



## **BioSpecs Purchasing Specifications for Compostable Biobased Food Service Ware (Mandatory Requirements and Additional Voluntary Criteria)<sup>1</sup>**

**SCOPE:** These specifications can be applied, but are not limited, to the following types of products:

- Cutlery (i.e., forks, spoons, and knives, including both individually wrapped and bulk utensils);
- Plates, bowls and cups (for both hot and cold applications);
- Take-out packaging (such as clamshells, boxes, or containers with separate lids); and
- Ancillary items such as lids, straws, trays, and gloves.

These specifications DO NOT apply to ancillary food service items such as napkins or paper towels.

**APPROACH:** These specifications are composed of two parts:

1. Products must meet all mandatory sustainability criteria; and
2. Products will be evaluated based on additional sustainability criteria. In their bid solicitation and evaluation processes, purchasing agents will award points to bidders that provide documentation supporting that their products meet the additional sustainability criteria.<sup>2</sup>

These specifications were prepared for the Sustainable Biomaterials Collaborative by the Green Purchasing Institute. Each type of biobased food service ware product requires its own bid. These specifications are designed with sustainability and performance criteria in mind.<sup>34</sup> A sample bid sheet is included.

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<sup>1</sup> Purchasers may use these specifications as is or tailor them to their own procurement practices.

<sup>2</sup> Purchasers may opt to request disclosure of information relating to each non-mandatory sustainability criterion, instead of awarding points.

<sup>3</sup> Purchasers, it is highly important that these products are used in facilities that have a designated composting facility or system in place that will accept compostable biobased food service ware products to enable recovery.

<sup>4</sup> Performance criteria include: minimum temperature tolerance, ability to break without creating sharp edges - which is particularly important to correctional facilities, size, shape, color, etc.

## A. MANDATORY SUSTAINABILITY REQUIREMENTS

### 1. The product must be manufactured in compliance with all applicable laws and regulations.

Documentation Required: In order for the compostable food service ware product to be considered acceptable, the bidder must submit a written declaration stating that the product offered was manufactured in a facility that complies with all applicable laws and regulations. The declaration must be written, signed, and dated on the manufacturer's letterhead by the manufacturer and state that they have had no violations in the last three years that have not been corrected or disclose all open cases.

### 2. All products (other than cutlery) offered on this contract must contain at least 90% biobased carbon content. All cutlery products offered on this contract must contain at least 70% biobased carbon content. Biobased carbon content is the amount of *biobased* carbon as a percent weight of the total amount of carbon in the product. Biobased carbon content is determined by testing compostable products using the ASTM Method D6866.

Documentation Required: The bidder must provide documentation demonstration that its biobased carbon content meets the above specifications for cutlery and non-cutlery products by including at least one of the following with its offer:

- ASTM Standard D6866: independent laboratory analysis verifying that the product meets the minimum biobased carbon content required.
- USDA's BioPreferred Program – Biobased Label certification: (see its Biobased Label Program at [www.biopreferred.gov/LabelPurpose.aspx](http://www.biopreferred.gov/LabelPurpose.aspx)) product's biobased content is listed on the label.
- Vinçotte's OK Biobased Program: (see <http://www.okcompost.be>) non-cutlery products should have a 4-star label and cutlery products should have a 3- or 4-star label. Bidders must supply Vinçotte certification demonstrating the exact biobased content of the product since the star ratings are not completely indicative of the product's biobased content.<sup>5</sup>



Exception:

- Food service ware products made of 100% UNCOATED wood, bamboo, paper or other obviously fiber-based material will automatically meet these biobased content requirements. Sample must be submitted.

### 3. Disclose whether or not engineered “nanomaterials” were intentionally added to the product, including surface treatments of the product.

Documentation Required: The bidder must submit a formal declaration stating whether or not engineered nanomaterials were intentionally added to the product it is offering. The declaration must be written, signed, and dated on the manufacturer's letterhead by the manufacturer.

