



# HOW THIS INGREDIENT BECAME UPCYCLED CERTIFIED

As the world's first certification for upcycled ingredients and products enters the beauty industry, **Caroline Barry** explores the steps IFF's GENENCARE OSMS range went through to become Upcycled Certified

**F**or many beauty brands, achieving zero waste and circular economy goals can prove challenging and require a layered approach. Upcycled ingredients represent a powerful tool to reduce the environmental impact of products and tell an important sustainability story at the same time.

Using upcycled ingredients aligns with one of the environmentally sustainable values that resonates most with consumers: waste reduction. According to a study by Deloitte, 48% of surveyed UK consumers have chosen brands that practice waste reduction when deciding to shop sustainably for beauty and personal care products<sup>[1]</sup>. In another study by Mintel, 65% of German women surveyed are interested in using beauty and personal care products made from plant waste<sup>[2]</sup>.

In the personal care industry, there are several types of side streams that can be converted into upcycled solutions. Such examples include imperfect produce from farms like 'ugly' carrots, harvest by-products like juices and pulps, pomace (the residue from crushed produce, like cranberry skins) and side streams from processing facilities, like wastewater from mushroom blanching.

As upcycled ingredients become increasingly popular for beauty and personal care brands, how can the industry legitimise food waste as a reputable and reliable source for beauty ingredients, and ensure that such products are manufactured to the highest standards?

## FIRST STANDARD FOR UPCYCLED INGREDIENTS

Launched in June 2021, the Upcycled Certified Program is the first global third-party certification for upcycled foods and ingredients. Products and ingredients that are Upcycled Certified must maintain a key set of criteria: they are made from surplus food or food by-products, are traceable via verifiable supply chains, and have a positive impact on the environment. The Upcycled Certified Standard is a detailed framework that adds credibility and integrity to the certifying process.

Developed by a global group of industry agents, retailers, academics and consumer advocates, the standard serves as a set of requirements to promote alignment between businesses, brands and consumers.

By definition, the standard creates a uniform message that enables transparency and drives a sense of enthusiasm around the value of upcycled products.

The standard also helps to differentiate upcycling from just another fad or trend, making it a recognisable and substantiated claim, a symbol that can be trusted throughout the beauty and personal care industry.

Turner Wyatt, co-founder and CEO of the Upcycled Food Association, is so confident in the Standard he believes the Upcycled Certified mark will become one of the most commonly recognisable symbols on store shelves within the next decade.

"I think in the years to come, consumers will see the Upcycled Certified logo in every aisle of every store, similar to how organic is today. Most people agree that food waste is a problem, and upcycled products are the sustainable option that appeals to people across the political spectrum," said Wyatt during a *Food Tank* interview.

## BECOMING UPCYCLED CERTIFIED

The Upcycled Certified certification process is a comprehensive, cross-coordinated effort between UFA and Where Food Comes From (WFCF), a leading third-party food and agriculture verification firm.

On average, UFA recommends applicants set aside two months to complete the entire certification process, although it can be completed in as little as a week.

There are three Upcycled Certified types one can pursue: ingredient, product and minimal content.

**Upcycled Ingredient (UI):** UIs must contain  $\geq 95\%$  upcycled uniform diverted inputs by weight. As defined by UFA, UIs are single ingredient inputs not sold directly to customers that were originally produced for use in human food that otherwise would not have gone to human consumption, are procured and produced using verifiable supply chains, and have a positive impact on the environment.

**Product Containing Upcycled Ingredients (PUI):** PUIs must contain  $\geq 10\%$  certified upcycled ingredients by weight or meet the threshold for total tonnage diverted (based on sales tier). PUIs encompass any food, beverage, dietary supplement, companion pet food, cosmetic, personal care, or household cleaning product.

**Products with Minimal Upcycled Ingredient Content (Less Than PUI):** Minimal content products are those containing  $< 10\%$  certified upcycled ingredient content less than threshold for total tonnage diverted. Any relevant product (see list above) that does not meet the diversion threshold of its sales tier, or includes less than  $10\%$  certified upcycled ingredient content by weight, can qualify for the Upcycled Certified Minimal Content Mark.

The minimal content type was created to commend brands and businesses who are practising food waste diversion, even if they don't quite yet meet the specified requirements of UIs or PUIs. The Mark is an important signifier for brands who are starting to mobilise their waste diversion efforts, and comes with tailored marketing messaging and separate labelling to make a clear distinction between UIs or PUIs.

The Upcycled Certification Program isn't about exclusivity – on the contrary, it's about inclusivity. The Less Than PUI type reduces the barrier to entry, a pervasive problem of most other certifications in both the food and beverage and beauty and personal care industries

IFF's GENENCARE OSMS range is extracted from the by-product of sugar beet (*Beta vulgaris*, below) processing known as sugar beet molasses

## STEPS TO CERTIFICATION

In addition to certification type, those seeking certification must adhere to the following requirements:

- Make a public commitment to food waste diversion;
- Demonstrate waste monitoring processes within their own manufacturing practices;
- Effectively ensure the UI or PUI has a positive environmental impact;
- Provide greenhouse gas emissions source identification;
- Be able to provide information on the following: chain of custody documentation, an affidavit affirming the source of upcycled material and original waste destination, proof applicable food safety requirements are met, ingredient segregation and traceability, and employee training.

