



# phade®

The world's first marine biodegradable straw  
and stirrer made with PHA

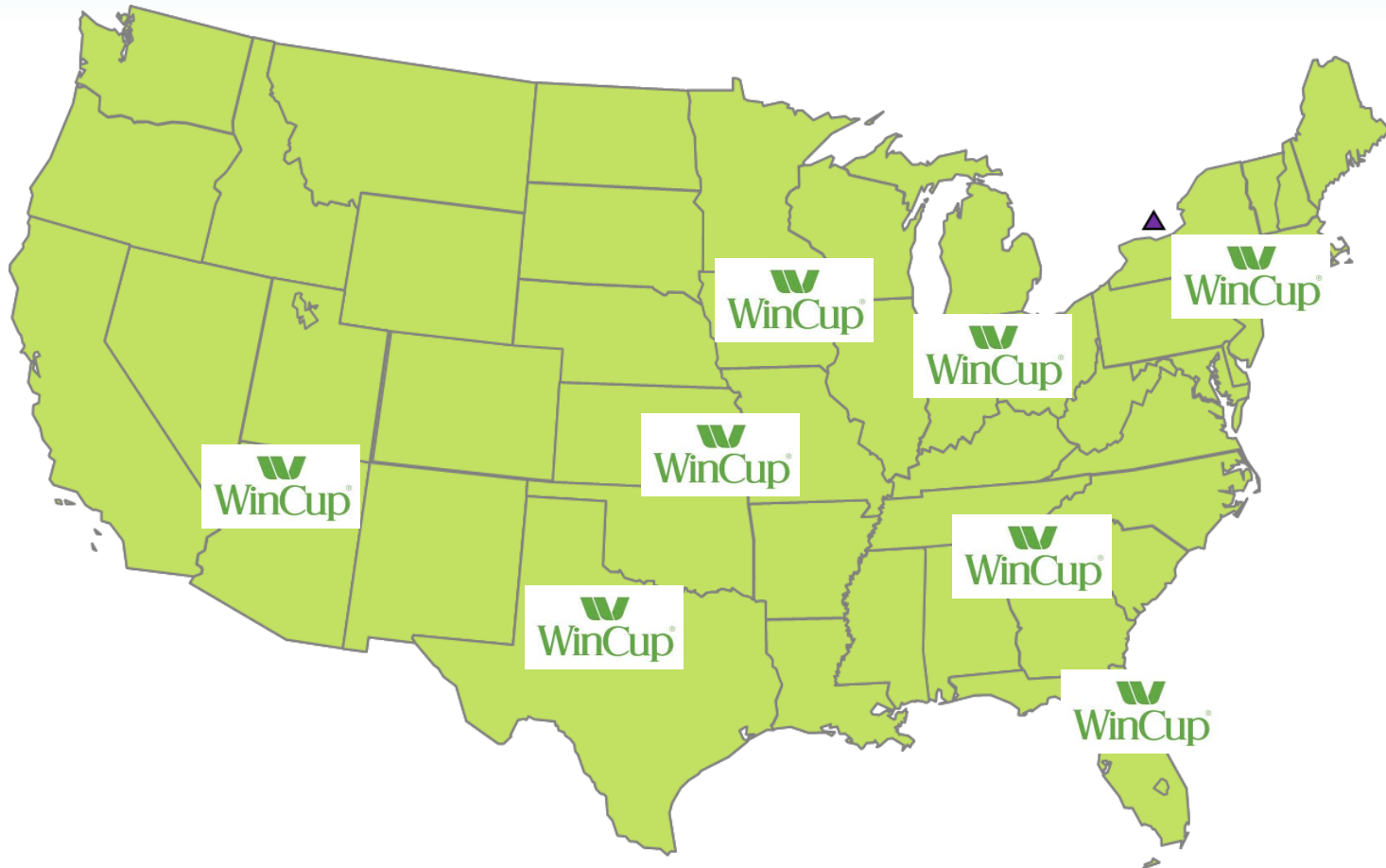
Brad Laporte – CEO  
Michael Winters – President and CRO  
April 18, 2023



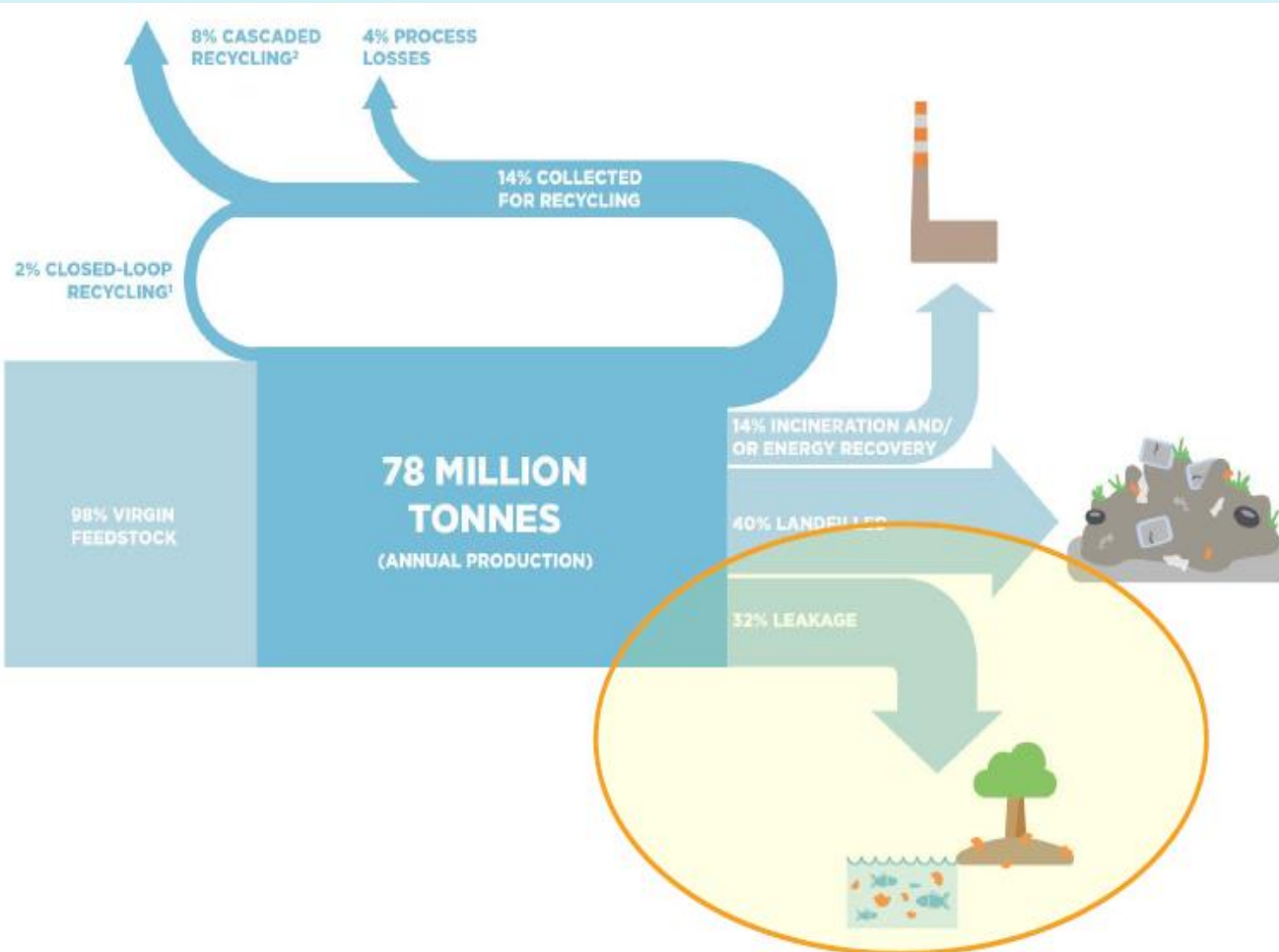
# WinCup is a National Manufacture of Foodservice Disposable products with 8 US Plants



WinCup pioneered the development of the phade® straw in its **Jacksonville, FL** manufacturing and distribution facility.



# The World Thirsts for Innovation to the Pollution Problem we Face



## RECAP

- 86% or more of plastics are not being recycled!
- Plastic proliferation is a problem!
- New biopolymer technologies can help to solve this problem.
- The need for a 4<sup>th</sup> R is NOW!

**REUSE**   
**REDUCE**  
**RECYCLE**  
**REPLACE**

# The Unintended Consequences of a Ban: Harmful Chemicals in Paper Straws



1. Paper Straws are **constructed with glues and sealants** to enable fluid consumption.
2. Most paper straws **have not been tested or certified** by an independent third party.
3. Many paper straws contain **intentionally added PFAS and PVA (polyvinyl acetate)**.
  - a) **PVA** - most adhesives are made from polyvinyl acetate (PVA), which is **designed to be durable and not biodegrade**. If ingested, **PVA can damage the liver, kidneys, stomach and other organs**. PVA is made from vinyl acetate, which is a **known animal carcinogen**.

