

Purchasing Specifications for Compostable Food Service Ware

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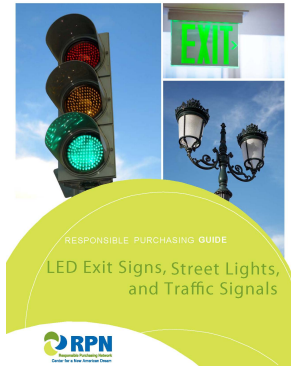
Who is RPN?

International Network

- ✓ State and local governments
- ✓ Federal agencies
- ✓ Colleges and universities
- ✓ School districts
- ✓ Businesses
- ✓ Non-profit organizations
- ✓ Faith-based organizations



RPN Resources



✓ *Responsible Purchasing Guides* for 15 product categories



✓ Webinars on “green” procurement issues

✓ Quarterly newsletter highlighting “green” purchasing activities and resources



✓ Sustainable purchasing policies and specifications

✓ *Model Responsible Purchasing Report*

✓ Calculators and other tools

Sustainability Purchasing Specifications for Biobased Food Service Ware



[www.sustainablebiomaterials.org/
criteria.purchasing.php](http://www.sustainablebiomaterials.org/criteria.purchasing.php)

BioSpecs Complement Other Considerations



- ✓ **Design requirements (type, size, shape, color of products needed)**
- ✓ **Performance During Use**
- ✓ **Availability of Products from Local Vendors**
- ✓ **Cost (Best Value)**



Overview of BioSpes For Purchasers



Mandatory Sustainability Criteria

- ✓ Specifications
- ✓ Points



Desirable Sustainability Criteria

- ✓ Points
- ✓ Disclosure requirement (questionnaire)

Scope of BioSpes For Purchasers

Types of products covered

- ✓ Cutlery
- ✓ Plates, bowls, cups
- ✓ Clamshells
- ✓ Gloves, trays, etc



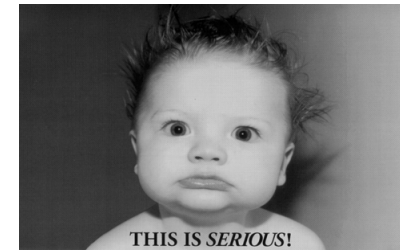
Types of materials covered

- ✓ Bioplastics (e.g., PLA, potato starch, etc.)
- ✓ Other plant-based materials: paper, wood, bamboo, bagasse



Mandatory Criteria

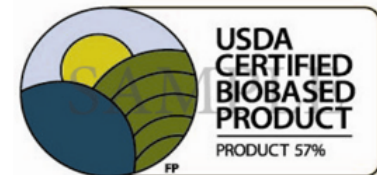
- ✓ **Minimum Biobased Material**
- ✓ **Nano-materials Declaration**
- ✓ **No fluorinated compounds**
- ✓ **Commercial compostability**
- ✓ **Products made in compliance with all applicable laws and regulations**
- ✓ **Products offered in bulk**
- ✓ **No polystyrene or PVC packaging**
- ✓ **10 samples must be provided**



Minimum Biobased Material

All products (other than cutlery) must contain at least 90% biobased carbon content; cutlery must contain at least 75%

- ✓ = % weight of total carbon content
- ✓ ASTM Test Method D6866



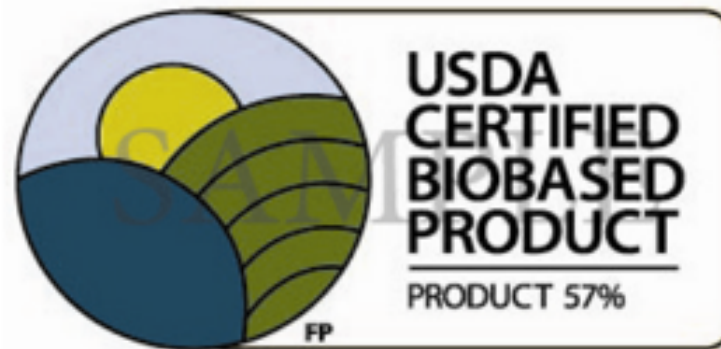
Documentation required

- ✓ Independent laboratory analysis
- ✓ Verification by USDA or an independent third party organization (e.g., OK Biobased Program of Vincotte)

