

Eco Mark Product Category No.140

**“Refill Containers and Resource Saving Containers  
Version 1.11”  
Certification Criteria**

—Applicable Scope—

- A. Refill Containers
- B. Resource Saving Containers (Edible Oil Containers)
- C. Container for Sterile-Packed Cooked Rice
- D. Lightweight PET Bottles (Container)
- E. PET Bottles (Containers) Using Reprocessed Materials in Kitchen Utensils and Containers/Packages
- F. PET bottles (containers) using plant-based plastics
- G. Plastic containers and packaging using recycled plastic
- H. Plastic containers and packaging using plant-based plastics

Established: July 2, 2007  
Last revised: February 1, 2017  
Expiration: June 30, 2022

Japan Environment Association  
Eco Mark Office

NOTE: This document is a translation of the criteria written in Japanese. In the event of dispute, the original document should be taken as authoritative.

Eco Mark Product Category No.140  
“Refill Containers and Resource Saving Containers Version 1.11”  
Certification Criteria

**F. PET bottles (containers) using plant-based plastics**

Japan Environment Association  
Eco Mark Office

**1. Purpose of establishing criteria**

Omitted

**2. Applicable Scope**

PET bottles specified by Cabinet Order on the basis of “Act on the Promotion of Effective Utilization of Resources” (specified PET bottles). Among the PET bottle components (the PET bottle main body, label and cap), both the PET bottle main body (including the preform) and the PET bottle including the label and the cap are covered by the scope of application.

**3. Terminology**

Omitted

**4. Certification Criteria and Certification Procedures**

With respect to Certification Procedures to criteria items, the Attached Certificates shall be submitted.

If the Applicant makes an application of an end product which is a combination of a bottle main body (including a preform) that has been Eco Mark certified as an intermediate product under the Certification Criteria with a label and a cap, presentation of the Eco Mark certification number of the bottle main body shall be a substitute for certification of the Certification Procedures of 4-1-1.(1) and 4-1-2.(3) - (6), (8) and (9) of the criteria items relevant to the bottle main body.

**4-1. Environmental Criteria and Certification Procedures**

**4-1. Common Criteria and Certification Procedures**

(1) The PET bottle using plant-based plastic shall meet all the following requirements a) to c).

- a) The content of biobased synthetic polymer in the bottle shall be 25% or higher.
- b) For the plant-based plastic (raw resin), the applicant shall have the understanding of the supply chain from cultivation of plant materials to manufacturing of plant-based plastic (raw resin). Each process shall conform to the checklist in the Attachment 1;
- c) The Applicant shall have confirmed by the life cycle assessment (LCA) that for the plant-based plastic (raw resin), greenhouse gas emissions (CO<sub>2</sub> conversion) from raw material procurement to discarding/recycling does not increase, when compared with conventional resin that is to be replaced. Note that if any increase in the emissions is offset by the reliable carbon offset (such as purchasing clean electric power, etc.), the applied product shall also conform to this item

[Certification Procedure]

a) Certificates indicating the calculated content of biobased synthetic polymers in the bottle shall be submitted. For the plant-based plastic (raw resin) thereof, measurement results of the biobased synthetic polymer content calculated with the method specified in ISO 16620-3, using measurement results of the biobased carbon content and element composition by the 14C method specified in ISO 16620-2 or ASTM D6866 shall be mentioned. Should there be any deviation of 10% or higher between the measurement results and the content of biobased synthetic polymer in the standard, a description of a reason(s) therefor shall also be included. The measurement results of the biobased carbon content shall be submitted as an attached document.

In addition, for appropriate maintenance of the content of biobased synthetic polymer after certification, any of the following certificates issued by a raw resin supplier (including a dealer) shall be submitted.