<sup>5</sup> Products listed by the OK Biobased Program of Vinçotte with four stars contain >80% biobased content. Bidders need to show that their non-cutlery product contains at least 90% biobased content. Similarly, products listed by the OK Biobased Program of Vinçotte with three stars contain 60-80% biobased content. Therefore, bidders need to prove that their cutlery product contains at least 70% biobased content. Cutlery products with four stars automatically meet the minimum biobased content specification.

#### 4. Product may not contain fluorine or fluorinated compounds.

##### Documentation Required:

- The bidder must submit a formal declaration stating that no intentionally added fluorine or fluorinated compounds were added to the product it is offering. The declaration must be written, signed, and dated on the manufacturer's letterhead by the manufacturer.
- If product is fiber-based (including paper): the bidder must identify the type of grease barrier or coating used on the product.<sup>6</sup>

#### 5. Product is certified as commercially compostable.

The product must be 3<sup>rd</sup>-party certified to at least one of the following standards:

- ASTM D6400: Standard Specification for Compostable Plastics ([www.astm.org/Standards/D6400.htm](http://www.astm.org/Standards/D6400.htm))
- ASTM D6868: Standard Specification for Biodegradable Plastics Used as Coatings on Paper and Other Compostable Substrates ([www.astm.org/Standards/D6868.htm](http://www.astm.org/Standards/D6868.htm))
- DIN EN 13432: Requirements for Packaging Recoverable Through Composting and Biodegradation – Test Scheme and Evaluation Criteria for Final Acceptance of Packaging ([http://www.dincertco.de/en/products\\_made\\_of\\_compostable\\_materials.html](http://www.dincertco.de/en/products_made_of_compostable_materials.html))
- AS 4736: Biodegradable plastics - Biodegradable plastics suitable for composting and other microbial treatment (<http://infostore.saiglobal.com/store2/Details.aspx?ProductID=317882>)
- International Organization for Standardization (ISO) 17088: *Specification for Compostable Plastics* ([www.iso.org/iso/catalogue\\_detail.htm?csnumber=43373](http://www.iso.org/iso/catalogue_detail.htm?csnumber=43373))

Documentation Required: The bidder must provide documentation demonstrating that the product is certified as compostable in a commercial facility.

- For non-cutlery products, the bidder must provide a sample of the product showing that it contains the logo of one or more of the certification agencies listed below on the product itself:
  - Biodegradable Products Institute (North America)
  - Green Seal GS-35 (USA)
  - AIB Vinçotte Inter (Belgium)
  - Din Certco (European Union)
  - Australian Bioplastics Association (Australia)
  - Japan Bioplastics Association (Japan)
- For cutlery products, the bidder must provide an unopened package of the product offered showing that it contains a logo from one of the certification organizations listed above.



##### Exception:

- If the product is made of uncoated wood, bamboo or another obviously plant-based material it automatically meets this mandatory requirement. For these products, the bidder must disclose the material type of the product it is offering.

<sup>6</sup> In a study conducted by the Oregon Center for Environmental Health, molded fiber products were found to use fluorinated compounds, such as PFOS and PFOA, as a grease barrier.

6. **The product offered must be available in bulk, not individually wrapped.**<sup>7</sup>

Documentation Required: The bidder must provide a sample or information demonstrating that the product is available in bulk.

7. **The product may not be packaged in polystyrene (PS), such as “peanuts,” or polyvinyl chloride (PVC).**<sup>8</sup>

Documentation Required: The bidder must provide a sample of the product packaging with its offer. This may be the packaging needed to provide samples for this bid.



8. **At least 10 samples of the product offered on this contract must be submitted for performance testing by the bidder.** If the product fails the jurisdiction’s design or performance testing, it may be disqualified. If the product is designed to hold hot food, such as hot cups, soup bowls, and takeout containers, it must be able to tolerate a temperature of at least 130° F without melting.

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<sup>7</sup> If purchaser needs individually wrapped items, the wrapping should be certified as compostable in a commercial composting facility.

<sup>8</sup> PVC packaging is typically labeled with a chasing arrow containing the number 3 or letter V.

