Purchasing Specifications for Compostable Food Service Ware

June 4, 2012

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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

www.ResponsiblePurchasing.org
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

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Sustainability Purchasing Specifications for Biobased Food Service Ware

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

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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
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
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

Lab tests or results of XRF spectroscopy tests

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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
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
Find Potential Alternatives

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

**BEST OPTION:** Issue RFI using BioSpecs
## Track Options in Database

### Table 1. Sample Spreadsheet for Tracking Potential Options

<table>
<thead>
<tr>
<th>Category</th>
<th>Brand</th>
<th>Manufacturer</th>
<th>Product</th>
<th>Manufacturer ID #</th>
<th>Certification(s, Approvals)</th>
<th>Material</th>
<th>Additional Attributes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clamshell, Hot</td>
<td>Harvest</td>
<td>GenPak</td>
<td>Large Hinged 3 Section 9&quot;x 9.1&quot;x 3.1&quot;, heat tolerance up to 140°</td>
<td>HF203</td>
<td>BPI, Cedar Grove</td>
<td>PLA/fiber</td>
<td></td>
</tr>
<tr>
<td>Plate</td>
<td>Chinet</td>
<td>Huhtamaki</td>
<td>8 3/4&quot; plate</td>
<td>25710</td>
<td>BPI, Cedar Grove</td>
<td>Smooth molded fiber</td>
<td>100% postindustrial paper fiber</td>
</tr>
<tr>
<td>Cup, Cold</td>
<td>GreenWare</td>
<td>Fabri-Kal</td>
<td>12 oz. cold cup</td>
<td>GC12S</td>
<td>BPI, Cedar Grove</td>
<td>Ingeo PLA</td>
<td></td>
</tr>
</tbody>
</table>
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

<table>
<thead>
<tr>
<th>Performance Graded By</th>
<th>Agency</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Code</td>
<td>Description/Grade</td>
<td>Performance Parameters</td>
</tr>
<tr>
<td>P-1</td>
<td>Plate – 7” FH807</td>
<td>Size appropriate</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Sufficient carrying strength</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Holds up with utensil use</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Absorbs liquids, gets soggy</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Leaks</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Melts with hot food</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Collects condensation</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Food absorbs plate taste</td>
</tr>
<tr>
<td></td>
<td>PLATES</td>
<td>Overall Grade</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Best</td>
</tr>
</tbody>
</table>
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
### Compostable Food Serviceware Product Testing Results

**Category: Hot Cups**

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

<table>
<thead>
<tr>
<th>MC #</th>
<th>Mandatory Criterion Description</th>
<th>Documentation Required</th>
<th>Documentation Provided by Bidder</th>
<th>MSC Met? (Y/N)</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>Product must be certified as “commercially” compostable. It must meet ASTM D6400 or D6868; DIN EN 13432; AS 4376; or ISO 17088</td>
<td>Non-cutlery products: need logo on product itself. Cutlery products: need logo on packaging. 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.</td>
<td>Circle the certification logo(s) found on the product or packaging. <img src="https://example.com/compostable-logo.png" alt="Compostable Logo" /> <img src="https://example.com/bioplastic-logo.png" alt="Bioplastic Logo" /> <img src="https://example.com/biodegradable-logo.png" alt="Biodegradable Logo" /></td>
<td>Y</td>
</tr>
<tr>
<td>6</td>
<td>Product must be offered in bulk. OR: Individual wrappings are certified as compostable in a commercial composting facility.</td>
<td>Bidder must submit samples and/or information demonstrating that product is available in bulk. If purchaser needs product individually wrapped, bidder must demonstrate that the wrapping is certified as compostable in a commercial composting facility.</td>
<td><img src="https://example.com/demonstrated-availability.png" alt="Demonstrated Availability in Bulk" /> <img src="https://example.com/compostable-wrap.png" alt="Compostable Wrap" /> <img src="https://example.com/biodegradable-wrap.png" alt="Biodegradable Wrap" /></td>
<td>N</td>
</tr>
</tbody>
</table>

Exception: Product is UNCOATED wood, paper or another fiber-based material. Exception: Disclose material type of product offered. Exception: Material type: __________

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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