*Source: Agency for Toxic Substances and Disease Registry. Toxicological profile for vinyl acetate. US Public Health Service in collaboration with the US Environmental Protection Agency*
  - b) **PFAS** - are per- and polyfluoroalkyl substances, also known as **“forever” chemicals**. Studies have shown that exposure to some PFAS in the environment may be **linked to harmful health effects in humans and animals**  
(Source: [epa.gov/pfas](https://www.epa.gov/pfas)).
    - i. **Eleven (11) states have already banned intentionally added PFAS** in food service products, and **several more states have similar bills pending**, which are expected to pass.
    - ii. Next wave of **PFAS class action lawsuits for toxic exposure and personal injury** (cancer, thyroid disease, etc.) has begun.
4. Studies show a high risk of harmful and non-biodegradable chemicals in paper straws
  - a. 2020 **Univ. of Florida study (Dr. John Bowden) tested 38 different straws** labeled as “biodegradable” and purchased from Amazon. Products including both paper and PLA based straws.
  - b. **36 of the 38 (94.7%) straws tested contained PFAS.**
  - c. **“PFAS are very persistent, they repel water, those properties make it difficult for straws to breakdown or biodegrade. If PFAS are on it, I would not consider it biodegradable.”**

# Paper Straws: Poor Consumer Experience at a Greater Cost

- Paper straws deliver a **poor consumer experience** relative to the performance standards of traditional, petroleum based straws.
  - a. Paper straws **alter the taste** of beverages, **have poor mouth-feel** and **get soggy** and collapse.
  - b. Paper straws are not safe or suitable for everyone to use and **can create choking hazards**.
    - Especially Children and the disabled.
  - c. Ultimately, the use of paper straws creates a **suboptimal user experience**.
  - d. And...they **cost more than phade®** PHA straws!



## Pricing Comparison - Paper Straws vs phade

Brand	Material	Size	Case Count	Price	Price/Straw	Delta
Aardvark	Paper	7.75" Jumbo	3200	84.33	\$ 0.026	
phade	PHA	7.75" Jumbo	3750	94.38	\$ 0.025	-4.5%
Aardvark	Paper	7.75" Giant	2200	95.42	\$ 0.043	
phade	PHA	8.5" Giant	1200	47.37	\$ 0.039	-9.0%



# PHA and phade® A New Innovation in Foodservice Packaging



## The Science Behind phade

- PHA (short for polyhydroxyalkanoate) is a **naturally occurring bio polymer** derived from the **fermentation of canola oil**.
- PHAs are a **renewable bio-based alternative** (aka “naturally occurring” plastics) to traditional fossil fuel based polymers (aka “synthetic” plastics).
- phade is created with a “**closed-loop**” design. It is created with a naturally occurring bio polymer intended to **return to the environment after use**.
- PHAs are **highly biodegradable** in most all environments: **marine, home compost piles, industrial compost facilities, soil, and anaerobic digesters**.
- phade products **biodegrade safely**, as confirmed by TUV certifications, ASTM tests, and various other tests for heavy metals, fluorine and ecotoxicity.



# phade: The Scientific Evidence Testing and Certifications



## 1. Home Compostable Product Certification

- TUV Austria

## 2. Industrial Compostable Product Certification

- BPI (Biodegradable Products Institute)
- TUV Austria
- Cedar Grove/CMA Covered-In-Vessel Approved

## 3. Marine Biodegradable Resin Certification

- TUV Austria

## 4. Marine Biodegradability Product Testing

- ASTM D6691
  - Biodegradation & Disintegration
- Residual Water Raman Spectroscopy
- Residual Water NMR Spectroscopy
- Eco-Toxicity (non-toxic), Heavy Metals and No Fluorine

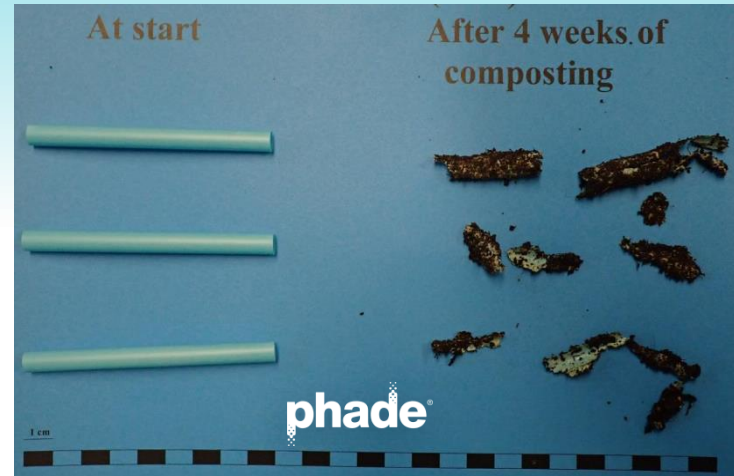


# phade® Home Compostable Test Pictures - Gone in 9 weeks

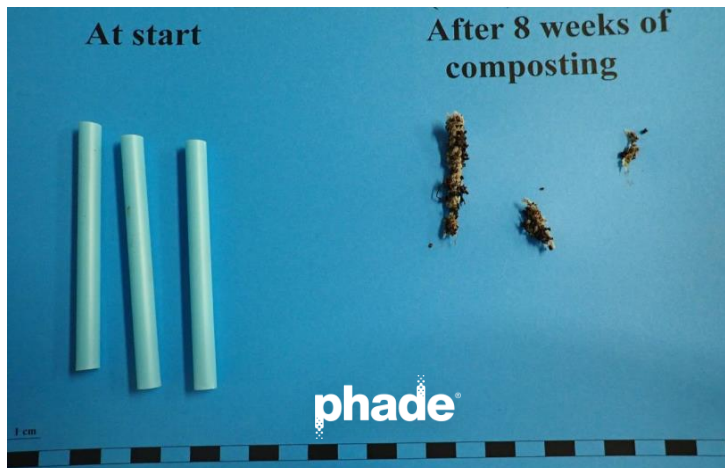
Week 2



Week 4



Week 8



Week 9 - GONE





# phade® in a Marine Fish Tank week 1 and week 5 ½



**Week 1**  
**in Marine Tank**



**Week 5 ½**  
**in Marine Tank**



Go to You Tube and type in “phade Time Lapse” to see this amazing Video of how quickly phade Biodegrades

[https://www.youtube.com > watch](https://www.youtube.com/watch)

[phade Time Lapse \(Full\) - YouTube](#)



Straws shouldn't last for centuries. Now they don't. **phade**® straws are the latest breakthrough in sustainable ...

YouTube · phade Products · Aug 9, 2021

# Reef Relief Review and Impact on Marine Life of Ingestion of PHA



- WinCup worked with local non-profit Reef Relief to provide **extensive test data and information on phade**, as well as numerous **independent University studies** on the **impact on marine life of ingesting PHA** as it was biodegrading in a marine environment.
- **Independent University studies have been conducted** on the impact of PHA on a wide assortment of marine life and livestock, including:
  - Yellow Croaker Fish
  - European sea bass
  - Shrimp
  - Rainbow trout
  - Chinese mitten crab
  - Prawn
  - Nile tilapia
- Studies show a number of **significant benefits to marine life** from the ingestion of small quantities of **PHA** including: **faster growth** and **greater weight gain**, **increased lipid metabolism** and storage, as an antibiotic in shrimp, **improved digestive enzyme activity** and **immune systems**, and **improved gut microbiota**.
- After its extensive review, **Reef Relief** concluded that products like **phade** are “**heading us in the right direction.**”

# Innovation & Education Can Change Legislation

## Fort Myers Beach Florida, November 2021



- ❑ 2017, Fort Myers Beach bans plastic straws
- ❑ 2021, WinCup educates FMB on new technological advances in PHA
- ❑ Nov, 2021, the Fort Myers Beach Town Council [Unanimously Passes ordinance allowing for marine biodegradable straws.](#)

“When you advertise a product as marine biodegradable, you send a message to the world that we’re serious about our environment here on Fort Myers Beach and **we’re serious about our water.** As far as the restaurants, the bars and anyone else, they can advertise themselves that they’re distributing only marine biodegradable straws because we care about our water and our environment. That translates to all the people who are visiting us.”  
- Fort Myers Beach Mayor Ray Murphy

***“Straw bans don’t work – better straws do!”***

*Dr. Allen Hershkowitz, Co-Founder of the Green Sports Alliance, and Chairman of Sport and Sustainability International*

**Fort Myers Beach expands straw ordinance to include biodegradable option**  
by Zach Barrett — 12:17 AM EDT, Thu November 04, 2021

AA

**Today's Restaurant**  
The Foodservice Industry Authority  
MONDAY MORNING NEWS

**WinCup Applauds Fort Myers Beach's Vote to Strengthen Straw Ban**  
By TRN Guest Posting | November 8, 2021 | No Comments

YouTube

phade 7.75" JUMBO 375  
SUSTAINABLE ECO STRAWS  
FOR COLD DRINKS ONLY  
✓ MARINE BIODEGRADABLE  
✓ HOME COMPOSTABLE  
✓ INDUSTRIAL COMPOSTABLE

Fort Myers Beach expands straw ordinance to include biodegradable option

# Proposed Amendments to Key West Straw Ordinance



## ARTICLE VIII. - SINGLE-USE PLASTICS

### Sec. 26-312. - Definitions

*Definitions.* For the purposes of this article, the following terms shall have the ascribed meanings unless expressly stated otherwise:

*Marine Biodegradable means the product will completely break down, biodegrade, and return to nature decomposing into elements found in the marine environment within one year, as shown by reliable and competent scientific evidence.*

*Retail Establishment* means any person or entity engaged in the retail sale of food, drinks, or goods. Retail establishment includes any supermarket, grocery store, bar, restaurant, convenience store, shop, service station, farmer's market vendor, special events vendors, all city-contracted vendors, and any other sales outlet where a customer can directly purchase goods, materials, and products.

