



# UPCYCLED CERTIFIED™ STANDARD

**VERSION 2**

2022

DEVELOPED AND DRAFTED BY  
THE UPCYCLED CERTIFIED™ STANDARDS COMMITTEE

**UPCYCLED™**  
**FOOD ASSOCIATION**



The Upcycled Food Association is a nonprofit whose mission is to reduce food waste by growing the upcycled food economy. Through policy, marketing, and communications work, the Upcycled Food Association is building a food system in which all food goes to its highest and best use.

To learn more, visit [www.upcycledfood.org](http://www.upcycledfood.org)

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## Introduction

### Intent And Vision of the Certification

The intent of this Upcycled Certified™ Standard and the certification process is to guide the use of the upcycled foods definition, align ethos around the upcycled food movement, and build the upcycled food economy. The upcycled food definition can be segmented into three components which provide objectives for “decreasing the negative impact on the environment of overproduction and waste while increasing access to safe, sustainable food sources for people around the world.”<sup>1</sup>

*Upcycled foods use ingredients 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.*<sup>1</sup>

#### 1) Reduce Food Loss and Waste –

The United Nations developed Sustainable Development Goals (SDGs) as a guide for the international community to “build a fairer, more peaceful world”<sup>2</sup>. With climate change and environmental production at a forefront of issues for the future, the Food and Agricultural Organization (FAO) has worked to identify goals that will support a sustainable world. SDG 12, responsible consumption, and production, has a critical sub-goal 12.3, to halve global per capita food loss and waste by 2030<sup>2</sup>. This has been deemed a critical issue as food loss and waste accounts for 8% of global emissions and would be the third largest greenhouse gas emitter if it were a country, only behind the United States and China<sup>2</sup>. Additionally, Project Drawdown, the world’s leading resource for climate change solutions, points to food loss and waste reduction as the top actionable change to reduce emissions and prevent a 2°C temperature increase by the year 2100<sup>3</sup>.

#### 2) Verifiable Supply Chains –

Supply chains must be verified to substantiate that food loss and waste is being prevented. By looking at the full supply chain to measure and understand where waste occurs, actions can be put in place to manage and reduce waste. Additionally, a third-party review of the supply chain aims to reduce the potential for greenwashing and build trust in the waste prevention movement.

#### 3) Environmental Impact Metrics –

The intention behind the upcycled food movement is to cultivate global sustainability by reducing the effects of climate change through the manufacturing of Non-Durable, Consumer Goods using food that would have otherwise gone to waste. However, there may be instances or processes that inadvertently result in an increase of emissions. To maintain the ethos of this certification and the wider movement, the Applicant/Operator should build processes that operate with the mindset of improving the environment. To verify this, the certification process has and will continue to implement levers to evaluate the company's commitment to sustainability.

### Building the Economy

The criterion within this Standard provides a framework for upcycled ingredients and products and aims to answer the consumer’s call for more sustainable products. The Upcycled Certified™ program exists to provide consumers ease and assurance that certified ingredients and products prevent waste and align with global goals to reduce climate change and uphold the value of producing products in a more sustainable manner. Ultimately, the capacity of this movement will grow as consumers gain trust and confidence in Upcycled Certified™ products.

This is a large task for one certification Mark, but through the rigor of this Standard and trust in the environmental benefits it brings, Upcycled Certified™ ingredients and products can meet that challenge.

### Vision for Levels of Certification

While this Standard represents a major feat in the journey to create a more sustainable food system, this is the first step in scaling the upcycled food industry in a sustainable manner. This Standard is a living document and will embrace continuous improvement over time. This second version of the Standard adopts a “wide-tent” approach, including a certification process for the Applicant/Operator producing Upcycled Ingredients (UI) and Products Containing Upcycled Ingredients (PUI). The Standard embraces

and celebrates the use of upcycled Inputs in all amounts but reserves prominent front of pack labeling for products that meet or exceed thresholds for minimum percent upcycled Input by weight or tonnage diverted as a result of yearly production. A Minimal Content PUI designation is available for the Applicant/Operator that does not meet these thresholds but whose waste diversion efforts warrant credit and celebration. Back of pack or specific menu item labeling may be used by Applicant/Operators that have taken this initial step. Future versions of the Standard are likely to incorporate additional forms of certification to highlight and acknowledge leaders in the sector who are contributing significantly to diverting waste from low value uses by incorporating greater quantities of upcycled Input(s) into their product.

### **Vision for Demonstrating Impact**

The Standard requires a third-party supply chain Audit to ensure that Input(s) come from a verified source, an accounting of the Input(s) diverted and percentage of upcycled Ingredients within UI or PUI and requires that the Applicant/Operator begins identifying sources of greenhouse gas emissions (GHGE) arising from production of the UIs and/or PUIs. Thresholds for UIs and PUIs were set by the Upcycled Certified™ Standards Committee, a group of international experts in sustainability, agriculture, food systems, nutrition, food purchasing, and retail using the best available data from companies within the industry and modeling use-cases. These thresholds were further refined through multiple comment periods.

