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DRAFT  
Jamaican Standard  
Specification  
for  
General purpose disinfectant

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**BUREAU OF STANDARDS JAMAICA**

**COMMENT DEADLINE: 29 OCTOBER 2017- 28  
December 2017**



Draft Jamaican Standard

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**JS 282: 201X**

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## JBS CERTIFICATION MARK PROGRAMME

The general policies of the JBS Certification Mark Programme are as follows:

- The JBS provides certification services for manufacturers participating in the programme and licensed to use the gazetted JBS Certification Marks to indicate conformity with Jamaican Standards.
- Where feasible, programmes will be developed to meet special requirements of the submitter.
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Further information concerning the details of JBS Certification Mark Programme may be obtained from the Jamaica Bureau of Standards, 6 Winchester Road, Kingston 10.

### CERTIFICATION MARKS



Product Certification Marks



Plant Certification Mark



Certification of Agricultural Produce  
(CAP) Mark



Jamaica-Made Mark

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Bureau of Standards Jamaica  
6 Winchester Road  
P.O. Box 113  
Kingston 10  
JAMAICA, W. I.  
Tel: (876) 926 -3140-5/ 618 – 1534 / 632- 4275  
Fax: (876) 929 -4736  
Website: [www.bsj.org.jm](http://www.bsj.org.jm)  
E-mail: [info@bsj.org.jm](mailto:info@bsj.org.jm)

Month 201X



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This standard specification was circulated in the draft form for comments under the reference DJS 282: 201X.

Jamaican Standards establish requirements in relation to commodities, processes and practices, but do not purport to include all the necessary provisions of a contract.

The attention of those using this standard specification is called to the necessity of complying with any relevant legislation.

## Amendments

| No. | Date of issue | Remarks | Entered by and date |
|-----|---------------|---------|---------------------|
|     |               |         |                     |

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## Foreword

Disinfectants are widely used by householders, food, drug and cosmetic manufacturers and in the health sector. There are over fourteen brands of locally manufactured disinfectants on the market. This standard is an attempt to ensure that there are some minimum criteria for judging the performance of disinfectants thus ensuring that the consumer gets a product that can destroy bacteria potentially harmful to health. This standard will be used in assessing labelling claims of disinfectants.

This standard is intended to be compulsory and shall be used in assessing labelling claims of disinfectants.

## Committee Representation

The preparation of this standard for the Standard Council established under the Standard Act 1968, was carried out under the supervision of the Bureau's Disinfectants Technical Committee which at the time comprised the following members:

## Acknowledgement

Acknowledgement is made to the following organization for permission to reproduce material from the following documents:

Association of Official Analytical Chemists Official Methods of Analysis, 20th Edition

## Related documents

This standard makes reference to the following documents:

*Food and Drugs Act*

JS 1: Part 1, *Jamaican Standard Specification for The labelling of commodities — Part 1: General principles*

JS 1: Part 15, *Jamaican Standard Specification for The labelling of commodities — Part 15: The labelling of household chemicals*

JS 1: Part 17, *Jamaican Standard Specification for The labelling of commodities — Part 17: The precautionary labelling of hazardous industrial chemicals*

JS 1: Part 20, *Jamaican Standard Specification for The labelling of commodities — Part 20: The labelling of prepackaged goods*

*Official Methods of Analysis of AOAC INTERNATIONAL, 20th Edition (2016)*

*Standard Methods for the Examination of Water and Waste Water. 22nd Edition (2012)*

## Jamaican Standard Specification for General purpose disinfectant

### 1 Scope

This standard applies to disinfectant containing phenolic, quaternary ammonium or other type of germicide which is intended primarily for general cleaning and disinfecting of floors, walls and other hard surfaces. It is intended for use where destruction of bacteria is important. The disinfectant may contain a detergent system.

### 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.

*Food and Drugs Act*

JS 1: Part 1, *Jamaican Standard Specification for The labelling of commodities — Part 1: General principles*

JS 1: Part 15, *Jamaican Standard Specification for The labelling of commodities — Part 15: The labelling of household chemicals*

JS 1: Part 17, *Jamaican Standard Specification for The labelling of commodities — Part 17: The precautionary labelling of hazardous industrial chemicals*

JS 1: Part 20, *Jamaican Standard Specification for The labelling of commodities — Part 20: The labelling of prepackaged goods*

*Official Methods of Analysis of AOAC INTERNATIONAL, 20th Edition (2016)*

*Standard Methods for the Examination of Water and Waste Water, 22nd Edition (2012)*

### 3 Terms and definitions

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

#### 3.1

##### **disinfectant (germicide)**

A chemical agent which prevents the transmission or survival of undesirable microorganisms on inanimate environmental surfaces by causing destruction or irreversible inactivation of such microorganisms in the growing forms but not necessarily the resistant spore form.

#### 3.2

##### **phenol coefficient**

The number obtained by dividing the numerical value of the greatest dilution capable of killing the test organisms in 10 min but not in 5 min at room temperature by the greatest dilution of phenol showing the same results.

#### 3.3

##### **use dilution**

The dilution which gives a positive 100% kill at a confidence level of 95% (59 out of 60 replicates or 10 out of 10 replicates) against the test organisms.

#### 4 Classification

Disinfectants, according to this standard, shall be of the following types based on the active ingredients:

Type 1 Phenolic

Type 2 Quaternary ammonium

Type 3 Pine oil

Type 4 Chlorine

Type 5 Other

#### 5 General requirements

5.1 In liquid form, the disinfectant shall be a homogeneous fluid at room temperature (25°C).

5.2 It shall not contain any visible foreign matter and shall be free from objectionable odour (e.g. rancidity or decomposition) as received, or in solution in water.