*Single-use plastic beverage straw or stirrer* means a tube, intended for only one-time use, that is made predominantly of plastic derived from either petroleum or a biologically based polymer, including polymers derived from corn or other plant sources, for stirring or transferring a beverage from its container to the mouth of the drinker. Single-use plastic beverage straw or stirrer includes compostable and biodegradable petroleum and biologically based polymer straws, *provided, however that it does not include a compostable biologically based polymer straw or stirrer that is also marine biodegradable.* Single-use plastic beverage straws or stirrers does not include straws or stirrers that are made from non-plastic materials, such as paper, sugar cane, bamboo, or other similar materials.

### Sec. 26-313. - Prohibitions.

(1) It shall be unlawful for any retail establishment to sell or distribute single use plastic beverage straws or stirrers in the City of Key West.

(Ord. No. 19-22, § 2, 9-4-2019)



# Appendix

# Introducing Phade, the first PHA straw that biodegrades/composts in a matter of months



Innovation Progress is being made!



## PP

The Original Plastic Straw

- **Does not meet ANY** environmental standards— 200 years on average to biodegrade.

**Performance:**

- ✓ Meets consumer expectations.



## PLA

First Biopolymer Based Straw

- ✓ Industrially compostable but limited to only 188 sites nationwide.

**Performance:**

- Won't hold up in high heat applications and shipping conditions.



## Paper

May or may not be Industrially Compostable and/or Marine Biodegradable & **NOT Certified**

- ✓ Many include harmful **PFAS coating** chemicals which are linked to **harmful health effects in humans and animals**
- ✓ Many include unsafe **PVA adhesives** (polyvinyl acetate), which are **not biodegradable**.
- ✓ PVA's damage the liver, kidneys, stomach and other organs & is **known animal carcinogen**.

**Performance:**

- Soggy, Mushy, Collapses & overall poor consumer experience



## PHA

**FINALLY A STRAW & STIRRER THAT CHECKS ALL THE BOXES**

Checks **ALL THE BOXES:**

- ✓ Marine Biodegradable
- ✓ Home Compostable
- ✓ Industrial Compostable
- ✓ SUSTAINABLE
- ✓ Passes all eco-toxicity tests
- ✓ Free of PFAS & PVA's

**Performance:**

- ✓ Meets consumer expectations
- ✓ Superior environmental and sustainable benefits

# Beware of Misrepresentations and Greenwashing on “Eco-Friendly” and “Natural” Straws on the Market

- Specificity in Claims, Testing and Certifications are critical to ensure sustainability, creditability, and confidence.

Unqualified claim



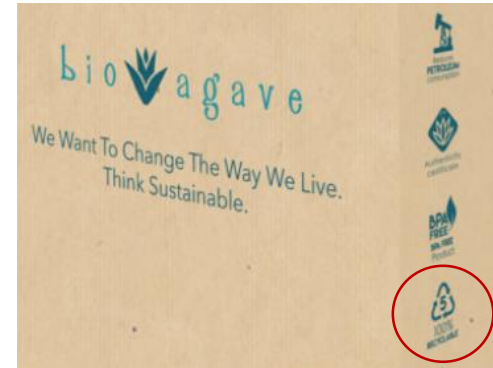
Unqualified claim & No BPI Certificate



Unqualified claim Biofading Foodware???



Unqualified claim



#5 Symbol is Polypropylene

Unqualified claim



Unqualified claim



# BPI Industrial Compostable Certifications



## CERTIFICATE for Products

THIS IS TO CERTIFY that the following Items have been found to comply with the specifications established in the American Society for Testing and Materials standard ASTM D6400 and/or D6868 in accordance with the terms and conditions of the "International Biodegradable Products Institute, Inc. Licensing & Certification Program for Compostable Products":

- Blue Drinking Straws, max thickness 340 microns (13.4 mils) [20201216-01]

as further described in the application and related information submitted to the Biodegradable Products Institute by New WinCup Holdings, (the "Licensee") a corporation of USA.

Specific items associated with these certifications can be found on the BPI Product Catalog: <https://products.bpiworld.org/companies/new-wincup-holdings>

This Certificate authorizes the Licensee to use the Certification Program Logo depicted below in relation to such Products, subject to all conditions and terms of the Program Rules and the License Agreement between the Biodegradable Products Institute and the Licensee.



### Items on this Certificate:

The following item numbers (SKUs) are certified under this document. Only these items are published on the BPI's web-based catalogs.

The licensee shall inform BPI immediately for any new items or discontinued items. These items were certified under item review 20201216-01 and must be recertified by the BPI on or before January 31, 2024

Brand	Manufacturer SKU	Title
Phade	511167	7.75" Jumbo Phade Straw US
Phade	511168	10.25" Giant Phade Straw US
Phade	511169	8.5" Giant Phade Straw US
Phade	511170	5" Phade Stirrer US
Phade	511178	7.75" Jumbo Phade Straw CA/MD
Phade	511179	10.25" Giant Phade Straw CA/MD
Phade	511180	8.5" Giant Phade Straw CA/MD
Phade	511181	5" Phade Stirrer CA/MD



By: Rhodes Yepsen  
BPI Executive Director  
Valid until: January 31, 2024  
Certificate #: 10529093-2



# Home & Industrial Compostable Certifications



## CERTIFICATE FOR AWARDING AND USE OF THE 'OK COMPOST HOME' CONFORMITY MARK

**TA8022004614**

(Cancels and replaces the certificate dated 22 June 2020)  
Issued by TÜV AUSTRIA CERT GMBH

**Product(s):**

Domain	Home Compostable Products
Group	Finished products
Family	Catering
Type	Straws
Trade mark	Phade Straws
Description / Particularities	Maximum nominal thickness: 336 µm Colour: blue Unprinted

**Licensee:**

**New WinCup Holdings, Inc.**  
4640 Lewis Road  
30083 Stone Mountain, GA  
USA

**Criteria:**

- Test Program with reference OK 2 edition D 'Home compostability of products'

**Validity:**

From 22 February 2021 till 22 June 2025

**Conclusions of the examination:**

The products comply with the above mentioned certification criteria, as confirmed by the report 65002690 / 2021-AG-0188cert.

**Applicable certification system:**

Type examination followed by supervision through verification tests on samples from the distributor's stocks or of the market.  
The conformity of the product is guaranteed by the procedures for awarding and use of the 'OK compost HOME' conformity mark. This only applies for specimen bearing the 'OK compost HOME' mark.

Brussels, 22 February 2021

For the Certification Committee  
Ph. DEWOLFS  
President of the Committee

Annex: /

FM-LTC-TABE-CERT-BIO-DKH-003\_certificate\_EN  
Rev 1902

This certification was carried out according to the TÜV AUSTRIA CERT procedures for certification and is regularly monitored.  
TÜV AUSTRIA CERT GMBH | Deutschstraße 10 | A-1230 Vienna

011069-20-8



## CERTIFICATE FOR AWARDING AND USE OF THE 'OK COMPOST INDUSTRIAL' CONFORMITY MARK

**TA8012004613**

(Cancels and replaces the certificate dated 22 June 2020)  
Issued by TÜV AUSTRIA CERT GMBH

**Product(s):**

Domain	Industrially Compostable Products
Group	Finished products
Family	Catering
Type	Straws
Trade mark	Phade Straws
Description / Particularities	Maximum nominal thickness: 336 µm Colour: blue Unprinted

**Licensee:**

**New WinCup Holdings, Inc.**  
4640 Lewis Road  
30083 Stone Mountain, GA  
USA

**Criteria:**

- Test Program with reference OK 1 edition E Including EN 13432 (09-2000) - « Packaging - Requirements for packaging recoverable through composting and biodegradation – Test scheme and evaluation criteria for the final acceptance of packaging »

**Validity:**

From 22 February 2021 till 22 June 2025

**Conclusions of the examination:**

The products comply with the above mentioned certification criteria, as confirmed by the report no 65002690 / 2021-AG-0188cert.

**Applicable certification system:**

Type examination followed by supervision through verification tests on samples from the distributor's stocks or of the market.  
The conformity of the product is guaranteed by the procedures for awarding and use of the 'OK compost INDUSTRIAL' conformity mark. This only applies for specimen bearing the 'OK compost INDUSTRIAL' mark.