## B. ADDITIONAL SUSTAINABILITY CRITERIA (DESIRABLE)

### 1. The product contains a higher percentage of biobased carbon content than the minimum required in the specification.

**Non-cutlery products:** For each 1% of additional biobased carbon content above 90% that the product contains, the bidder will receive **1 point for a maximum of 10 points** for that item.

**Cutlery Products:** For each 3% of additional biobased carbon content above 70% the product contains, the bidder will receive **1 point for a maximum of 10 points** for that item.

**Documentation Required:** To receive these points, the Bidder must document the additional biobased carbon content of the product by including at least one of the following with its offer:

- ASTM Standard D6866: independent laboratory analysis verifying that the average biobased carbon content of the non-cutlery product is above 90%, or the cutlery's content is above 70%, based on ASTM Standard D6866.
- USDA's BioPreferred Program – Biobased Label certification: (see its Biobased Label Program at [www.biopreferred.gov/LabelPurpose.aspx](http://www.biopreferred.gov/LabelPurpose.aspx)) product's biobased content is listed on the label.
- Vinçotte's OK Biobased Program: (see <http://www.okcompost.be>) non-cutlery products should have a 4-star label and cutlery products should have a 3- or 4-star label. Bidders must supply Vinçotte certification demonstrating the exact biobased content of the product since the star ratings are not completely indicative of the product's biobased content.<sup>9</sup>



**Automatic full points:** Food service ware products made of 100% UNCOATED wood, bamboo, paper or other obviously fiber-based material will automatically meet these biobased content requirements. Sample must be submitted.

### 2. Production of the biobased material used to make the product protects workers and the environment through sustainable farming and forestry practices.

- a. **The product contains biobased material that was sustainably produced.** Bidders are encouraged to offer products containing biobased materials that protect the environment and/or workers when they are grown and harvested. Bidders will get **10 points** if they can document that the product is certified by one or more of the following organizations because all of the biobased material the product contains was sustainably produced:

- Forest Stewardship Council (FSC)
- Rainforest Alliance
- USDA Organic
- Protected Harvest
- Fair Trade USA



**Documentation Required:** To receive these points, the Bidder must provide documentation certifying that the biobased material used to make the product was sustainably grown and harvested. Documentation may include logos on products or packaging, products listed on a certifying organization's website or letterhead, or documentation provided by a third party verifying organization.

<sup>9</sup> Products listed by the OK Biobased Program of Vinçotte with four stars contain >80% biobased content. Bidders need to show that their non-cutlery product contains more than 90% biobased content. Similarly, products listed by the OK Biobased Program of Vinçotte with three stars contain 60-80% biobased content. Therefore, bidders need to prove that their cutlery product contains more than 70% biobased content.

- b. **The product contains biobased material that was grown without genetically modified organisms (GMOs).** Bidders are strongly encouraged to offer food service ware products that contain plant-based material for which no GMOs were intentionally added in the field.

*Documentation Required:* Bidders will receive **10 points** if they provide documentation showing that the plants used to make the biobased content of the product were derived from seeds or plant stock that was not intentionally genetically modified. Acceptable documentation includes any of the following:

- Submit a sample of the product packaging that displays an ecolabel from an organization certifying that the product is GMO-free. Acceptable certification organizations include Non-GMO Project Verified ([www.nongmoproject.org](http://www.nongmoproject.org)), CERT ID Non-GMO ([www.cert-id.com/Non-GMO-Certification.aspx](http://www.cert-id.com/Non-GMO-Certification.aspx)) or ProTerra ([www.genetic-id.com/services/certification](http://www.genetic-id.com/services/certification)).
- Submit a letter, or a current website printout, from a certification organization indicating that the product is certified as GMO-free. Acceptable certification organizations include Non-GMO Project Verified ([www.nongmoproject.org](http://www.nongmoproject.org)), CERT ID Non-GMO ([www.cert-id.com/Non-GMO-Certification.aspx](http://www.cert-id.com/Non-GMO-Certification.aspx)) or ProTerra ([www.genetic-id.com/services/certification](http://www.genetic-id.com/services/certification)).
- Submit test data from an ISO 17025-accredited laboratory verifying that the product offered does not contain GMOs.<sup>10</sup>
- Submit test data from GeneScan, Inc. ([www.gmotesting.com](http://www.gmotesting.com)) verifying that the product offered does not contain GMOs.