5.3 It shall remain stable and homogeneous and shall remain free from objectionable odour, when stored under ambient conditions in unopened containers for the shelf life indicated on the label.

5.4 It may contain a surface active ingredient which shall be biodegradable.

5.5 It shall not cause deterioration of porcelain, ceramic, vinyl, asphalt, terrazzo or rubber flooring surface under conditions of use. When used on metallic or other hard surface, the product shall cause no greater corrosion or other harmful effects than water used in the same conditions.

#### 6 Chemical requirements

##### 6.1 Total Solids

The non-volatile content (percentage by mass) of the product shall be determined as detailed in the Total Solids or Total Dissolved Solids Method of the Standard Methods for the Examination of Water and Wastewater. This provides a quick check of the composition of the product.

##### 6.2 pH

When tested in accordance with the Measurement of pH Method of the Standard Methods for the Examination of Water and Wastewater. The pH of a solution, 1 part sample to 9 parts water, shall be within the range of 4 to 10.5.

##### 6.3 Stability to hard water

When the disinfectant is tested in accordance with the Hard Water Stability Method of the Official Methods of Analysis of AOAC International, no more than 0.5 mL of curd shall be generated.

#### 6.4 Germicidal activity

The disinfectant at a dilution of 1:80 shall give a positive 100% kill at a confidence level of 95% (59 out of 60 replicates or 10 out of 10 replicates) against *Staphylococcus aureus*, *Salmonella choleraesuis* and *Pseudomonas aeruginosa*, when tested in accordance with the Use Dilution method, in the presence of 5% blood serum and in hard water of 200 mg/L CaCO<sub>3</sub>; or the Phenol Coefficient of the product shall be not less than 4. These test methods are as outlined in Official Methods of Analysis of AOAC International.

#### 6.5 Chlorine concentration

For Type 4 (Chlorine) disinfectants, aqueous solutions shall have minimum 5.25% sodium hypochlorite (NaClO).

### 7 Packaging

The package employed shall perform in accordance with the fundamental requirements of all good packaging.

**7.1** Packaging material including closures shall be resistant to and compatible with the contents.

**7.2** The product shall be packed in containers of good quality, which shall be so constructed and so closed as to prevent any leakage which might be caused under ambient conditions of storage or transport by changes in temperature, humidity or pressure.

**7.3** Plastic material likely to be softened, rendered brittle or permeable by extreme temperatures during transport or storage shall not be used.

### 8 Labelling

**8.1** The product shall be labelled in accordance with the requirements of JS 1: Part 1, JS 1: Part 15, JS 1: Part 17, JS 1: Part 20 and The Food and Drug Act.

**8.2** In addition the label shall contain information to indicate the Use Dilution. Indication of the Phenol Coefficient shall be optional.

### 9 Sampling

A sampling of unopened containers selected at random from each lot of 1 000 containers or less shall be supplied for tests in accordance with Table 1. When capacity exceeds 1000 mL, the sample may be procured by opening the container, thoroughly mixing its contents and withdrawing a specimen not less than 500 mL which shall be placed immediately in a well stoppered glass bottle.

**Table 1 — Sampling Plan for Testing of Disinfectant**

| Lot Size | Sample Size |
|----------|-------------|
| 2-8      | 2           |
| 9-15     | 3           |
| 16-25    | 5           |
| 26-50    | 8           |
| 51-90    | 13          |
| 91-150   | 20          |
| 151-280  | 32          |

|          |    |
|----------|----|
| 281-500  | 50 |
| 501-1200 | 80 |

**10 Product information**

The products covered by this standard are designed to be effective for use with water of up to 200 mg/L CaCO<sub>3</sub> hardness. In areas where water hardness exceeds this level either correspondingly more product or softened water should be used.

## **Standards Council**

The Standards Council is the controlling body of the Bureau of Standards Jamaica and is responsible for the policy and general administration of the Bureau.

The Council is appointed by the Minister in the manner provided for in the Standards Act, 1969. Using its powers in the Standards Act, the Council appoints committees for specified purposes.

The Standards Act, 1969 sets out the duties of the Council and the steps to be followed for the formulation of a standard.

### **Preparation of standards documents**

The following is an outline of the procedure which must be followed in the preparation of documents:

1. The preparation of standards documents is undertaken upon the Standard Council's authorisation. This may arise out of representation from national organisations or existing Bureau of Standards' Committees of Bureau staff. If the project is approved it is referred to the appropriate sectional committee or if none exists a new committee is formed, or the project is allotted to the Bureau's staff.
2. If necessary, when the final draft of a standard is ready, the Council authorises an approach to the Minister in order to obtain the formal concurrence of any other Minister who may be responsible for any area which the standard may affect.
3. The draft document is made available to the general public for comments. All interested parties, by means of a notice in the Press, are invited to comment. In addition, copies are forwarded to those known, interested in the subject.
4. The Committee considers all the comments received and recommends a final document to the Standards Council
5. The Standards Council recommends the document to the Minister for publication.
6. The Minister approves the recommendation of the Standards Council.
7. The declaration of the standard is gazetted and copies placed on sale.
8. On the recommendation of the Standards Council the Minister may declare a standard compulsory.
9. Amendments to and revisions of standards normally require the same procedure as is applied to the preparation of the original standard.

### **Overseas standards documents**

The Bureau of Standards Jamaica maintains a reference library which includes the standards of many overseas standards organisations. These standards can be inspected upon request.

The Bureau can supply on demand copies of standards produced by some national standards bodies and is the agency for the sale of standards produced by the International Organization for Standardization (ISO) members.

Application to use the reference library and to purchase Jamaican and other standards documents should be addressed to:

Bureau of Standards Jamaica  
6 Winchester Road  
P.O. Box 113,  
Kingston 10  
JAMAICA, W. I.