Biobased Material

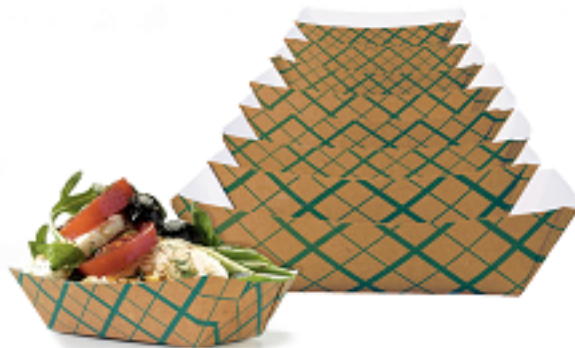


VS



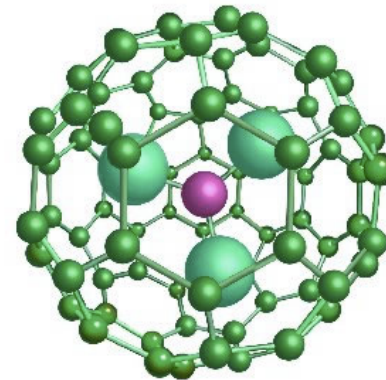
Minimum Biobased Material

Products made of 100% (uncoated) wood, bamboo, paper or another obviously plant-based material (other than biobased plastic) will automatically meet this requirement



Nanomaterials Declaration

Bidder must declare whether or not nanomaterials were intentionally added to any offered products (including surface treatments)



Documentation Required

- ✓ Written declaration on manufacturer's letterhead
- ✓ Signed and dated by a corporate officer

No Fluorinated Compounds

- ✓ Perfluorinated compounds are sometimes added to molded paper products as a grease barrier
- ✓ Bidder must verify that products do not contain fluorine or fluorinated compounds



Documentation Required

- ✓ Laboratory tests (e.g., XRF results)
- ✓ Type of grease barrier used must be identified



Commercial Compostability

Biobased food service ware products must be certified as “compostable” (in a commercial facility) based on verified compliance with the following standards:

- ✓ **ASTM D6400 or D6868 (North America)**
- ✓ **ISO 17099 (International)**
- ✓ **DIN EN 13432 (European Union)**
- ✓ **AS 4376 (Australia)**



Commercial Compostability

Products must have one of the following certifications:

- ✓ Biodegradable Products Institute (North America)
- ✓ Green Seal GS-35 (USA)
- ✓ AIB Vincotte Inter (Belgium)
- ✓ Din Certo (European Union)
- ✓ Australian Environmental Labeling Association
- ✓ Japan Bioplastics Association



Commercial Compostability

Documentation Required

- ✓ Product or packaging must contain certification logo
- ✓ If BPI-certified, manufacturer must be listed on BPI website
- ✓ If paper, wood, or another obvious plant-based material (other than biobased plastic) must be approved by Cedar Grove Composting site.



Bidder must disclose the material and coatings of each product offered.

Other Mandatory BioSpecs Criteria

- ✓ **Products must be made in compliance with all applicable laws and regulations**
- ✓ **Products must be offered in bulk**
- ✓ **No polystyrene or PVC packaging allowed**
- ✓ **10 samples must be provided for performance testing**



Additional Sustainability Criteria (Desirable)

- ✓ **Additional Biobased Content (>90%)**
- ✓ **Sustainability Attributes of Biobased Material**
- ✓ **Sustainability of Biobased Product Manufacturing**
- ✓ **Other End-of-Life Considerations (labeling)**
- ✓ **Transportation and Packaging Considerations**