- c. **GMO Offset Certificates have been purchased by the resin producer or product manufacturer.** Bidders are encouraged to offer products for which the manufacturer of either the product or the biobased resin used to make the product has purchased GMO offset certificates.

*Documentation Required:* Bidders will receive **10 points** if they document that the resin producer or the product manufacturer purchased GMO offset certificates commensurate with the quantity of GMO crops that were grown to make the line of products it is offering. Acceptable GMO offset certificates include the Working Landscapes Certificate ([www.workinglandscapes.org](http://www.workinglandscapes.org)) and NatureWorks Source Offset Program ([www.natureworkslc.com/the-ingeo-journey/raw-materials/source-options.aspx](http://www.natureworkslc.com/the-ingeo-journey/raw-materials/source-options.aspx)).



<sup>10</sup> A list of approved ISO 17025-accredited labs can be found at [www.nongmoproject.org/industry/about-gmo-testing/accredited-labs-and-resources/](http://www.nongmoproject.org/industry/about-gmo-testing/accredited-labs-and-resources/).



### 3. The product was made using a sustainable manufacturing process.

#### a. Chemicals of high concern were avoided.

Bidders are strongly encouraged to offer products that are devoid of chemicals of high concern due to their toxicity, persistence in the environment, and ability to accumulate in living things. Bidders will receive **2 points per criteria, for a maximum of 10 points**, if they can document that the product they are offering meets any of the following criteria:

- The product is devoid of intentionally added Proposition 65 chemicals ([http://oehha.ca.gov/prop65/prop65\\_list/Newlist.html](http://oehha.ca.gov/prop65/prop65_list/Newlist.html)).

Documentation Required: The bidder must submit a formal declaration stating that no intentionally added Proposition 65 chemicals were added to the product it is offering. The declaration must be written, signed, and dated on the manufacturer's letterhead by the manufacturer.

- The sum of the concentration levels of lead, cadmium, mercury, arsenic, and hexavalent chromium present do not exceed 100 ppm by weight.

Documentation Required: The bidder must submit XRF test results of the product showing the concentration levels of the different elements in the product or Green Seal certification.

- The product has less than 100 ppm by weight of intentionally added halogens or organohalogens, which are carbon-based compounds that contain chlorine, bromine, or iodine.

Documentation Required: The bidder must submit XRF test results of the product showing the concentration levels of the different elements in the product.

- Chlorine or chlorine compounds were not used in producing or bleaching the product.

Documentation Required: The bidder must submit Chlorine-Free Products Association or Green Seal certification.



- The product is devoid of bis-phenol A and harmful phthalates.

Documentation Required: The bidder must supply laboratory analysis showing that the product is BPA-free and has less than 0.1% by weight of the following phthalates: Diisononyl phthalate (DINP), Di-2-ethylhexylphthalate (DEHP, sometimes called DOP), di-n-octyl phthalate (DnOP), Di-isodecyl phthalate (DIDP), butylbenzyl phthalate (BBP), and dibutyl phthalate (DBP).

#### b. Recycled content was used to make wood- and paper-based food service product.

Bidders are encouraged to offer products that contain recycled-content. Bidders will receive:

**1 point** for every 10% of post-consumer recycled content for a maximum of **4 points** OR **1 point** for every 25% of post-industrial recycled content for a maximum of **4 points** that is in the final product based on the total fiber weight of the product. Bidders may get credit for both post-consumer and post-industrial recycled content but may not receive more than 4 points total for this criterion.