Brussels, 22 February 2021

For the Certification Committee  
Ph. DEWOLFS  
President of the Committee

Annex: /

FM-LTC-TABE-CERT-BIO-DKH-003\_certificate\_EN  
Rev 1902

This certification was carried out according to the TÜV AUSTRIA CERT procedures for certification and is regularly monitored.  
TÜV AUSTRIA CERT GMBH | Deutschstraße 10 | A-1230 Vienna

011070-20-8

ZERTIFIKAT | CERTIFICATE | CERTIFICADO | CERTIFICAZIONE | CERTIFIKAT | 証明書 | 인증서

ZERTIFIKAT | CERTIFICATE | CERTIFICADO | CERTIFICAZIONE | CERTIFIKAT | 証明書 | 인증서

# Marine Biodegradable & Biobased Certifications



## CERTIFICATE FOR AWARDING AND USE OF THE 'OK BIODEGRADABLE MARINE' CONFORMITY MARK

**TA8062004803**

Issued by TÜV AUSTRIA CERT GMBH

**Product(s):**

Domain	Products Biodegradable in SEAWATER
Group	Raw material
Family	Bio material
Type	In form of Resin or Granulates
Trade mark	Danimer-02513
Description / Particularities	Colour : Off-white Maximum nominal thickness : 45 µm

**Licensee:**

**DaniMer Scientific**  
1301 Colquitt Hwy  
39817 Bainbridge, GA  
USA

**Criteria:**

- Test Program with ref OK 12 edition A1 "Bio-products – degradation in seawater"

**Validity:**

From 15 July 2020 till 15 July 2025

**Conclusions of the examination:**

The products comply with the above mentioned certification criteria, as confirmed by the report no 65000130 / 2020-AG-0785p.

**Applicable certification system:**

Type examination followed by supervision through verification tests on samples from the distributor's stocks or of the market.  
The conformity of the product is guaranteed by the procedures for awarding and use of the 'OK biodegradable MARINE' conformity mark. This only applies for specimen bearing the 'OK biodegradable MARINE' mark.

Brussels, 15 July 2020

For the Certification Committee  
Ph. DEWOLFS  
President of the Committee

**Annex:** /

FM-LTC-TABE-CERT-BIO-OKM-003\_certificate\_EN Rev. 19/02



## CERTIFICATE FOR AWARDING AND USE OF THE 'OK BIOBASED' CONFORMITY MARK

**TA8072105405**

(Cancels and replaces the certificate dated 22 February 2021)  
Issued by TÜV AUSTRIA CERT GMBH

**Product(s):**

Domain	Biobased Products
Group	Finished products
Family	Catering products
Type	Straws
Trade mark	Phade Straws
Description / Particularities	Colour: blue Unprinted

**Class (between 1 & 4):**

The product is assigned to class 4, meaning:  
80 % ≤ Biobased Carbon Content of the product

★★★★

**Licensee:**

**New WinCup Holdings, Inc.**  
4640 Lewis Road  
30083 Stone Mountain, GA  
USA

**Criteria:**

- Test Program 'OK biobased' with reference OK 20 edition C Methodology conform to EN 16640: "Bio-based products - Bio-based carbon content - Determination of the bio-based carbon content using the radiocarbon method"

**Validity:**

From 26 March 2021 till 22 February 2026

**Conclusions of the examination:**

The products comply with the above mentioned certification criteria, as confirmed by the report no 65002690 / 2021-AG-0387cert.

**Applicable certification system:**

Type examination followed by supervision through verification tests on samples from the distributor's stocks or of the market.  
The conformity of the product is guaranteed by the procedures for awarding and use of the 'OK biobased' conformity mark. This only applies for specimen bearing the 'OK biobased' mark.

**Caution:** *The use of OK biobased-certified polymers / materials is not a guarantee that intermediate or finished product into which it is incorporated complies with the requirements of the OK biobased programme.*

Brussels, 26 March 2021

For the Certification Committee  
Ph. DEWOLFS  
President of the Committee

**Annex:** /

FM-LTC-TABE-CERT-BIO-OKB-004\_certificate\_EN Rev. 20/01

ZERTIFIKAT | CERTIFICATE | CERTIFICADO | CERTIFICAT | CERTIFIKAT | 証明書 | 인증서

ZERTIFIKAT | CERTIFICATE | CERTIFICADO | CERTIFICAT | CERTIFIKAT | 証明書 | 인증서

023090-20-1 | 011438-20-8

# Composting Manufacturing Alliance In-Vessel Certification via testing at Cedar Grove



## Cedar Grove – CMA-I Certification Notification

Expires: May 10, 2025

May 10, 2022

WinCup, Inc.  
4640 Lewis Road  
Stone Mountain, GA 30083

This certifies that the following products have met the Compost Manufacturing Alliance (CMA) standards for commercially compostable products by passing laboratory standards and commercial composting field testing disintegration standards.

WINCUP, INC. - CMA-I Certified Products	
Product ID	Product Description
511167	7.75" Phade Jumbo Drinking Straw
511169	8.5" Phade Giant Drinking Straw
511168	10.25" Phade Giant Drinking Straw
511170	5" Phade Stirrer

- Certified items are suitable for commercial collection but may not be suitable for residential curbside collection.
- CMA reserves the right to require periodic re-evaluation for recertification as early as one year after the date of initial acceptance.
- The listed products are considered CMA certified. However, individual facilities may have additional requirements for acceptance of specific items or categories, which are subject to change at the individual facility's discretion. Specific governmental jurisdictions may also have specific requirements for marking or labelling compostable products. CMA acceptance does not imply compliance with specific facility or legal jurisdictional requirements.
- Certification does not authorize the use of the CMA name or logo without a separate licensing agreement.

*Kari Rolnick*  
Kari Rolnick  
Compliance Supervisor  
COMPOST MANUFACTURING ALLIANCE LLC

WIN\_AL\_CMA-I\_LIA\_5.10.2022

# Composting Manufacturing Alliance Windrow Certification



## CMA Certification: Windrow (CMA-W)

July 25, 2022

Amended January 31, 2023

WinCup Inc.  
4640 Lewis Road  
Stone Mountain, GA 30083

This certifies that the following products have met the Compost Manufacturing Alliance (CMA) standards for commercially compostable products by passing laboratory standards and commercial composting field testing disintegration standards.

WinCup Inc. CMA-W Certified Products			
Product ID	Product Description	Field Test	Expiration Date
511170	5" Phade Stirrer	SLC16	07/25/2022
511167	7.75" Phade Jumbo Drinking Straw	SLC18	01/31/2026

- Certified items are suitable for commercial collection but may not be suitable for residential curbside collection.
- CMA reserves the right to require periodic re-evaluation for recertification as early as one year after date of initial acceptance.
- The listed products are considered CMA-W accepted. However, individual facilities may have additional requirements for acceptance of specific items or categories, which are subject to change at the individual facility's discretion. Specific governmental jurisdictions may also have specific requirements for marking or labelling compostable products. CMA acceptance does not imply compliance with specific facility or legal jurisdictional requirements.
- Certification does not authorize the use of the CMA name or logo without a separate licensing agreement.

*Kari Rolnick*

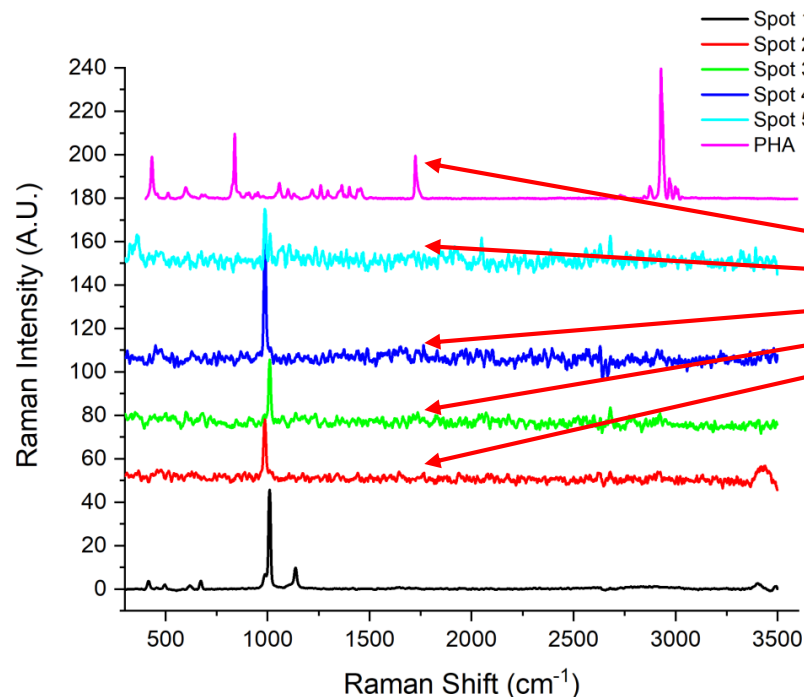
Kari Rolnick  
Compliance Supervisor  
COMPOST MANUFACTURING ALLIANCE LLC

WIN\_AL\_CMA-W\_07.25.2022\_amended\_01.31.2023



## Raman Spectroscopy

- A non-destructive, analytical technique used in many applications where **microscopic, chemical analysis and imaging is required.**
- Commonly used by polymer manufacturers to identify small particles in a film or material (for quality control purposes) and by pharmaceutical companies to identify compounds and for quality control purposes.