Higher Biobased Carbon Content

Additional points offered for products with higher biobased content (>75% for cutlery & >90% for everything else)



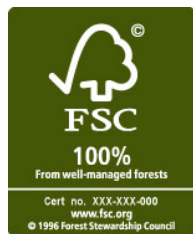
Documentation required

- ✓ Independent laboratory tests (per ASTM D6868)
- ✓ Third party verification (USDA Biobased Label or OK Biobased Program of Vincotte)
- ✓ Products made of 100% uncoated paper, wood or other plant-based material automatically get all points

Sustainability Attributes of Biobased Material

Sustainable Production of Biobased Feedstocks

“Bidders are encouraged to offer products containing biobased materials that protect the environment when they are grown and harvested.”



Sustainability Attributes of Biobased Material



Grown Without Genetically Modified Organisms (GMOs)

“Bidders are strongly encouraged to offer products containing plant-based material for which no GMOs were intentionally added to the field.”

- ✓ Certified GMO-free
- ✓ GeneScan (www.gmotesting.com)
- ✓ Test data from ISO 17025-accredited lab

Sustainability Attributes of Biobased Material

GMO Offset Certificates

*Bidders are encouraged to offer products for which
GMO offset certificates were purchased by
biobased feedstock, resin and/or product
manufacturers.*

- ✓ Working Landscapes Certificate Program
- ✓ NatureWorks Source Offset Program



Sustainability of Biobased Product Manufacturing

- ✓ Avoidance of chemicals of high concern
- ✓ Use of recycled content in wood- and paper-based food service ware products
- ✓ Protection of workers and the environment during product manufacturing
- ✓ Minimization of transportation impacts



Sustainability of Biobased Product Manufacturing

Avoidance of Chemicals of High Concern

- ✓ Carcinogens and Reproductive Toxins (California's Prop 65 list)
- ✓ Halogens and Halogenated Compounds
- ✓ Toxic Heavy Metals
- ✓ Phthalates
- ✓ Bis-Phenol-A



The CFPA is proud to introduce our New Mark of Sustainability!



Lab tests or results of XRF spectroscopy tests

Sustainability of Biobased Product Manufacturing

Recycled Content

“Bidders are encouraged to offer products that contain recycled-content (particularly post-consumer) material.”



- ✓ FSC 100% Recycled or Mixed Sources
- ✓ SCS Recycled Content Verification (Scientific Certification Systems)
- ✓ GS-35: Green Seal Environmental Standard for Food Service Packaging (min. 45%)



Sustainability of Biobased Product Manufacturing

Protection of Workers and Environment

“Bidders are encouraged to offer products that have been certified by an independent third-party organization to meet...”

- ✓ ISO 14001 (EMS)
- ✓ Social Accountability 8000
- ✓ OSHA 8002
- ✓ ILO Standards
- ✓ ISO Environmental Health Protection & Safety Standards



Sustainability of Biobased Product Manufacturing

Minimization of Transportation Impacts

Bidders are encouraged to reduce transportation impacts by offering products for which biobased feedstocks, resin and finished products are made in North America.



Bidder must identify where biobased material is grown and where resin and final product are made.

Additional End-of-Life Product Considerations

- ✓ Acceptable to local commercial composting facility
- ✓ Clearly labeled “Compostable”
- ✓ Compostable in backyard or onsite system
- ✓ Biodegradable in marine environment
- ✓ Biodegradable in fresh water



Packaging Considerations

- ✓ **Commercially compostable**
- ✓ **Easily recyclable**
- ✓ **Devoid of chemicals of concern**
- ✓ **Contains post-consumer recycled content**



Is Performance Testing Necessary?