- An explanatory document stating that measurements of the content of biobased carbon will be regularly carried out, and that measurement results can be disclosed as per a request of the Eco Mark Office; and
- A certificate that the Applicant has been audited or certified by a third party for management of the content of the biobased synthetic polymer.

b) Certificates issued by a raw resin supplier (including a dealer) indicating the supply chain (flow diagram, etc. and including purification, fermentation, etc.) from the cultivation area (country, state, city, etc.) to manufacturing of plant-based plastic (raw resin), and status of conformance to the Attachment 2 shall be submitted.

c) Results of the LCA assessment of the plant-based plastic (raw resin) shall be submitted (reference to the existing paper, etc. is acceptable). If carbon offset is adopted, data describing content of the carbon offset and reliability shall be submitted together.

(2) In manufacturing the applying product, related environmental laws and regulations and pollution control agreement (hereinafter referred to as the “Environmental Laws, etc.”) must be followed with respect to air pollution, water contamination, noise, offensive odor, and emission of hazardous materials in the

area where the plant performing the final manufacturing process is located. In addition, the state of compliance with the Environmental Laws, etc. for the last five years from the date of application (whether there is any violation) must be reported. If there is any violation, it is necessary that proper remedies and preventive measures have been already taken, and the related Environmental Laws, etc. must thereafter be followed appropriately.

[Certification Procedure]

With respect to the compliance with the Environmental Laws, etc. in the area where the plant performing the final manufacturing process is located, a certificate issued by the representative of the manufacturer of the applying product or the manager of the relevant plant (entry or attachment of the list of names of the Environmental Laws, etc.) must be submitted.

In addition, it is necessary to report whether there is any violation during the last five years, including a violation subject to administrative punishment or administrative guidance, and if there is, the following documents in a and b must be submitted:

- a. With respect to the fact of violation, guidance documents from administrative agencies (including order of correction and warning) and copies of written answers (including those reporting causes and results of correction) to such documents (making a series of progress clear);
- b. Following materials (copies of recording documents, and so on) concerning the management system for compliance with the Environmental Laws, etc. in 1)-5):
  - 1) List of the Environmental Laws, etc. related to the area where the plant is located;
  - 2) Implementation system (organizational chart with entry of roles, etc.);
  - 3) Document stipulating retention of recording documents;
  - 4) Recurrence prevention measures (future preventive measures);
  - 5) State of implementation based on recurrence prevention measures (result of checking of the state of compliance, including the result of onsite inspection).

#### 4-1-2. Criteria on PET bottle Components and Certification Procedures

The following items (3) to (9) shall apply to [Applicable Component] specified in each item, of components of the applied product (Out of a bottle (including a preform), label, or cap, a component that is included in the scope of application).

(3) Substances regulated by "Self-imposed Controls on Printing Ink (Negative List regulations)" by the Japan Printing Ink Makers Association shall not be added in the printing ink used for the product as a prescribed constituent. [applicable components: label, cap]

[Certification Procedures]

Compliance with the Negative List regulations shall be indicated in the Attached Certificate.

(4) Plastic materials to be used in the product shall not be added with plastics that contain halogen in polymer backbone as a prescribed constituent. [applicable components: PET bottle, label, cap]

[Certification Procedures]

Whether any halogen element is added or not in polymer backbone shall be indicted in the Attached Certificate.

(5) Plastics additives such as the plasticizers, colorants, stabilizers, lubricants, etc. used in the plastic materials shall comply with the positive list of the Japan Hygienic Olefin and Styrene Plastics Association, etc. [applicable components: PET bottle, label, cap]

[Certification Procedures]

To show that plastic additives such as the plasticizers, colorants, stabilizers, lubricants, etc. used in the plastic materials comply with the positive list of the Japan Hygienic Olefin and Styrene Plastics Association, etc., the Applicant shall submit a description of a management method (procedures) and a certificate that the plastic additive is registered in the positive list (a copy of the registration confirmation certificate or positive list name/classification number/substance name, etc.) for one representative plastic additive.