- Took **5 scans of the solids from the residual water** and compared with a PHA film.
- **Spectra show no overlapping peaks with PHA.**
- There is also no evidence of carbonyls in the water samples (~1700 cm<sup>-1</sup>), confirming **no organic esters are present in the water.**

## NMR Spectroscopy

- An analytical chemistry technique used in quality control and research for determining the content and **purity of a sample**, as well its molecular structure.
- Has an even **higher sensitivity than Raman**, and provides good resolution even on a very small sample.

Biodegradation at  
OWS – Collect  
remaining water  
samples

Remove water with  
gentle heat

Analyze remaining  
solids with NMR

- Test results:

- The **solids remaining in the water** were inorganic salts from the seawater inoculum used in the test.
- Both spectroscopy and NMR spectroscopy showed **no phade<sup>®</sup> material remaining in the residual water after biodegradation.**
- **Phade<sup>®</sup> = Complete biodegradation and NO MICROPLASTICS.**

# Impact on Marine Life of Ingestion/Digestion of PHA



## Sources:

- Microbial Poly-3-Hydroxybutyrate (PHB) as a Feed Additive for Fishes and Piglets, A Study by Xaun Wang, Xiao-Ran Jiang, Fuqing Wu and Yiming Mai, Tsinghua University, Beijing, China
- Biomedical applications of polyhydroxyalkanoates, Subhasree Ray and Vipin Chandra Kalia, Microbial Biotechnology and Genomics, CSIR - Institute of Genomics and Integrative Biology (IGIB), Academy of Scientific and Innovative Research (AcSIR), 2, Rafi Marg, Anusandhan Bhawan, New Delhi, 110001 India

# Maine: Bans are Bad Policy



In 2021, the Legislature of the State of Maine considered a state wide plastic straw ban, **An Act to Prevent Pollution from Single-Use Plastic Straws, Splash Stick and Beverage Lid Plugs** (LD 602).

- The Act would have prohibited the manufacture, wholesale and retail sale, distribution and provision to food or eating establishment customers of **single use straws or stirrers made wholly or partly of plastic**, including biopolymers such as PHA.
- **The Act failed** due to strong opposition from Maine businesses asserting that product bans are not effective, and a better solution to the global plastics crisis is more recycling and composting. As the Maine Grocers' Association pointed out, **"Banning products is bad policy."**
- In addition, the Act faced **strong opposition from advocates for the Disabled Community**, who urged the Legislature to adopt a "straws upon request" policy instead.
- Last, **product bans based on material can be complex and have unintended consequences** in implementation and enforcement.
  - As Maine DEP testified, the "complexity and scope raise significant questions as to the interpretation, implementation and ultimately fiscal impact" of the Act. Furthermore, given the definition of plastic in the bill, the Department "would anticipate questions and concerns regarding what products qualify as non-plastic alternatives in this context."





# NY City Straw Law: phade Permitted



## New York City Straw Law FAQs

### What does the new law do?

The law regulates the distribution of certain types of straws and stirrers at food service establishments.

### What types of straws and stirrers are regulated?

Plastic straws and stirrers, and compostable straws and stirrers.

### What is plastic?

The broad term of plastic is scientifically defined as a group of materials, either synthetic or naturally occurring, that may be shaped when soft and then hardened to retain the given shape.

### How is "plastic" defined in the NYC law?

"Plastic" is defined as "a synthetic material made from organic polymers, including, but not limited to, polypropylene and polystyrene, that can be molded into shape while soft, and then set into a rigid or slightly elastic form.

### Is phade made of "plastic" as defined in the law?

No, phade is made with PHA (polyhydroxyalkanoate), which is a non-synthetic or naturally occurring biopolymer. PHAs are polymers produced naturally through the bacterial fermentation of sugars or lipids. Specifically, the PHA formula used in phade straws is derived through the natural fermentation of canola oil.

To learn more visit [phadeproducts.com](http://phadeproducts.com)



New WinCup Holdings, Inc.  
4640 Lewis Road  
Stone Mountain, GA 30083  
[www.WinCup.com](http://www.WinCup.com)

### MANUFACTURER'S LETTER OF COMPLIANCE

February 28, 2022

RE: phade® Straws and Stirrers  
Compliance with New York City Single Use Plastic Beverage Straw Ordinance  
Local Law 64 (2021) (the "Act")

To Whom it May Concern:

New WinCup Holdings, Inc. ("WinCup") is the manufacturer of phade® straws and stirrers. phade straws and stirrers are made with polyhydroxyalkanoate ("PHA"), which is a non-synthetic, naturally occurring biopolymer. The Dunkin' franchisee who is in possession of this letter is a WinCup customer who purchases our phade straws and/or stirrers.

Reference is made to the above referenced Act which regulates single use plastic straws and stirrers. The Act defines "plastic" as "a synthetic material made from organic polymers, including, but not limited to, polypropylene and polystyrene, that can be molded into shape while soft, and then set into a rigid or slightly elastic form."

phade straws and stirrers are exempt from regulation under the Act because they are not "plastic" as defined by the Act. phade straws are not synthetic because they are made with PHA, which is a naturally occurring biopolymer.

As such, phade straws and stirrers may be distributed freely by New York City food service establishments, even without a customer's request.

Please do not hesitate to contact me with any questions regarding this matter. Thank you.

Sincerely,

Michael Winters  
President and CRO  
Office: (678) 274-6334 Ext. 6007  
Mobile: 404-307-8869  
[michaelwinters@wincup.com](mailto:michaelwinters@wincup.com)



# New Jersey Straw Law: phade Permitted



## New Jersey Straw Law FAQs

### How does the New Jersey Straw Law work?

The New Jersey law is a plastic straw on request law; single use plastic straws can only be provided upon request. Non-synthetic or naturally occurring biopolymer based straws can be displayed and provided without request

### What types of straws may only be given upon request?

Plastic straws

### Does the law regulate stirrers?

No, stirrers are not addressed in the law or impacted by it.

### What is plastic?

The broad term of plastic is scientifically defined as a group of materials, either synthetic or naturally occurring, that may be shaped when soft and then hardened to retain the given shape.

### How is "plastic" defined in the New Jersey law?

"Plastic" is defined as "a synthetic material made from linking monomers through a chemical reaction to create an organic polymer chain that can be molded or extruded at high heat into various solid forms retaining their defined shapes during the life cycle and after disposal."

To learn more visit [phadeproducts.com](http://phadeproducts.com)



New WinCup Holdings, Inc.  
4640 Lewis Road  
Stone Mountain, GA 30083  
[www.WinCup.com](http://www.WinCup.com)

### MANUFACTURER'S LETTER OF COMPLIANCE

February 28, 2022

RE: phade® Straws  
Compliance with New Jersey Plastic Straws By Request Only Act  
P.L. 2020, c. 117 (NJ Statutes c.13:1E-99.126 *et seq.*) (the "Act")

To Whom it May Concern:

New WinCup Holdings, Inc. ("WinCup") is the manufacturer of phade® straws. phade straws are made with polyhydroxyalkanoate ("PHA"), which is a non-synthetic, naturally occurring biopolymer. The Dunkin' franchisee who is in possession of this letter is a WinCup customer who purchases our phade straws.

Reference is made to the above referenced Act which regulates plastic straws. The Act defines "plastic" as "a synthetic material made from linking monomers through a chemical reaction to create an organic polymer chain that can be molded or extruded at high heat into various solid forms retaining their defined shapes during the life cycle and after disposal."

phade straws are exempt from regulation under the Act because they are not "plastic" as defined by the Act. phade® straws are not a synthetic material. In addition, phade straws do not retain their defined shapes after disposal. PHA is a highly biodegradable material and will be biodegraded (consumed) in any environment where bacteria are present, and therefore, will not retain its defined shape after disposal.

As such, phade straws may be distributed freely by a New Jersey food service business, even without a customer's request.