Documentation Required: To receive these points, the bidder must submit documentation from an independent laboratory or a third-party organization verifying the amount and type of recycled content in the product. The following certifications are acceptable:

- FSC Recycled or FSC Mixed through the Forest Stewardship Council (<http://www.fsc.org/accreditation.html>)
- SCS Recycled Content through Scientific Certification Systems ([http://www.scs-certified.com/gbc/material\\_content.php](http://www.scs-certified.com/gbc/material_content.php))

- UL Environment Verification Mark  
(<http://www.ulenvironment.com/ulenvironment/eng/documents/sellsheets/EnvironmentalClaimsValidation.pdf>)
- GS-35: Green Seal Environmental Standard for Food Service Packaging,  
([http://www.greenseal.org/Portals/0/Documents/Standards/GS-35/GS-35\\_Foodservice\\_Packaging\\_Standard.pdf](http://www.greenseal.org/Portals/0/Documents/Standards/GS-35/GS-35_Foodservice_Packaging_Standard.pdf))<sup>11</sup>



**c. Workers and the environment were protected during manufacturing of the finished product.**

Bidders are encouraged to offer products manufactured in a factory that meets one or more of the following standards:

- ISO14001 Environmental Management System through the International Organization for Standardization (ISO) (<http://www.iso.org>)
- Social Accountability 8000 (SA8000) Standard through Social Accountability International (SAI) (<http://sai-intl.org>)
- Occupational Health and Safety Assessment Series 18001, Health and Safety Management Specification ([www.ohsas-18001-occupational-health-and-safety.com](http://www.ohsas-18001-occupational-health-and-safety.com))
- International Labour Organization (ILO) Standards ([www.ilo.org](http://www.ilo.org))
- International Certification Services 13 Standards (Environment, Health Protection, Safety) through the International Organization for Standardization ([www.iso.org](http://www.iso.org))

**Documentation Required:** The bidder will receive **1 point per standard met, for a maximum of 5 points**, if they submit documentation demonstrating that the product manufacturing factory meets one of the above standards.

**4. End-of-life product impacts are avoided.**

**a. The product is acceptable to the local commercial composting facility used by the institution.**

Bidders are strongly encouraged to seek confirmation from the composting facility used by the institution issuing this solicitation to verify that their product is compostable in the composting facility.<sup>12</sup>

**Documentation Required:** Bidders will receive **10 points** if they provide a letter from the composting facility that will be accepting the products for recovery. The letter must state that the biobased food service product offered is acceptable in their facility.<sup>13</sup> The composter's contact information is provided below:

Name of Composting Facility: \_\_\_\_\_ Phone Number: \_\_\_\_\_  
Contact Person: \_\_\_\_\_ Email Address: \_\_\_\_\_

**b. The product is clearly labeled "Compostable".**

The Bidder must offer products that are clearly labeled as "compostable" to facilitate users to

<sup>11</sup> Green Seal-certified products must have a minimum of 45% recycled content; therefore, they will automatically qualify for 1 point. To receive more points, documentation of the type and amount of recycled content is necessary.

<sup>12</sup> Purchaser: you may want to ask for samples early on to test them with your composter or, if time is short, ask the Bidder to supply a list of similar composters that already accept their products. For instance, if your composter makes aerated windrow piles, the Bidder should provide a list of other aerated windrow composters that can validate the product offered composts in their system.

<sup>13</sup> If the compost facility provides a list of acceptable products, the Bidder must provide only products that are on the list. If the list allows for "equivalent alternates," then the bidder must receive a letter from the composter indicating that the "equivalent" product offered is also compostable in its facility.



properly sort these products with food residuals and help the composting facility properly identify these products as acceptable in their process. The word, “compostable,” should be clearly visible against the background of the product.

Documentation Required: Bidders must send a sample of the product and will receive **10 points** if the purchasing agent finds the word, “compostable,” to be clearly visible on the product.

**c. The product is compostable in a “home/backyard” composting system.**

Bidders are encouraged to offer biobased food service products that are compostable in a home/backyard or on-site composting system, particularly if food service ware is provided for takeout.