Future versions of this Standard will require more refined impact reporting, such as but not limited to, the measurement of GHGE. GHGE accounting and reporting may not be common practice in the food industry and reporting may create a barrier-to-entry for the Applicant/Operator without the resources to conduct a full GHGE analysis. Therefore, current GHGE reporting requirements are largely qualitative and informative in nature. Future versions of the Standard will require quantitative metrics and calculation.

The long-term vision of the Upcycled Certified™ Standard is to guide the food system towards increased economic and environmental sustainability through food loss and waste diversion. This will happen through:

- 1) Scaling the upcycled food industry through adoption of the certification among new and existing Operators.
- 2) Continuing to expand the Upcycled Certified™ Standard throughout other industries that have similar Input sourcing practices and supply chains such as, but not limited to, companion pet food, cosmetics, personal care products, and household cleaning products, along with Inputs used to produce these goods (See Section 1.2).
- 3) Continued development of waste mitigation strategies and GHGE reporting to better understand major contributors to GHGE.

The Standard also has a strategic vision to support companies to develop realistic waste minimization targets throughout their operations. Measuring is the first step towards setting achievable targets and therefore the Standard will take a phased approach to target setting in the future including but not limited to:

- 1) Making documentation and review of Food Loss and Waste Assessment by management mandatory with corrective actions documented.
- 2) Making diversion goal setting and demonstrated food loss and waste *reduction* mandatory to maintain certification.

The body responsible for writing this Standard evaluated a number of approaches to determining the continued eligibility of a supply chain to avoid perverse and/or rebound effects such as, but not limited to, determining a UI or PUI is no longer meaningfully contributing to food loss and waste reduction. However none were ultimately adopted due to the complex nature of the issue. While the Standards Committee was unable to address this aspect of upcycled ingredients and products, we see this area as of great import.

During discussions that led to “Defining Upcycled Foods: A Definition for Use Across Industry, Government, and Academia” a foundational document for this Standard, the Upcycled Foods Definition Task Force noted “Products may exist that use diverted ingredients that would otherwise go to food loss and waste destinations, but because the product has existed for such a long time, its supply chain is firmly established and it cannot be said to be contributing to the reduction of food loss and waste.”<sup>1</sup> The Standards Committee recommends that the Upcycled Food Association deploy resources to study this topic and encourages future Standards Committees to take up the issue.

This Standard aims to balance the current capacity of the industry with the desire to define what it means to be a UI or PUI. This second version of the Standard reflects the current state of the sector and is designed to be refined and expanded for future versions in tandem with industry growth and evolution.

# Upcycled Certified™ Standard

## 1. Overview

### 1.1 Purpose

The purpose of the Upcycled Certified™ Standard (the Standard) is to establish rigorous certification criteria in order to develop markets for Upcycled Foods and other products which use Inputs 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”<sup>1</sup>.

The Upcycled Certified™ Program:

- 1) Communicates to consumers a consistent message regarding the criteria for and value of these distinct products.
- 2) Creates a common identity for the upcycling movement.
- 3) Serves to communicate transparency, aiming to build trust and enthusiasm about consuming food that would have otherwise been lost or wasted.

The Certification helps Input manufacturers, product manufacturers, and foodservice operators:

- 1) Identify suppliers that support the Upcycled Food industry’s mission to address climate change.
- 2) Feed a growing population by reducing the amount of food loss and waste throughout the food system.
- 3) Have a mechanism to consider for environmental impact.

### 1.2 Scope

The Standard outlines three distinct designations: (1) Upcycled Ingredient(s) (UI), (2) Product Containing Upcycled Ingredient(s) (PUI), and (3) Minimal Content PUI(s). Each adds additional value to food preparation or manufacturing by diverting food loss and waste to a higher value end destination, subsequently mitigating the total weight of food loss and waste produced and encouraging more responsible production. For more detail on the requirements for certification see Section 4. Operators that grow, produce, manufacture, process, prepare, and trade in Non-durable, Consumer Goods are eligible to apply for the Upcycled Certified™ Program. These categories include, but are not limited to, the following: food and beverage, foodservice, dietary supplements, companion pet food, cosmetics, personal care products, and household cleaners, along with Inputs used to produce these goods.

