text{MPa}$ into $2.5\text{MPa} \pm 0.015\text{MPa}$ (see 4.11, 2009 version 4.13);

--- Modify the relative humidity from not less than 50% to not less than 30% (see 5.1, 2009 version 5.1);

--- Modify the vertical lifting height, from 200mm to (200 ± 20) mm (see 5.3.3, 2009 version 5.3.3);

- Modify the sprayer placed on the slope angle from 10 ° to 8.5 ° ± 0.2 ° (see 5.3.4, 2009 version 5.3.6);
- Increased strap absorbent (see 5.3.8);
- Increased aerosol component fluid resistance test (see 5.3.9);
- Increased center of gravity (see 5.6);
- Increased power driven knapsack sprayer special test (see Chapter 7);
- Increased compression sprayer special test (see Chapter 8);
- Increased pretreatment device example (see Appendix A);
- Increasing the shut-off valve test device example (see Appendix B).

This section uses the translation method is equivalent to using ISO .19932-2..2013 "Plant Protection Machinery Knapsack Sprayer Part 2. Test side law".

This section made the following editorial changes.

- Modify the standard name;
- Modify the editorial errors in international standards, pressure test corresponding provisions of this section 5.4;
- Use "MPa" instead of "bar".

The documents of our country that are in conformity with the corresponding international documents that are normative references in this part are as follows.

Glossary of plant protection machinery (ISO 5681.:1992, MOD).

This part is proposed by China Machinery Industry Federation.

This part of the National Agricultural Machinery Standardization Technical Committee (SAC/TC201) centralized.

This section drafted by. China Agricultural Mechanization Research Institute, the State Plant Protection Machinery Quality Supervision and Inspection Center, City Holdings Limited Division, Taizhou letter Yi Agricultural Machinery Co., Ltd., the State Farm Machinery Quality Supervision and Inspection Center.

Introduction

When spraying pesticides, the use of a knapsack sprayer requires consideration of biological, economic, environmental and operator aspects.

The purpose of this section is to provide test methods and technical requirements to ensure the safety of use and the protection of the environment.

The implementation of this series of standards will reduce operator harm to the lowest level, to avoid leakage of pesticides to the environment.

Plant protection machinery knapsack sprayer Part 1. test methods

1 Scope

GB/T 24679 provisions of this part of ISO .19932-1 given by the operator's back or shoulders, and plant protection products (liquid) Test method for knapsack sprayer to be used together.

This section is suitable for agricultural and horticultural applications rocker-operated knapsack sprayer, compressed sprayer and by the engine or motor Driven sprayer, and spray droplets for the fog, the tank volume is greater than 3L.

This section does not apply to the knapsack sprayer specified in ISO 28139.

2 Normative references

The following documents for the application of this document is essential. For dated references, only the dated version applies to this article Pieces. For undated references, the latest edition (including all amendments) applies to this document.

ISO 5681.:1992 Plant protection machinery vocabulary
(Equipmentforcropprotection-Vocabulary) ISO .19932-1..2013 Plant Protection Machinery Knapsack Sprayer - Part 1. Safety and Environmental Requirements (Equipmentfor cropprotection-Knapsacksprayers-Part 1. Safetyandenvironmentalrequirements)

3 Terms and definitions

The terms and definitions defined in ISO 5681 and ISO .19932-1 apply to this document.

4.1 Water

Clean, free from suspended solids.

4.2 Pretreatment device

Keep the sprayer stable and rocker-operated knapsack sprayer pumps work continuously with adjustable stroke and frequency. See examples Appendix A. Other equivalent test devices can also be used.

4.3 Shut-off valve test device

It is composed of a bracket for holding the handle of the shut-off valve, a mechanism for driving the shut-off valve control device, such as a valve stem, Valve repeatedly switch in

the process to ensure that the flow of liquid at the specified flow rate and pressure range. Throttle stroke should be adjustable. See Appendix B for an example.

Other equivalent test devices can also be used.

4.4 Strap test device

When the sprayer falls vertically along the rail from a height of 200 mm, it can be hooked by a horizontal bar with a diameter of 75 mm. This