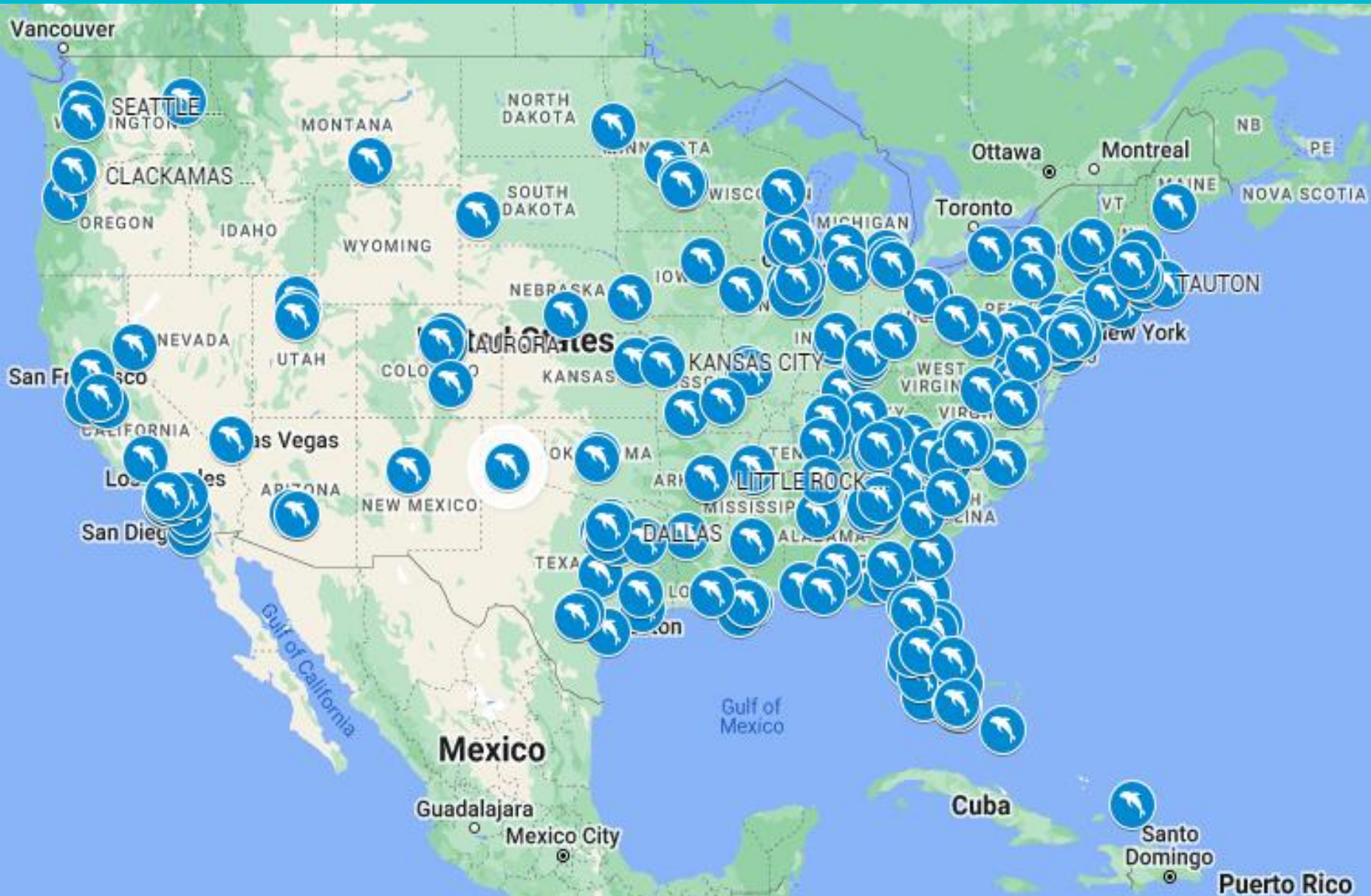
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Sincerely,

Michael Winters  
President and CRO  
Office: (678) 274-6334 Ext. 6007  
Mobile: 404-307-8869  
[michaelwinters@wincup.com](mailto:michaelwinters@wincup.com)

# phade® Distribution: 425+ Ship To DC's

*Thousands of end users, small businesses, & consumers*





# phade® Acceptance Is Accelerating Rapidly

In 425+ Customer Distribution Centers Nationwide & Thousands of end users.

Key channels include:

Restaurants, Hotels, Airports, Pro Sports teams, Universities, National Parks, Retailers



### Professional Sports

### Retailers & E-Commerce Sites

### QSR's/Restaurants & Hotels/Resorts

### Universities, Airports, & National Parks



# phade® is Being Adopted by Multiple Professional Sports Venues

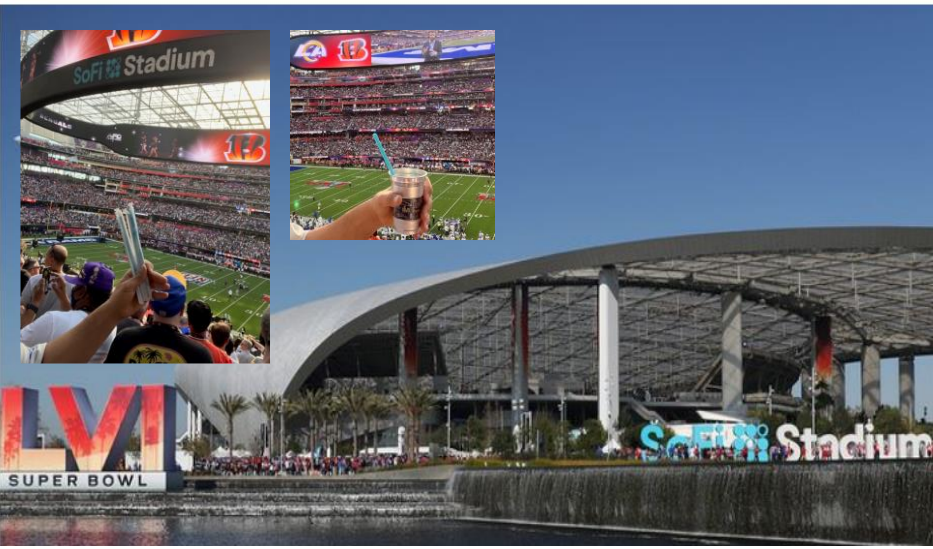


## How 'green' is this Super Bowl? Ocean-friendly straws and Nikola's hydrogen beer truck try to lower the NFL championship's carbon footprint

Last Updated: Feb. 13, 2022 at 7:28 p.m. ET  
First Published: Feb. 11, 2022 at 3:46 p.m. ET

By Rachel Koning Beals

According to Waste Management, the NFL, MLB, NBA and NHL create at least 35,000 tons of carbon emissions each year from spectators



Home > Industries > Living With Climate Change

Living With Climate Change

## Yankee Stadium will use biodegradable straws made from canola oil that disappear within months

Last Updated: April 7, 2022 at 10:16 a.m. ET  
First Published: April 5, 2022 at 12:15 p.m. ET

By Rachel Koning Beals (Follow)

Opening Day at Yankee Stadium will see WinCup's Phade straws and cocktail stirrers, which look and perform like traditional straws, taking the stands. They were featured at this year's Super Bowl.



Yankee Stadium holds over 54,000 people. The team and its hospitality arm have already committed to diverting approximately 85% of the stadium's total waste from landfills and incinerators. Now, it will use Phade marine biodegradable drinking straws and cocktail stirrers, which are made from canola oil.

# Meaningful Relevant Innovation Generates Press & Awards



## Forbes

Jan 18, 2021, 03:17pm EST | 1,138 views

**You Donut Need A Single-Use Plastic Straw: The Biodegradable Phade Is Available At Dunkin' And Other Locations**

## Bloomberg Green



**Dunkin' Introduces a Straw for People Too Lazy to Compost**

## BuzzFeed

Community • Posted on Apr 6, 2022

**11 Sustainable Trends And Products To Incorporate In Your Daily Routine In 2022**

2. Enjoy your favorite beverages with biodegradable straws



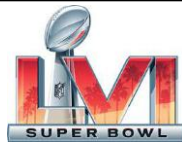
**2020 NACS Convection Voted as the #1 Cool New Green Product**



**Aug. 2020 Innovation in Bio Plastics Award**

## yahoo!finance

- Environmental benefits: marine biodegradable, home and industrial compostable
- Feels and performs like a traditional plastic straw
- Can be mass produced



**SB SUSTAINABLE BRANDS**



**WABE90.1**  
Where ATL meets NPR

**Blue straws from Stone Mountain company will help make the Super Bowl a little greener**



**March 2021 National Restaurant Association**

## FAST COMPANY

**World Changing Ideas**  
May 2021



## THE WALL STREET JOURNAL

**WinCup, Inc.'s phade(R) Straws and Stirrers to be a Proud Sponsor of the Atlanta Falcons(R) at Mercedes Benz Stadium**

## JACKSONVILLE BUSINESS JOURNAL

**Jacksonville manufacturer looks to take over straw market with biodegradable product**

## Plastics News

**Kickstart: The MVP of sustainable foodservice products**



**WinCup Joins Green Sports Alliance as Official Program Partner**



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# When Companies Innovate with meaningful solutions - attitudes change.



## 2018 – “Get Rid of Straws”

**BuzzFeed** Quizzes TV & Movies Shopping Videos News Tasty

**Buzz** · Posted on Jan 26, 2018

### 16 Reasons You Should Give Up Straws This Year

By 2050, there may be more plastic in the ocean than fish. Do you want to do something to stop it?

## 2022 – “Make phade® biodegradable straws part of your daily routine”

**BuzzFeed** Quizzes TV & Movies Shopping Videos News

**Community** · Posted on Apr 6, 2022

### 11 Sustainable Trends And Products To Incorporate In Your Daily Routine In 2022

2. Enjoy your favorite beverages with biodegradable straws



*Phade Straws / Via phadeproducts.com*

Do you want to do your part in saving our marine life by reducing plastic usage starting with the straws we use in our favorite drinks, but tired of paper straws melting in your drink? Phade Straws are the perfect sustainable, single-use, and structurally sound solution. These straws are marine biodegradable and breakdown in just 58 days compared to the average 73,049 days it takes for traditional plastic straws to compost. Sip sustainably by ordering Phade Straws on Amazon or their website.