Documentation Required: Bidders will receive **7 points** if they submit information verifying that the products offered have received Vincotte’s OK Compost HOME certification.



Automatic full points: Uncoated paper plates will automatically qualify for these points.

**d. The product is biodegradable in an aquatic environment.**

Bidders are encouraged to offer biobased food service products that are biodegradable in marine or freshwater environments.

Documentation Required: The Bidder will receive **4 points** if they provide documentation verifying that the product meets one of the following:

- ASTM D7081, Standard *Specification for Non-Floating Biodegradable Plastics in the Marine Environment* (<http://www.astm.org/Standards/D7081.htm>)
- Holds a current “OK Biodegradable WATER” certification from Vincotte ([www.okcompost.be/en/recognising-ok-environment-logos/ok-biodegradable-soil-amp-ok-biodegradable-water](http://www.okcompost.be/en/recognising-ok-environment-logos/ok-biodegradable-soil-amp-ok-biodegradable-water)).



**5. Transportation impacts were avoided.** Bidders are encouraged to reduce transportation impacts by offering products for which both the finished products and the biobased feedstock used to make the product were produced in North America.

Documentation Required: The bidder will receive:

**2 points** for documentation that identifies the finished product was made in North America,  
**2 points** for documentation that the resin producer/converter is located in North America, and  
**2 points** for documentation that the feedstock is sourced from North America.

To receive these points, the Bidder must identify where the feedstock, resin, and product was produced by providing a letter from the resin or product manufacturer that is written, signed, and dated on the manufacturer’s letterhead by the manufacturer.

**6. Packaging impacts were avoided.**

The Bidder is encouraged to offer biobased food service ware products in environmentally sound packaging.<sup>14</sup>

**a. Primary packaging is compostable in a commercial composting facility.**

The Bidder will receive **1 point** if they demonstrate that the product's primary packing material is acceptable by the institution's composting facility and **1 point** if the packaging is certified as "commercially compostable" based on ASTM D6400 or ASTM 6868.

Documentation required:

The Bidder must provide a sample of the packaging showing that it contains the logo of one or more of the certification agencies listed below on the product itself. The sample may be the packaging that delivers the product samples.

- Biodegradable Products Institute (North America)
- Green Seal GS-35 (USA)
- AIB Vinçotte Inter (Belgium)
- Din Certco (European Union)
- Australian Bioplastics Association (Australia)
- Japan Bioplastics Association (Japan)



AND the Bidder will receive another point if they provide a letter from the composting facility that will be accepting the products for recovery. The letter must state that the biobased food service product offered is acceptable in their facility.

**b. Packaging is "easily recyclable."** Bidders are encouraged to offer biobased food service ware products packaged in material that is accepted in the recycling program of the jurisdiction or institution.

Documentation required: Bidders will receive **1 point** if they demonstrate that the product's primary packaging material is recyclable in the institution's recycling program:

Acceptable materials include<sup>15</sup>:

Unacceptable materials include<sup>15</sup>:

**c. Packaging is devoid of the following toxic heavy metals: lead, mercury, cadmium and hexavalent chromium.** The Bidder will receive **1 point** if they submit XRF test results showing that the sum of the concentration levels of lead, cadmium, mercury, arsenic, and hexavalent chromium present in the product's primary packaging materials do not exceed 100 ppm by weight.

Documentation Required: The bidder must submit XRF test results of the product showing the concentration levels of the different elements in the product or Green Seal certification.

**d. Packaging materials contain post-consumer recycled (PCR) content.** Bidders are encouraged to offer biobased food service ware products packaged in material that contains *post-consumer recycled content*.

Documentation Required: Bidder will receive **0.25 point** for each 25% of post-consumer recycled content in the product's packaging, for a maximum of **1 point**. Bidder must submit a sample of the product's primary packaging with a statement of its minimum amount of PCR content.

<sup>14</sup> Primary packaging is the packaging that immediately surrounds the product.

<sup>15</sup> Since accepted materials vary by area, the purchaser would list these materials.