(6) If recycled plastic is used in products, the measures to ensure the safety based on “Guidelines on the use of recycled plastic in food apparatus and containers and packaging” of Ministry of Health, Labour and Welfare (Shokuan, 0427 No.2, April 27 2012), shall be taken. [applicable components: PET bottle]

[Certification Procedure]

The written document shall be submitted which shows the ensuring the safety based on “Guidelines on the use of recycled plastic in food apparatus and containers and packaging” of Ministry of Health, Labour and Welfare (Shokuan, 0427 No.2, April 27 2012).

(7) Adhesives to be used for the product shall comply with voluntary regulations on adhesives for food package materials, etc. by the Japan Adhesive Industry Association (NL regulations). [applicable components: label]

[Certification Procedures] Certifier: Applicant

Compliance with the Negative List regulations shall be indicated in the Attached Certificate.

(8) The product shall meet the requirement of harmful substances described in the Standards for Foods, Food Additives, etc. (Ministry of Health and Welfare Notice No. 370, 1959). [applicable components: PET bottle, label, cap]

[Certification Procedures]

To certify that requirements for a corresponding hazardous material are satisfied,

the Applicant shall submit a description of a management method (procedures) and test results for one representative plastic material.

(9) The product shall conform to “Designated PET Bottle Voluntary Design Guideline” created by PET Bottle Recycle Promotion Association. [applicable components: PET bottle, label, cap]

[Certification Procedures]  
The evaluation results conducted in compliance with the Designated PET Bottle Voluntary Design Guideline shall be submitted.

**4-2. Quality Criteria and Certification Procedures**

(10) Quality of the product shall conform to the industrial voluntary standards or the manufacturer’s own standards.

[Certification Procedures]  
A certificate to show the compliance with the appropriate standards shall be submitted.

**5. Considerations**

In manufacturing products, it is desirable to consider the following, although they are not requirements for certification. The conformance to the individual criteria item shall be indicated in Attached Certificates. [applicable components: PET bottle, label, cap]

- (1) Bottles are designed to be as thin and light weight as possible.
- (2) The plant-based plastic and the recycled plastic are used in the label and the cap as far as possible.

**6. Product Classification, Indication and Others**

Omitted.

---

October 1, 2013	Addition of Category C, D and E (Version 1.7)
June 1, 2015	Revised (Category A-D, Version 1.8)
June 1, 2016	Addition of Category G and H (Version 1.9)
September 16, 2016	Addition of Category F (Version 1.10)
February 1, 2017	Revised (Category D 4-1-1(1) and 5, Category E 5, and Category H 3: Version.11)
June 30, 2022	Expiration

The Certification Criteria for the Product Category will be revised when necessary.

## Checklist of Traceability of Plant-based Plastic (Raw Resin)

No	Purpose	Request (Item that must be realized)	Subject	Realized	Implementation Method (Check off all relevant items.)
1	Prevention of global warming, conservation of the natural ecosystem	Hasn't the farm land where plants are cultivated been converted from forests in the recent ten years?	Farm land	<input type="checkbox"/> Yes/ <input type="checkbox"/> No	<input type="checkbox"/> Confirmed the laws and regulations concerning the land conversion for the site. <input type="checkbox"/> Gained the understanding of the actual condition of the site through on-site investigation or hearings. <input type="checkbox"/> Defined and released the guideline for procurement of plants. Alternatively, conforming to the guideline of an independent third party. - Name of the guideline: - Location of release: <input type="checkbox"/> Also using the certification system of an independent third party, regarding the procurement of plants. -Name of certification system: <input type="checkbox"/> Others (Describe specifically.):
2	Conservation of the ecosystem	If the Applicant uses the genetically engineered crop as a raw material, has the Applicant assessed ensuring of safety?	Farm land	<input type="checkbox"/> Yes/ <input type="checkbox"/> No/ <input type="checkbox"/> Not applicable (Not used)	<input type="checkbox"/> Confirmed the laws and regulations concerning genetically engineered crop on the site. <input type="checkbox"/> Gained the understanding of the actual condition of the site through on-site investigation or hearings. <input type="checkbox"/> Defined and released the guideline for procurement of plants. Alternatively, conforming to the guideline of an independent third party. - Name of the guideline: - Location of release: <input type="checkbox"/> Also using the certification system of an independent third party, regarding the procurement of plants. -Name of certification system:



No	Purpose	Request (Item that must be realized)	Subject	Realized	Implementation Method (Check off all relevant items.)
					<input type="checkbox"/> Others (Describe specifically.):
3	Prevention of land acidification/nutrient enrichment/water contamination	Has the Applicant gained the understanding of usage conditions of fertilizers/agricultural chemicals in the main cultivation area of plants? Isn't any agricultural chemical regulated under the "Stockholm Convention on Persistent Organic Pollutants" (POPs Treaty) used?	Farm land	<input type="checkbox"/> Yes/ <input type="checkbox"/> No	<input type="checkbox"/> Confirmed the laws and regulations concerning fertilizers/agricultural chemicals on the site <input type="checkbox"/> Gained the understanding of the actual condition of the site through on-site investigation or hearings. <input type="checkbox"/> Defined and released the guideline for procurement of plants. Alternatively, conforming to the guideline of an independent third party. - Name of the guideline: - Location of release: <input type="checkbox"/> Also using the certification system of an independent third party, regarding the procurement of plants. -Name of certification system: <input type="checkbox"/> Others (Describe specifically.):
4	Appropriate water usage	Has the Applicant gained the understanding of usage conditions of water in the main cultivation area of plants?	Farm land	<input type="checkbox"/> Yes/ <input type="checkbox"/> No	<input type="checkbox"/> Confirmed the laws and regulations concerning usage of water (limits on the amount of water) on the site. <input type="checkbox"/> Gained the understanding of the actual condition of the site through on-site investigation or hearings. <input type="checkbox"/> Defined and released the guideline for procurement of plants. Alternatively, conforming to the guideline of an independent third party. - Name of the guideline: - Location of release: <input type="checkbox"/> Also using the certification system of an independent third party, regarding the procurement of plants. -Name of certification system:

No	Purpose	Request (Item that must be realized)	Subject	Realized	Implementation Method (Check off all relevant items.)
					<input type="checkbox"/> Others (Describe specifically.)
5	Use of recycled resources, avoidance of competition for food	If recycled resources are available as a part of crude raw materials of plant-based plastic (raw resin) on the site, did the Applicant preferentially use them?	Raw resin	<input type="checkbox"/> Yes/ <input type="checkbox"/> No/ <input type="checkbox"/> Not applicable (Not available)	Name of recycled resource in use [ ] Generated amount/percentage of recycled resources [ ]
6	Prevention of global warming	Has the Applicant gained the understanding of the processing status of biogas (such as methane) having a high global warming potential that is generated in the course of reaction of plant-based ethanol in the manufacturing plant for the main crude raw material?	Crude raw material manufacturing plant	<input type="checkbox"/> Yes/ <input type="checkbox"/> No	<input type="checkbox"/> Gained the understanding of the actual condition of the site through on-site investigation or hearings. <input type="checkbox"/> Others (Describe specifically.) [ ]
7	Utilization of non-fossil energy sources and renewable energy sources	If a plant is newly set up in the course of cultivation to raw resin manufacturing, did the Applicant utilize as many non-fossil energy sources (for example, bagasse or biogas) or renewable energy sources as possible?	Manufacturing plant	<input type="checkbox"/> Yes/ <input type="checkbox"/> No	Energy name and method of utilization [ ]
8	Legal compliance	Is discharged water in the plant controlled in accordance with the laws and regulations of the region, etc., where the plant for manufacturing the plant-based plastic (raw resin) is located?	Resin manufacturing plant	<input type="checkbox"/> Yes/ <input type="checkbox"/> No	Attach data describing the control of discharged water of the plant