# Other Major CPG Brands Have Adopted PHA



**“From the start, PepsiCo has taken a holistic approach to our sustainability work. Our first objective is achieving long-term profitability, and that requires sustainable solutions to grow our business while minimizing our environmental impact. Our plan to scale Danimer Scientific’s technology is a step toward achieving both our greenhouse-gas emission reduction and our recoverable and recyclable packaging goals.”**

*Dr. Mehmood Khan,  
former PepsiCo Vice Chairman  
and Chief Scientific Officer*



The PepsiCo Positive initiative, which is focused on sustainability in its business operations, includes an indu compostable bag made with Danimer’s PLA-based resin: This same bag was awarded the 2018 Innovation in Biop Award. We also collaborate on designing, developing, manufacturing, and assessing PHA-based packaging to replace single-use plastic for their snack brands.



We are collaborating with Nestlé to design and manufacture bio-based resins for packaging for Nestlé’s water business using our PHA biopolymer Nodax™. In 2018, Nestlé announced its commitment to make 100% of its packaging recyclable or reusable by 2025. To achieve this goal, the company has already undertaken several initiatives, including the creation of the Nestlé Institute of Packaging Sciences. The institute is dedicated to the discovery and development of functional, safe and environmentally friendly packaging solutions, including functional paper and biodegradable materials. Danimer is working to help them meet their packaging goals.

## MARS



Mars Wrigley is seeking to transform candy packaging to make it more sustainable, starting with developing packaging for Skittles® with Danimer that reliably breaks down in industrial composting facilities and backyard compost units.

**“Collaborating with Danimer to advance this breakthrough technology represents a major step to creating positive societal impact and better environmental outcomes across the full lifecycle of small, flexible packaging.”**

*Alastair Child  
Mars Wrigley VP of Sustainability*



Danimer is helping Bacardi, the world’s largest family-owned spirits company, make the most sustainable spirits bottle on shelf by 2023. The new 100% biodegradable bottle is expected to replace 80 million plastic bottles – 3,000 tons of plastic – currently produced by Bacardi across its portfolio of brands every year. Petroleum-based plastics used by Bacardi today will be replaced by bioplastics using Danimer’s Nodax™ PHA, a biopolymer derived from the natural oil of canola seeds. While a regular plastic bottle takes over 400 years to decompose, the new spirits bottle made from Nodax™ will biodegrade in a wide range of environments, including compost, soil, freshwater, and saltwater.





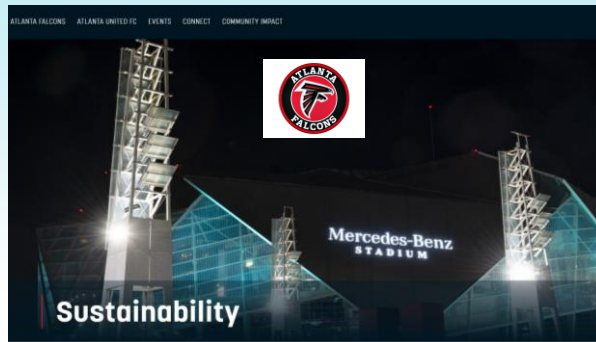
# phade® is being adopted by multiple professional sports venues and stadiums across the US – Starting in Atlanta at the Mercedes Benz Stadium home of the Atlanta Falcons & United



**MERCEDES-BENZ STADIUM STEPS UP GREEN AMBITIONS WITH WINCUP DEAL**

The Stadium Business.com

Posted by Bradley Rial on 5th October 2021



## SUSTAINABILITY PARTNERS



*Straws shouldn't last for centuries. Now they don't. Our partner phade® has developed an innovative eco-straw that performs like a traditional straw but breaks down and returns to the environment in just a matter of months. While phade® is meant for composting, it will even disappear in a marine environment in the unfortunate event that it ends up there. See for yourself and enjoy during your next visit to Mercedes-Benz Stadium!*



The Atlanta Falcons NFL team has entered into a partnership with disposable products manufacturer WinCup to introduce new drinking straws and stirrers to Mercedes-Benz Stadium.

WinCup's phade products are said to be the world's first marine-biodegradable home and industrial compostable drinking straws and stirrers. The introduction of the products at Mercedes-Benz Stadium is in line with the venue's vision to be more sustainable.

WinCup said its agreement with Mercedes-Benz Stadium reflects the growing demand for viable alternatives to single-use petroleum-based plastics. According to WinCup, its phade products are able to overcome performance and sustainability challenges presented by paper straws and vegetable-based polylactic acid straws.

Mace Aluia, vice-president of corporate partnership sales at AMB Sports and Entertainment, which operates Mercedes-Benz Stadium, said: "Sports venues are starting to return to full capacity, and as we welcome both new and returning fans, we have committed to protecting their health, as well as the health of our shared planet."

"As part of that initiative, we are excited that Mercedes-Benz Stadium will offer sustainable, innovative products such as phade straws and stirrers, which help address the plastics pollution crisis."

Michael Winters, WinCup president and chief revenue officer, added: "We are thrilled to partner with the Atlanta Falcons on their continued quest to be the best environmental steward in the sports industry. Our sponsorship provides us a platform to provide meaningful, sustainable solutions to teams, venues, leagues and their fans, starting right here in Atlanta."

"We look forward to seeing the continued adoption of eco-friendly products such as phade expanding in the sports world, and into communities across the US and countries throughout the world to help reduce global plastic pollution."

WinCup is headquartered in Stone Mountain, Georgia and was recently acquired by Atar Capital, a Los Angeles-based global private investment firm.

Mercedes-Benz Stadium was the first professional sports stadium to receive LEED Platinum certification. LEED (Leadership in Energy and Environmental Design) was created by the US Green Building Council and is the most widely used green building rating system.

Mercedes-Benz Stadium also serves as the home of Major League Soccer's Atlanta United.



The most sustainable sports venue in the world to feature new phade(R) marine biodegradable and compostable straws and stirrers to advance sustainability initiatives

STONE MOUNTAIN, Ga.--(BUSINESS WIRE)--September 30, 2021-- WinCup, Inc., an Atlanta metro-based company, is pleased to announce its sponsorship of the Atlanta Falcons to introduce phade(R), the world's first marine biodegradable, home and industrial compostable drinking straws and stirrers to Mercedes-Benz Stadium beginning in August 2021. Falcons' fans and other stadium attendees will be the latest beneficiaries of a growing movement of sustainable practices being adopted across the sports industry. Made with PHA (polyhydroxyalkanoate), a biodegradable resin derived from the fermentation of canola oil, phade(R) sustainable drinking straws and stirrers maintain the feel and user experience of traditional plastic equivalents but will safely return to nature through composting.



## Mercedes-Benz Stadium launches frozen drink in recognition of Breast Cancer Awareness Month

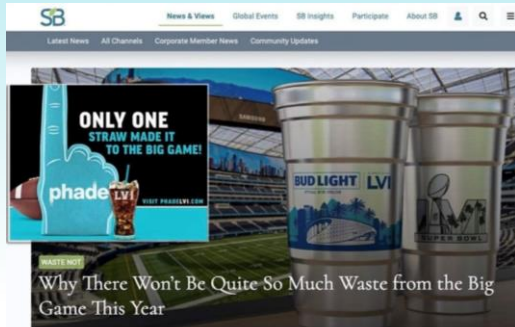
By FOX 5 Atlanta Digital Team | Published October 2 | Mercedes-Benz Stadium | FOX 5 Atlanta



Beginning during the Atlanta Falcons' Oct. 2 game, Mercedes-Benz Stadium will serve "Crucial Catch Lemonade," made with lemon vodka mixed with frozen house-made lemonade. (FOX 5 Atlanta)

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  - Police investigate fatal Marietta crash involving pedestrian
  - Some Astros fans are glad to face the Braves in the World Series
  - FDA panel considers Pfizer's

# Sustainable brands.com featured Ball's Aluminum Cups and phade® sustainable straws in their Super Bowl 56 So-Fi Stadium article



*From cups and straws to the over 300 million gallons of beer expected to be drunk in the US this weekend, companies are stepping up with innovative solutions to rein in the fallout from one of our most wasteful celebration days of the year.*

Fans can celebrate more sustainably this weekend with Ball's aluminum cups

WinCup, Green Sports Alliance team up to eliminate plastic waste from sporting events



Moving from cups to other ubiquitous sources of plastic waste ... This NFL season, along with Ball aluminum cups for beer and cocktails, SoFi Stadium rolled out new concession items designed specifically to curb plastic pollutions at the games — specifically, a compostable and biodegradable drinking straw and cocktail stirrer made from PHA (polyhydroxyalkanoate), a biopolymer derived from the fermentation of canola oil, called **phade® straws**.

These switches are extremely important, both due to the mounting plastic pollution crisis and the significant impact the sports industry plays in influencing fans to make sustainable choices (just look at **Tide's** ongoing partnership with the NFL to help influence fans to #TurnToCold, and **Hellmann's** new ad with **Jerod Mayo** to raise fans' awareness of at-home food waste).

**WinCup, Inc.**, producer of the phade straw, has become an official partner of the **Green Sports Alliance (GSA)** — a nonprofit that convenes stakeholders from around the sporting world to promote healthy, sustainable communities — to support GSA's mission to use the influence of sports to promote sustainable practices across the globe. The organization's members include over 300 professional sports leagues, sports-governing bodies, colleges, teams and venues — representing millions of fans.

