

# PHILIPPINE NATIONAL STANDARD

PNS/BAFS 155:2015  
ICS 67.080

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**Fresh vegetable – Water Convolvulus –  
Classification and grading**



**BUREAU OF PHILIPPINE STANDARDS (BPS)**

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- International Organization for Standardization (ISO)
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## **Foreword**

The Philippine National Standard for Fresh vegetable – Water Convolvulus – Classification and grading (PNS/BAFS 155:2015) was developed by the Technical Working Group (TWG) on the Development of PNS for Water Convolvulus. The group was organized by the Bureau of Agriculture and Fisheries Standards (BAFS) through a Special Order No. 169, Series of 2014 to present common information and understanding on the quality and safety requirements for water convolvulus. The TWG conducted technical reviews and public consultations in the three major islands of the country to generate further scientific data and opinions needed prior to the finalization of this Standard.

PNS/BAFS 155:2015 aims to provide common understanding on the scope, definitions, minimum requirements, classification, tolerances, sampling, packaging, marking and labeling, contaminants, and hygiene.

**Fresh vegetable – Water Convolvulus – Classification and grading**

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**1 Scope**

This Standard applies to lowland and upland varieties/types of water convolvulus, locally known as kangkong, grown from *Ipomoea aquatica* Forsk. of the Convolvulaceae family, to be supplied fresh to the consumer after preparation and packaging.

Water convolvulus for industrial processing are excluded.

**2 References**

The titles of the standard publications referred to in this standard are listed on the inside back cover.

**3 Definition**

For purposes of this standard, the following definitions shall apply:

**3.1****clean**

practically free from stain, pests and diseases, cuts and bruises, dirt or other foreign matter

**3.2****damage**

any specific defect, which detracts from the appearance of the edible or marketing quality of Water Convolvulus caused by pests and diseases, cuts and bruises, and physiological disorder

**3.3****foreign matter**

shall include, but not limited to pest, dust, dirt, plastic and stone, which are extraneous or foreign to Water Convolvulus

**3.4****practically free**

almost free of the concerned items (e.g. damages and foreign matters)

**3.5****sound**

free from rotting and deterioration

## **4 Provisions concerning quality**

### **4.1 Minimum requirements**

**4.1.1** In all classes, subject to the special provisions for each class and the tolerances allowed, the Water Convolvulus must be:

- fresh;
- well-trimmed;
- tender;
- characteristic of the variety/type;
- sound, produce affected by rotting or deterioration such as to make it unfit for consumption is excluded;
- clean, practically free of any visible foreign matter;
- practically free of pests and damage caused by them affecting the general appearance of the produce;
- practically free from mechanical and/or physiological damage caused by low and /or high temperature; and
- free of any foreign smell and/or taste.

**4.1.2** Water convolvulus should be harvested and have reached an appropriate degree of development in accordance with criteria proper to the variety and to the area in which they are grown.

The development and condition of the Water Convolvulus must be such as to enable them:

- to withstand transport and handling; and
- to arrive in satisfactory condition at the place of destination.

### **4.2 Classification**

Water Convolvulus is classified in two classes defined below:

#### **4.2.1 Class I**

Water convolvulus in this class must be of good quality. They must be characteristic of the variety/type. The following slight defects, however, may be allowed, provided these do not affect the general appearance of the produce, the quality, the keeping quality and presentation in the package:

- slightly damaged leaves, such as cracks, holes or tears; and
- slight defects in color.

#### **4.2.2 Class II**

This class includes Water Convolvulus which does not qualify for inclusion in Class I, but satisfy the minimum requirements specified above. The following defects may be

allowed, provided the Water Convolvulus retains its essential characteristics as regards the quality, the keeping quality and presentation:

- damaged leaves, such as cracks, bruises, holes or tears;
- defects in color;
- slight lack of freshness; and
- slight ribbiness.

## **5 Provisions concerning sizing**

There is no sizing requirement for water convolvulus.

## **6 Provisions concerning tolerances**

Tolerances in respect of quality shall be allowed in each package (or in each lot for produce presented in bulk) for produce not satisfying the requirements of the class indicated.

### **6.1 Quality tolerances**

#### **6.1.1 Class I**

Ten percent by weight of water convolvulus not satisfying the requirements of the class, but meeting those of Class II or, exceptionally, coming within the tolerances of that class.

#### **6.1.2 Class II**

Ten percent by weight of water convolvulus satisfying neither the requirements of the class nor the minimum requirements, with the exception of produce affected by rotting or any other deterioration.

