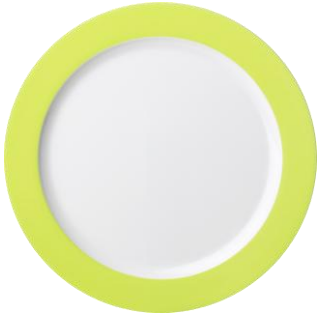
“Forever Chemicals” in Single-use foodware

Biz-NGO 2019 Annual Meeting

December 10, 2019

CEH CENTER for ENVIRONMENTAL HEALTH

CEH

A non-profit organization dedicated to protecting public health from exposures to toxic chemicals.

The Center for Environmental Health works with large purchasers to utilize their buying power to incentivize the production of environmentally preferable products

Endocrine Disrupting Chemicals

- Mimic, block, or change the activity of hormones, even at minute doses
- Can cause diabetes, obesity, reproductive harm, promote cancer, and other diseases
- Fetuses, babies and children vulnerable
- Exposure during critical developmental stages can lead to life-long health impacts.

Per- & Polyfluoroalkyl Substances (PFAS)

- Entirely manmade – thousands of formulations in use
- Many are **extraordinarily persistent** in the environment, cannot be broken down by natural systems
- PFAS are detected in air, water, soil, sludge
- Many **bioaccumulate** at the top of the food chain – in birds, fish, livestock, and humans
- Environmental persistence leads to **global distribution** via air and water movement – releases here can be significant for communities on the other side of the world

Slide adapted from Andrew Lindstrom, US EPA

Some Uses & Sources of PFAS

Source: Green Science Policy Institute, reproduced with permission www.greensciencepolicy.org

PFAS Health Effects & Exposure

Human health effects associated with PFAS in the general population and/or communities

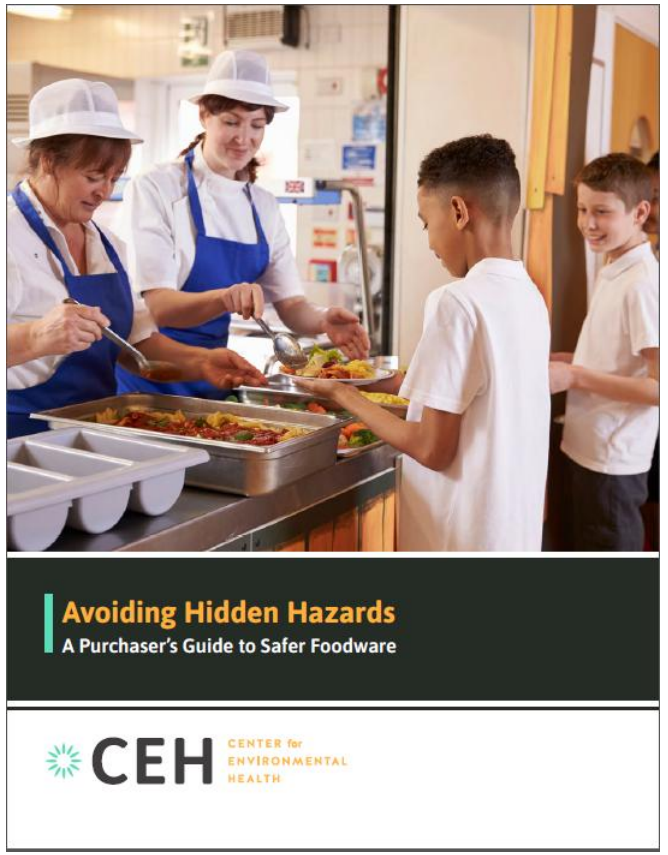
- Associated with kidney and testicular cancer, elevated total cholesterol, accelerated puberty, liver damage, obesity, immune system and thyroid disruption, and other health problems.

Exposure Pathways

- Diet (fish/seafood, garden produce, etc)
- Drinking water
- Incidental soil/dust ingestion

Disposable Foodware & Fluorinated Additives

- CEH tested single-use plates, bowls, clamshell containers and food trays
- PFAS is used in foodware for water- and grease-resistance
- PFAS can end up in food, compost and landfills.