"Sports have an enormous influence on our culture as millions of fans follow the lead of their favorite teams' sustainability choices, from energy and water use to drinking straws," said **Roger McClendon**, Executive Director of GSA. "That's why we're so pleased to partner with WinCup. The company's commitment to developing innovative, sustainable foodservice products is already making an impact at pro sports venues and events through its phade straws and stirrers; and we look forward to sharing the benefits of compostable and biodegradable products, as alternatives to petroleum plastics, through this partnership."

While relatively new to the marketplace, phade has already become the sustainable straw of choice for several professional sports venues, teams and events — including SoFi Stadium; the **Atlanta Falcons** and their home, **Mercedes-Benz Stadium**; **Gillette Stadium** in **New England**; and the **2021 PGA Championship** in **Kiawah Island, South Carolina**.

"The Green Sports Alliance is a tremendously influential organization that engages with both professional and collegiate sports leagues, teams and venues to promote best practices in sustainability," said **Michael Winters**, WinCup President and Chief Revenue Officer. "As a result, millions of fans experience the most advanced sustainable practices while cheering on their favorite team and take those ideas back into the community. phade® straws and stirrers are a perfect example of something simple every sports fan can use at home or when dining out and know they are helping to protect the environment. We could not be prouder to be GSA's partner to create a more sustainable future for sports fans, businesses and consumers across the globe."







# WinCup & phade® joins forces with the Green Sports Alliance to bring Sustainable to stadiums across the US



## WINCUP JOINS GREEN SPORTS ALLIANCE AS OFFICIAL PROGRAM PARTNER

*Developer of phade® home and industrial compostable and marine biodegradable drinking straws partners with leading sports environmental advocacy organization to promote sustainable practices across the industry*

**PORTLAND, OR (January 14, 2022)** – WinCup, Inc. has become an official program partner of the Green Sports Alliance (GSA), an environmentally and socially focused nonprofit organization that convenes stakeholders from around the sporting world to promote healthy, sustainable communities. The announcement comes as a growing list of professional sports teams and venues have selected WinCup's phade®, the world's first marine biodegradable, home and industrial compostable drinking straw, as their exclusive straw. Made with PHA (polyhydroxyalkanoate), a biopolymer derived from the fermentation of canola oil, the phade® brand is a breakthrough line of sustainable drinking straws and stirrers that maintain the feel and user experience of traditional plastic equivalents while delivering superior sustainable benefits.

The new partnership supports GSA's mission to use the influence of sports to promote sustainable practices across the globe. The organization's members include over 300 professional sports leagues, sports governing bodies, colleges, teams, and venues representing millions of fans.

While relatively new to the marketplace, phade® has already become the sustainable straw of choice for several professional sports venues, teams and events, including SoFi Stadium in Los Angeles, Mercedes-Benz Stadium in Atlanta, Gillette Stadium in New England, the Atlanta Falcons and the 2021 PGA Championship in Kiawah Island, South Carolina.

The development of phade® involved a rigorous testing and certification process. TÜV AUSTRIA, a globally recognized independent third-party certifying body, certified phade® as both industrial and home compostable in a matter of months. TÜV also certified the material from which WinCup's phade® straw is made as marine biodegradable. Additionally, the Biodegradable Products Institute Inc. (BPI) has certified phade® as industrial compostable.

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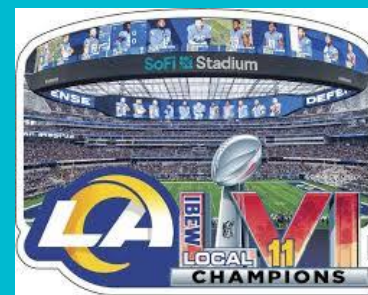
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# Plastic News article published 2-15-22

## Headlines: The MVP of the sustainable Foodservice Products



### Plastics News

NEWS OPINION SHOP FLOOR EVENTS RESIN PRICES RANKINGS & DATA DIRECTORY CU

## Kickstart: The MVP of sustainable foodservice products



RHODA MIEL Assistant Managing Editor

Plastics News Staff



### The MVP of sustainable foodservice products

Maybe no one is about to claim that plastics had an MVP performance at the Super Bowl, but there definitely is a relationship between bio-based plastics and the game's MVP.

Cooper Kupp, a wide receiver for the champion LA Rams, is the nephew of Stephen Croskey, the CEO of materials company Danimer Scientific, whose PHA resin was used in the [Phade-brand straws](#) used at the game.

"Sustainability and the conservation of our planet is as important a mission as any," Kupp said in a social media post from Danimer Scientific. "I'm so proud that my family and my Uncle Stephen are an innovative part of this vital movement."

SoFi Stadium, the home of the LA Rams and the site of the Feb. 13 game, has used compostable and biodegradable WinCup Phade-brand products in foodservice products all season. Danimer Scientific supplies the PHA to WinCup.



## Forbes

Jan 18, 2021, 03:16pm EST | 1.53K views

### You Donut Need A Single-Use Plastic Straw: The Biodegradable Phade Is Available At Dunkin' And Other Locations

This straw does not suck. At least not in a bad way. It's not one of those use-it-once-and-toss-it-away plastic straws that lives for 200 years in a landfill. The straw is called phade and promises sipping that's not subpar. Dunkin' has adopted the brand and is giving out phade drinking straws at select stores.

The phade is dubbed as a "breakthrough marine biodegradable drinking straw" made with a substrate derived from canola oil, aka PHA or polyhydroxyalkanoate. The straw is compostable in home and industrial environments, its makers say, but still has that "feel and user experience of a traditional plastic straw."



Jeff Kart Contributor @ Science



Organic Waste Systems (OWS), based in Belgium, conducted a home compostable study, concluding that ... [+] ows

## Bloomberg Green

Dunkin' Introduces a Straw for People Too Lazy to Compost - B... <https://www.bloomberg.com/news/articles/2021-01-15-dunkin-introduces-a-straw-for-people-too-lazy-to-compost>

### Culture & Design Dunkin' Introduces a Straw for People Too Lazy to Compost

The plant-based straw, manufactured by WinCup, will biodegrade anywhere, whether it's composted or not.

By Elizabeth Elkin  
January 15, 2021, 5:00 AM EST

Feb 2<sup>nd</sup> 2021



The biodegradable phade straw. Source: WinCup

A new biodegradable drinking straw, called a phade straw, is appearing in Dunkin' stores in the U.S. Its manufacturer, WinCup says it's meant to be composted at home or in an industrial facility. But it also knows you might not compost it at all—and that's OK.

"No matter if it ends up in the ocean, on the beach, in your backyard, on the side of the road, and definitely in a landfill where there's lots of bacteria living, phade will have a great end of life story," said WinCup CEO Brad Laporte. "It turns back into organic matter."

## JACKSONVILLE BUSINESS JOURNAL

### Jacksonville manufacturer looks to take over straw market with biodegradable product

Feb 1<sup>st</sup>, 2021

A Georgia-based foodservice company is manufacturing biodegradable straws in Jacksonville, with the product being used in local establishments like the Ponte Vedra Inn and Club and Omni Amelia Island Resort — as well as nationally in places like Dunkin' doughnut shops.

The straws, made at WinCup's westside factory, were officially released in July 2020 and formally launched to consumers in January.

The straws are made out of Phade, the brand name of a biodegradable substance manufactured by WinCup, a company based in Stone Mountain, Georgia, that makes disposable polystyrene cups, bowls and containers, among other items.

The new straws are made with polyhydroxyalkanoates, abbreviated PHA, a material made by fermenting sugar or starch feedstock. Phade is made from PHA crafted out of canola oil by Danimer Scientific, which feels similar to traditional plastic.

"We looked very deeply into (paper straws) and found out that it did not have a very good consumer appeal," WinCup President Michael Winters said. "Consumers didn't like the fact that paper straws get soggy and they collapse, and they kind of have a funny feeling in your mouth, but people were moving to them because there wasn't really a good alternative."

Locally, the straws are being used at the Ponte Vedra Inn, Omni Amelia Island Plantation, Caps on the Water, Conch House, Safe Harbour Seafood and Sawgrass Country Club.

Aaron Stiles, the director of food & beverage at Ponte Vedra Inn & Club said in an email that as the Inn continues its efforts to be more sustainable, Phade has set the bar for those who follow.

Over 100 million straws have been shipped to customers in the first six months of launch during a pandemic, Winters said, and the US straw market today is about a \$570 million market.

"That equates to about 128 billion straws," Winters said. "As we market it and continue to pick up speed along the way, we could take a substantial percentage of that overall market based on it being a meaningful relevant breakthrough innovation in the straw category."



## yahoo! finance

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- Environmental benefits: marine biodegradable, home and industrial compostable
- Feels and performs like a traditional plastic straw
- Can be mass produced

PRODUCT OF WINCUP

ECO-FRIENDLY

WINCUP AIMS TO LIMIT PLASTIC POLLUTION W/ ITS 'PHADE' STRAW

LIVE

**"CONFIDENTIAL"**