## **7 Sampling**

Sampling for ascertaining the conformance shall be in accordance with PNS/ISO 874:2011 Fresh Fruits and Vegetables – Sampling.

## **8 Provisions concerning presentation**

### **8.1 Uniformity**

The contents of each package must be uniform and contain only water convolvulus of the same source, variety/type, quality and size. The visible part of the contents of the package must be representative of the entire contents.

## 8.2 Packaging

Water convolvulus must be packed in such a way as to protect the produce properly. The materials used inside the packages must be new<sup>1</sup>, clean and of a quality such as to avoid causing any external or internal damage to the produce. The use of materials, particularly of paper or stamps bearing trade specifications, is allowed, provided that the printing or labeling has been done with a non-toxic ink or glue.

Water convolvulus shall be packed in each container in compliance with the Recommended Code of Practice for Packaging and Transport of Fresh Fruits and Vegetables (CAC/RCP 44-1995).

## 8.3 Description of Containers

The containers shall meet the quality, hygiene, ventilation and resistance characteristics to ensure suitable handling, shipping and preserving of the water convolvulus. Packages must be practically free of all foreign matters or smell.

## 9 Marking and labelling

9.1 Name of produce, variety;

9.2 Class;

9.3 Net weight;

9.4 Name and address of producer, trader, exporter, packer and/or dispatcher. Identification code (optional)<sup>2</sup>;

9.5 Place of origin (farm and optionally province where grown or name of local place);

9.6 Date of harvest;

9.7 Official inspection mark and/or product certification mark (optional);

9.8 Expiration Date/Best Before Date;

9.9 Product of the Philippines.

9.10 Non-retail containers

Each package must bear the abovementioned particulars, in letters grouped on the same side, legibly and indelibly marked and visible from the outside or on the accompanying documents.

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<sup>1</sup> For the purposes of this Standard, this includes recycled material of food grade quality.

<sup>2</sup> In the case where a code mark is used, the reference “packer and/or dispatcher (or equivalent abbreviations)” has to be indicated in close connection with the code mark.

## **10 Contaminants**

### **10.1 Heavy metals**

Water Convolvulus shall comply with those maximum levels for heavy metals established by the Codex Alimentarius Commission or authority for this commodity (Annex 1).

### **10.2 Pesticide residues**

Water Convolvulus shall comply with those maximum residue limits established by the Codex Alimentarius Commission or authority for this commodity.

## **11 Hygiene**

**11.1** It is recommended that the produce covered by the provisions of this standard be prepared and handled in accordance with the appropriate sections of the Recommended Code of Practice – General Principles of Food Hygiene (CAC/RCP 1-1969), Recommended Code of Hygienic Practice for Fresh Fruits and Vegetables (CAC/RCP 53-2003), and other relevant Codex texts such as Codes of Hygienic Practice and Codes of Practice.

**11.2** The produce shall comply with the microbiological criteria established in accordance with the Principles for the Establishment and Application of Microbiological Criteria for Foods (CAC/GL 21-1997).

## Annex 1

Table 1 – Heavy metals for Water Convolvulus

Heavy metal	Maximum level (mg/kg)
Cadmium (Cd)	0.2
Lead (Pb)	0.3

Source:  
CODEX STAN 193-1995. Codex General Standard for Contaminants and Toxins in Food and Feed. ([www.codexalimentarius.org](http://www.codexalimentarius.org))



## References

**PNS/BAFS 155:2015**

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.

CAC/GL 21-1997. Principles for the Establishment and Application of Microbiological Criteria for Foods

CAC/RCP 53-2003. Recommended Code of Hygienic Practice for Fresh Fruits and Vegetables

CAC/RCP 44-1995. Recommended Code of Practice for Packaging and Transport of Fresh Fruits and Vegetables

CAC/RCP 1-1969. Recommended Code of Practice – General Principles of Food Hygiene

CODEX STAN 193-1995. Codex General Standard for Contaminants and Toxins in Food and Feed

CODEX STAN 1-1985. Codex General Standard for the Labeling of Prepackaged Foods

PNS/ISO 874-2011. Fresh Fruits and Vegetables – Sampling

Proposed Draft ASEAN Standard for Water Convolvulus (ASEAN Stan 46:20XX as of April 30, 2014).

USDA, ARS, National Genetic Resources Program. Germplasm Resources Information Network - (GRIN) [Online Database]. National Germplasm Resources Laboratory, Beltsville, Maryland.

URL: <http://www.ars-grin.gov/cgi-bin/npgs/html/taxon.pl?20218> (09 July 2014)

<http://tcpermaculture.com/site/2014/01/29/permaculture-plants-water-spinach-kangkong>



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