Database of Products

- Results of product testing is publicly available
- Findings indicate which products are “fluorinated” or “non-fluorinated”
- Accompanies CEH’s Foodware report

Center for Environmental Health's Database of Single-Use Food Service Ware Products Tested for Fluorinated Additives

Full Database of Tested Products

Peaslee Lab Results	Galbraith Lab Results	Date Added to Database	Manufacturer/Brand	Type of Product	Product #/SKU	Product Description	Product Material Type
No/Low F	N/A	4/30/2018	Tablecraft	Plate	808BAMDSBK2	Black Mini Square Serving Dish	Bamboo
No/Low F	N/A		The Home Store	Bowl	15166	White with flowers 12 oz bowl	Paper
No/Low F	N/A		The Home Store	Plate	15164	White with flowers 6.8" plate	Paper
No/Low F	N/A	12/20/2018	Treevive	Tray	999SP96PALM	Brown 9"x6" Rectangular Tray	Palm Leaf
No/Low F	N/A	12/20/2018	Treevive	Tray	999TRAYDELI7	Brown 12" Round Compartment Tray	Palm Leaf
No/Low F	N/A		Up & Up	Bowl	041594167977	White 12 oz heavy duty bowl	Paper - Unknown Coating
No/Low F	N/A		Up & Up	Plate	041165108194	White 8.5" Heavy Duty Paper Plates	Paper - Unknown Coating
No/Low F	N/A		Up & Up	Plate	076955748274	White 9" Paper Plates	Paper
No/Low F	No/Low F	11/1/2019	Value Corner	Plate	021130265206	9" White Uncoated Paper Plates	Paper
No/Low F	N/A		Value Corner	Plate	021130286027	White 9" Paper Plates	Paper
No/Low F	N/A		Vegware	Bowl	SC-08	Small Disposable Bowl	Paper - PLA Lined
No/Low F	N/A	12/20/2018	Vegware	Straw	WS05-GS	Green stripe white 5mm ecovio straw	PLA
No/Low F	No/Low F	12/20/2018	Vio	Straw	511095	Green 7.75" Straw	Polypropylene
No/Low F	N/A	4/30/2018	WNA Comet Ecosense	Plate	999ECOCW6BK	Black 6.25" Round Plate	Polypropylene
No/Low F	N/A		World Centric	Cup	CU-PA-12-P	12 oz Hot Paper Cup with Ingeo™ Lining	Paper - PLA Lined
No/Low F	N/A		World Centric	Clamshell	KL-CS-7	7x7x3" Hinged Clamshell, Clear	PLA
No/Low F	N/A		World Centric	Clamshell	KL-CS-6	6x6x3 Clear Clamshell	PLA
No/Low F	N/A		World Centric	Tray	SU-CS-75	Sushi Tray Set	PLA
No/Low F	N/A	12/20/2018	World Centric	Lid	SU-CS-75	Clear 24 oz Burrito Oval Lid	PLA
No/Low F	N/A	12/20/2018	World Centric	Take-Out Container	DC-CS-8	Clear 8 oz Take Out Container	PLA
No/Low F	N/A	12/20/2018	World Centric	Lid	TRL-CS-10	10x7.5 Tray lid - Ingeo	PLA
No/Low F	N/A	12/20/2018	World Centric	Clamshell	KL-CS-8T	Clear 8" x8" x3" Compartment Clamshell	PLA
No/Low F	N/A	12/20/2018	World Centric	Bowl	SB-CS-16	Clear 16 oz Salad Bowl	PLA
No/Low F	N/A		World Centric	Cup	CP-CS-25	Clear 2 oz Souffle Cup	PLA
No/Low F	N/A		World Centric	Lid	CPL-CS-25	Clear 2 oz Souffle Cup Lid	PLA
No/Low F	N/A		World Centric	Cup	CU-PA-12	White 12 oz Paper Hot Cup	Paper - PLA Lined
No/Low F	N/A	12/20/2018	World Centric	Bowl	DC-CS-16	Clear 16 oz Round Deli Bowl	PLA
No/Low F	N/A	12/20/2018	Yes Eco	Soup Container	YS-PLA12BWLH	White and Green 12 oz Soup Container	Paper - PLA Lined
F	N/A		Aura Eco Pack	Plate	BGSP100-50	White 7" Floral Plates	Molded Fiber
F	N/A		Bare by Solo (Dart)	Bowl	12BSC-2050	White 12 oz Square Bowl	Molded Fiber (Sugarcane)
F	N/A		Be Green Packaging	Cup	BG-C04	Brown 4 oz cup	Molded Fiber
F	N/A		Be Green Packaging	Bowl	BG-B032	Brown 32 oz bowl	Molded Fiber (Plant Fiber)
F	N/A		Be Green Packaging	Bowl	BG-OB-321	Brown Oval 32 oz Bowl	Molded Fiber (Plant Fiber)
F	N/A		Be Green Packaging	Lid	BG-OB-321-L	Brown Oval 32 oz Lid	Molded Fiber (Plant Fiber)