NOT ALWAYS. Good experiences reported by others may be enough, e.g. reports on SBC & RPN websites

- ✓ Testing can help ensure new product sizes, shapes, and materials work in your system
- ✓ Your composting facility may need to test products to ensure they work for them

Kitchen Walk-Through

- **ID products currently used that you want to replace**
- **Determine how compostables fit into your food service process**
- **Create buy-in from kitchen managers and food service departments**
- **Assess food waste collection**
- **Take photographs**



Compost Facility Tour

- ✓ **What process does it use, how quickly must compostables decompose, what happens if they don't?**
- ✓ **Does it have OMRI (organic) certification**
- ✓ **Does it need to test products to accept them?**
- ✓ **How can you ensure the compostable products you choose are acceptable?**
- ✓ **Develop buy-in from compost facility managers**



DAVID L. RYAN/GLOBE STAFF

Find Potential Alternatives

- ✓ Local food service and restaurant supply vendors
- ✓ Cedar Grove composting facility approved products list
- ✓ USDA BioPreferred Products List
- ✓ Other purchasers



SF Approved List

- ✓ **BEST OPTION:** Issue RFI using BioSpecs

Track Options in Database

Table 1. Sample Spreadsheet for Tracking Potential Options

Compostable Food Service Ware							
Category	Brand	Manufacturer	Product	Manufacturer ID #	Certifications, Approvals	Material	Additional Attributes
Clamshell, Hot	Harvest	GenPak	Large Hinged 3 Section, 9"x 9.1"x 3.1", heat tolerance up to 140°	HF203	BPI, Cedar Grove	PLA/fiber	
Plate	Chinet	Huhtamaki	8 3/4" plate	25710	BPI, Cedar Grove	Smooth molded fiber	100% postindustrial paper fiber
Cup, Cold	GreenWare	Fabri-Kal	12 oz. cold cup	GC12S	BPI, Cedar Grove	Ingeo PLA	

Code Samples

- ✓ Request samples from product distributors, manufacturers
- ✓ ID samples by name or SKU, add code to database
- ✓ Get samples of lids, ID products the lids work with



Evaluation Criteria



SIZE – sufficient surface, not too big or small

SHAPE – works for stacking, space requirements

STRENGTH – maintains shape when carried

INTEGRITY – hold doesn't get soggy, leak, deform

TEMPERATURE – cup/bowl not too hot to hold;
cutlery doesn't melt in hot liquid


AESTHETIC – tactile feel, food does not absorb taste;
doesn't splinter

TECHNICAL – withstands refrigeration, stacks well,
clamshell closures work well, easy to open/close, knife
cuts, fork spears, spoon holds liquid

ASSESSORIES – lids fit, don't leak or pop off

Create Evaluation Sheets

**GREEN PURCHASING INSTITUTE
COMPOSTABLE FOOD SERVICE WARE PERFORMANCE TESTING
Plates**

Performance Graded By		Agency		Date			
Code	Description/Grade	Performance Parameters		Additional Notes/Comments			
P L A T E S			Explanations				
			Size appropriate	Yes		No	_____
			Sufficient carrying strength	Yes		No	_____
			Holds up with utensil use	Yes		No	_____
			Absorbs liquids, gets soggy	Yes		No	_____
			Leaks	Yes		No	_____
			Melts with hot food	Yes		No	_____
			Collects condensation	Yes		No	_____
			Food absorbs plate taste	Yes		No	_____
			Overall Grade	5 4 3 2 1 Best Neutral Poor			

Test Day!

- ✓ **Test product categories together – all plates, all cups, all cutlery at same time**
- ✓ **Try all kinds of food with plates, use compostable utensils with them**
- ✓ **Standby thermoses of hot water to test bowls, cups and cutlery**
- ✓ **Multiple trays to test food prep scenarios with lids, stacking**



Product Evaluations

- ✓ Each tester evaluated every product
- ✓ Relevant questions answered on evaluation sheets for each product
- ✓ Each product given overall score from 1 – 5 by every tester
- ✓ Additional notes written in
- ✓ Spreadsheet calculations for the results