## VALUE-ADDED INGREDIENTS

An associate member of the UFA since 2019, IFF is one of the first ingredient suppliers to receive Upcycled Certification in the cosmetic active category.

To embark on the process, IFF submitted an Applicant Interest Form. After connecting with the Certifying Body, the company filed an intake questionnaire and service agreement for product and ingredient evaluation.

The product and ingredient evaluation is where things get a bit more technical. A specialist from WFCF handles the documentation, arranges an onsite audit and assigns an independent inspector.

In the event of non-conformances, the assigned inspector will conduct, audit and resubmit results for final review.

Only after all requirements are met will the applicant receive a Certificate of Approval and a special member marketing toolkit.

As an Upcycled Certified entity, organisations are required to annually renew their certification. A Certifying Body representative will request





documentation regarding any changes since the previous evaluation, and in the case of non-compliance, the certification could be revoked.

While obtaining and maintaining the Upcycled Certified Mark is no easy feat, IFF recognises the triple bottom line value that a certification like this brings, and how it can inspire the beauty and personal care industry to transition from linear to circular business models.

IFF's Vice President of Global Sustainability & EHS, Kip Cleverley, explains: "Upcycled Certified is a big step toward creating a circular economy. At IFF, we have embedded our commitment to circular design across our business as a guiding principle toward creating scalable, sustainable and closed-looped systems in which materials are constantly reused and waste becomes a resource."

One of IFF's certified product lines that warrants a closer look is the GENENCARE OSMS personal care bioactives range from its Health & Biosciences division.

The GENENCARE OSMS range is extracted from the by-product of sugar beet (*Beta vulgaris*) processing known as sugar beet molasses. IFF has developed a proprietary, tech-driven "natural betaine production process" that helps sugar mills to increase sugar yields during the desugarisation process.

At the same time, that side stream of betaine molasses is upcycled into the GENENCARE OSMS range in the form of highly purified crystalline powders, betaine (BA), inositol (MI) and micronised betaine (CC), creating maximum value out of a product that was previously considered low-value.

To put that into perspective, sugar beets account for approximately 20% of global sugar production, so there is a significant opportunity for sugar beet farmers and processors to maximise their production value and eliminate waste.

IFF's Health & Biosciences business is proving this can be done successfully and at scale.

## SUSTAINABLE, EFFICACIOUS INGREDIENTS

"Based on consumer conversations in 2019 and 2020, we [saw] how global participation in sustainability efforts has incentivised innovation and activity to move toward a less wasteful future," explains Hayley Hoffman, a US cosmetic industry and sustainability expert.

"Hashtags such as 'zerowaste', 'circular economy' and 'upcycled' experienced significant growth in consumer conversations and brand mentions<sup>[3]</sup>."

According to the *Dandi Day Sustainability Report*, #upcycled in the upcycled beauty category experienced the most consistent growth in consumer engagement from 2019-20, increasing 9% year-over-year<sup>[4]</sup>.

"We anticipate a push from ingredient suppliers to communicate the upcycled aspects of their portfolios for brands to source immediately for rapid category growth," adds Hoffman.

Johan Jansén-Storbacka, Director, Personal Care, Health & Biosciences, IFF, underscores the

## 'Upcycled Certified is a big step toward creating a circular economy'

significance of these growing demands: "Today's consumers expect more from the brands they use to support local, social and environmental issues. The GENENCARE OSMS portfolio is about reimagining how we can turn food waste into value-added, innovative solutions for our customers and the industry."

The GENENCARE OSMS range of bioactives is made up of osmolytes like betaine and inositol that occur naturally in the epidermal layers of the skin.

Natural betaine is a powerful osmoprotectant, making it an invaluable ingredient for personal care products due to its ability to manage cell water balance and strengthen the skin barrier to help protect skin against dehydration. Inositol helps to improve skin oxygenation and elasticity by energising the skin cells.

"This certification is a testament of our commitment to address the global challenge of waste through upcycling, and to address consumer needs for sustainable and advanced, efficacious ingredients," adds Jansén-Storbacka ●

*The Public Comment Period for Version 2 of the Upcycled Certified Standard closed on 1 April 2022. At the time this article was written, the Standards Committee hosted the first of several months of meetings to review comments and make necessary changes. Later this year, the Standards Committee will sit with the UFA Board of Directors to review and vote the revised Standard into full effect.*

## References

1. Deloitte, 'Sustainability & Consumer Behaviour 2021', 2021.
2. Mintel, 'Boost sustainability in BPC with recycled ingredients', August 2021.
3. Dandi Day, 'Sustainability Report and Solutions', 2021.
4. Dandi Day, 'Sustainability Report and Solutions', 2021.

**Figure 1**

**GENENCARE OSMS is upcycled from the sugar production side stream**