www.ceh.org/foodware

Summary of FL results by material type

- **ALL MOLDED FIBER** products tested had **high fluorine content (indicating likely treatment with PFAS)** – sugarcane/bagasse, wheat straw, wheat stalk, recycled paper fibers, plant fibers
- **Avoid polystyrene**

Summary of Product Materials and their Fluorine Test Results

Material Type Tested	# Products Tested	Fluorinated Products	Low/Non-Fluorinated Products
Bamboo	2	0	2
Molded Fiber	153	148	5
Molded Fiber - PLA Lining	5	5	0
Palm Leaf	10	0	10
Paper	27	0	27
Paper - Clay Coated	6	1	5
Paper - PLA Lined	23	0	23
Paper - Plastic Coated	3	0	3
Paper - Unknown Coating	14	0	14
Polylactic Acid (PLA)	37	0	37
Plastic	2	0	2
Total:	**282**	**154**	**128**

Concerns with Single-Use Food Service Ware

Lifecycle concerns

- Production/Transportation
- Use
- Disposal (waste)

Toxic Chemicals

- PFAS
- Polystyrene

https://huggythemuggy.files.wordpress.com/2011/05/img_2690.jpg

Disposable Foodware & Fluorinated Additives

- **Prioritize reusables & minimize single-use.** http://www.rethinkdisposable.org/
- **"Compostable" does not equal safe** (BPI-certified* or CMA Accepted compostable products can still have PFAS)
- **Recyclable Foodware is unlikely to be recycled**

***By Jan 1, 2020, ALL BPI-Certified products will be "free" of PFAS**

BPI-Certified Compostable

Biodegradable Products Institute (BPI) certifies food service ware products as compostable http://products.bpiworld.org/

- By Jan 1, 2020, all BPI-Certified products will be “free” of PFAS.

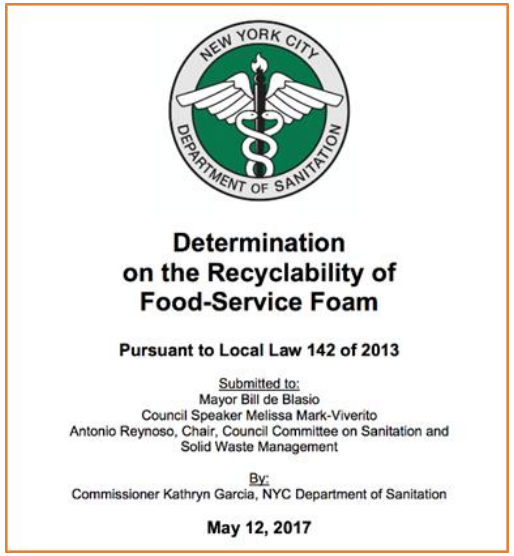
CMA Composter Approved List

Compost Manufacturing Alliance (CMA) verifies compostability of products in their composting facilities
https://compostmanufacturingalliance.com/portfolio/commercially-accepted-items/

- By Jan 1, 2021, products on CMA-Approved Lists will be “free” of PFAS.