Product Evaluations

Compostable Food Serviceware
Product Testing Results
Category: Hot Cups


Brands/ Lines	Manufacturer	Products	Approvals, Certifications	Overall Score (1-5)	% of Performance Criteria Passed	Comments
GalliGreen	Gallimore HealthCare	8 oz hot cup	BPI certified	5.0	100%	Not too hot to hold. Does not need a sleeve. Thick wall prevents cup from losing its shape.
EcoGreen	Kuan Chun Paper Company	4 oz cup	BPI certified	4.0	100%	Acceptable/ medium heat to hold
EcoGreen	Kuan Chun Paper Company	7 oz cup	BPI certified	4.0	100%	Acceptable/ medium heat to hold
StalkMarket, Jaya	Asean Corporation	12 oz hot cup	BPI certified	4.0	89%	Structure gives somewhat

Procurement Considerations

- ✓ **Local suppliers often have incomplete lines, some manufacturers sell direct**
- ✓ **Green product vendors often do not offer conventional food service ware products (separate line items)**
- ✓ **Energy use and greenhouse gas impacts – manufacturing locations and transportation impacts are difficult to sort out**



BioSpecs Bid Sheet

MC #	Mandatory Criterion Description	Documentation Required	Documentation Provided by Bidder	MSC Met? (Y/N)
5	Product must be certified as “commercially” compostable. It must meet ASTM D6400 or D6868; DIN EN 13432; AS 4376; or ISO 17088	<p>Non-cutlery products: need logo on product itself Cutlery products: need logo on packaging</p> <p>Bidder must submit product or packaging sample with logo from certification organization such as BPI, Green Seal, AIB Vincotte, Din Certo, Australian Bioplastics Assoc., or Japan Bioplastics Assoc. demonstrating that the product is compostable in a commercial composting facility.</p>	<p>Circle the certification logo(s) found on the product or packaging:</p> 	
	Exception: Product is <u>UNCOATED</u> wood, paper or another fiber-based material	Exception: Disclose material type of product offered	Exception: Material type: _____	
6	Product must be offered in bulk.	Bidder must submit samples and/or information demonstrating that product is available in bulk.	<input type="checkbox"/> Demonstrated availability in bulk	
	OR: Individual wrappings are certified as compostable in a commercial composting facility.	If purchaser needs product individually wrapped, bidder must demonstrate that the wrapping is certified as compostable in a commercial composting facility.	Need at least one of the following: <input type="checkbox"/> Compostable logo on wrapper <input type="checkbox"/> Wrapper listed on certification bodies website as a certified product <input type="checkbox"/> Wrapper meets compostability standard (i.e., ASTM D6400, EN 13432, etc)	

[www.sustainablebiomaterials.org/documents/
PurchasingBioSpecs_BidSheet_FINAL_2011.pdf](http://www.sustainablebiomaterials.org/documents/PurchasingBioSpecs_BidSheet_FINAL_2011.pdf)

Cost Considerations

- ✓ **Difficult to project costs until actual bid results come in**
- ✓ **Important to estimate equivalent usage**
- ✓ **Include on bid solicitation core (market basket) list**
- ✓ **Factor in cost savings from avoided landfill fees**
- ✓ **Consider cost savings of reusable food ware**



Lessons Learned

- ✓ **Compostable food serviceware market is very dynamic – new products, many materials, “greenwashing”**
- ✓ **Wide range of quality and compostability**
- ✓ **A food waste recycling program requires careful planning & collaboration with kitchen and compost facility**
- ✓ **May need to change waste haulers, compost sites**
- ✓ **Increasing number of high quality certified products and good options**



BioSpecs Early Adoptors

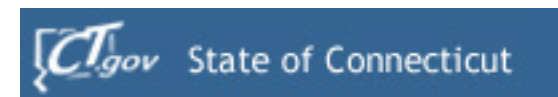
- ✓ **Santa Clara County**
(evaluated compostability and performance)



- ✓ **Practice Greenhealth**
(developed vendor questionnaire based on BioSpecs)



- ✓ **State of Connecticut**
(adding specs to statewide contract)



Thank You!

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