Problems with Polystyrene

- Styrene is reasonably anticipated to be a human carcinogen (2011, National Toxicology Program)
  - Styrene can leach into food or drinks
- Very difficult to recycle
  - Made from petroleum; ends up in landfills, waterways
  - breaks down into smaller pieces; ingested by animals
  - Products contaminated with food;
- May 2017: Determination that food-service foam "cannot be recycled in a manner that is economically feasible or environmentally effective for NYC"



NEW YORK CITY DEPARTMENT OF SANITATION

Determination on the Recyclability of Food-Service Foam

Pursuant to Local Law 142 of 2013

Submitted to:
Mayor Bill de Blasio
Council Speaker Melissa Mark-Viverito
Antonio Reynoso, Chair, Council Committee on Sanitation and Solid Waste Management

By:
Commissioner Kathryn Garcia, NYC Department of Sanitation

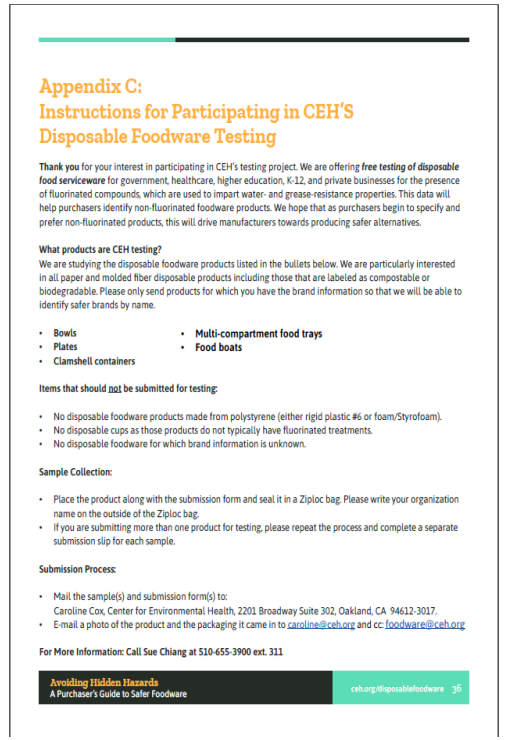
May 12, 2017

Things Purchasers/ Organizations Can Do

1. Participate in Product Testing
2. Letter to/Discussion with Suppliers
3. Communication with Certifiers (Compostability/Sustainability)
4. Use Model Specifications
5. Prefer Non-Fluorinated Foodware

Low Cost Product Testing

- Organizations can submit single-use foodware for testing
  - Plates, bowls, clamshells, food trays/boats
- Useful information for discussions with suppliers
- Contributes to list of preferred products



Appendix C:
Instructions for Participating in CEH'S Disposable Foodware Testing

Thank you for your interest in participating in CEH's testing project. We are offering ***free testing of disposable food serviceware*** for government, healthcare, higher education, K-12, and private businesses for the presence of fluorinated compounds, which are used to impart water- and grease-resistance properties. This data will help purchasers identify non-fluorinated foodware products. We hope that as purchasers begin to specify and prefer non-fluorinated products, this will drive manufacturers towards producing safer alternatives.

What products are CEH testing?
We are studying the disposable foodware products listed in the bullets below. We are particularly interested in all paper and molded fiber disposable products including those that are labeled as compostable or biodegradable. Please only send products for which you have the brand information so that we will be able to identify safer brands by name.

- **Bowls**
- **Plates**
- **Clamshell containers**
- **Multi-compartment food trays**
- **Food boats**

Items that should not be submitted for testing:

- No disposable foodware products made from polystyrene (either rigid plastic #6 or foam/Styrofoam).
- No disposable cups as those products do not typically have fluorinated treatments.
- No disposable foodware for which brand information is unknown.

Sample Collection:

- Place the product along with the submission form and seal it in a Ziploc bag. Please write your organization name on the outside of the Ziploc bag.
- If you are submitting more than one product for testing, please repeat the process and complete a separate submission slip for each sample.

Submission Process:

- Mail the sample(s) and submission form(s) to:
  Caroline Cox, Center for Environmental Health, 2201 Broadway Suite 302, Oakland, CA 94612-3017.
- E-mail a photo of the product and the packaging it came in to caroline@ceh.org and cc: foodware@ceh.org

For More Information: Call Sue Chiang at 510-655-3900 ext. 311

To participate, email **foodware@ceh.org**

Sue Chiang, MPH, MPP
Pollution Prevention Director
sue@ceh.org
510-740.9389

Thank you!