Products and Input(s) seeking certification must be all of the following:

- 1) Consumer Goods or Input(s), UI(s), PUI(s), or Minimal Content PUI(s) used to produce such goods. Industrial Inputs are considered within the scope of this Standard if they may be used to produce Consumer Goods.
- 2) Non-durable Goods (See 3.22 for examples)<sup>4</sup>
- 3) Aligned with UN Sustainable Development Goal 12.3 (See Reference 2 in Section 2.1) which seeks to substantially reduce food loss and waste throughout the supply chain, at the production, retail, and consumer levels. Products seeking certification must use Inputs that represent the diversion of food loss and waste back into the food (or consumable good) supply chain.<sup>2</sup>

The following types of goods are currently ineligible for certification:

- 1) Inputs derived from wood and forestry products.
- 2) Cigarettes, tobacco, vaping, or nicotine products.
- 3) Controlled substances or similarly restricted ingredients or products according to local, state, federal, or other laws which might supersede this Standard.
- 4) Goods for sale within countries for which an application for the certification trademark has not yet been submitted.
- 5) Durable Goods.<sup>5</sup>

The Upcycled Certified™ Standard is a voluntary certification. The requirements of the Standard shall not be used to verify or certify any other standards for certification including, but not limited to, food safety, organic, or gluten free certifications.

## 2. Normative References

### 2.1 References

The following documents contain provisions that, through reference, constitute provisions of this Standard. At the time this Standard was written, the editions listed below are current and valid. All documents are subject to revision, and parties are encouraged to investigate the possibility of applying the most recent editions of the documents indicated below. The most recent published edition of the document shall be used for undated references.

<sup>1</sup> Defining upcycled Foods. A Definition for Use Across Industry, Government, and Academia – The Upcycled Foods Definition Task Force. Upcycledfood.org/what-is-upcycled-food. [https://www.chlpi.org/wp-content/uploads/2013/12/Upcycled-Food\\_Definition.pdf](https://www.chlpi.org/wp-content/uploads/2013/12/Upcycled-Food_Definition.pdf) Published May 2020. Accessed April 2022.

**Note:** Stakeholder collaboration included: [Harvard University Food Law & Policy Clinic](#), [Drexel University Food Lab](#), [Natural Resources Defense Council](#), [World Wildlife Fund](#), and [ReFed](#)

<sup>2</sup> World Resource Institute and Champions 12.3. (2017). Guidance on Interpreting Sustainable Development Goal Target 12.3. <https://champions123.org/publication/guidance-interpreting-sustainable-development-goal-target-123>. Accessed February 2022

<sup>3</sup> Drawdown Framework. Drawdown.org. <https://drawdown.org/drawdown-framework>. Published 2020. Accessed August 2020.

<sup>4</sup> United States Bureau of Economic Analysis Glossary Entry for “Non-Durable Goods.” <https://www.bea.gov/help/glossary/nondurable-goods> Accessed January 2022

<sup>5</sup> United States Bureau of Economic Analysis Glossary Entry for “Durable Goods.” <https://www.bea.gov/help/glossary/durable-goods> Accessed January 2022

<sup>6</sup> Cosmetics and U.S. Law. U.S. Food and Drug Administration. FDA.gov. <https://www.fda.gov/cosmetics/cosmetics-laws-regulations/cosmetics-us-law> Accessed November 2020.

<sup>7</sup> World Resources Institute Food Loss and Waste Protocol, Food Loss and Waste Accounting and Reporting Standard: Executive Summary, [flwprotocol.org](http://flwprotocol.org). <https://www.flwprotocol.org/flw-standard/> Published Version 1.0. 2016. Accessed April 2022.

<sup>8</sup> National Organic Program. USDA Agricultural Marketing Services. <https://www.ams.usda.gov/services/organic-certification>. Accessed August 2020.

<sup>9</sup> International Organization for Standardization. (2018). Conformity assessment — Requirements for bodies certifying products, processes and services (ISO Standard No. 17065:2012). <https://www.iso.org/standard/46568.html> Accessed December 2020.

<sup>10</sup> World Resources Institute and World Business Council for Sustainable Development. The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard. <https://ghgprotocol.org/corporate-standard>. Published Revised Edition. 2004. Accessed August 2020.

### 2.2 Related Regulations and Control Requirements

Laws and regulations in geographic regions where the Applicant/ Operator is located or where certified products may be sold may supersede the production, manufacturing, or labeling

requirements and allowances of this protocol, including any variances granted. The applicable regulations should be considered carefully by any Applicant/ Operator intending to certify Inputs or products under the Standard to avoid inadvertently violating regulations concerning packaging, marketing, and sales materials. The Upcycled Food Association and Certifying Body or Bodies (CB) disclaim any responsibility or liability for Applicant's/ Operator's compliance with applicable laws, regulations, and rules external to this Standard, and by agreeing to be certified under this Standard, the Applicant/ Operator releases and holds harmless the Upcycled Food Association from all claims or liability related to any applicable laws, regulations, or rules external to this Standard. The Applicant/ Operator is required to maintain compliance with all applicable regulations for the process, production, intended use, and market destination of UI or PUI.

### 3. Definitions

**3.1 Attestation:** A formal document either created and supplied by the Upcycled Food Association or Certification Body, or provided by an Applicant/Operator, that includes a written and signed statement confirming specific characteristics of a given crop, Input, system, process, or operation.

**3.2 Applicant:** An organization that is seeking the designation for one or more certified UIs, Minimal Content PUIs, and/or PUIs.

**3.3 Audit/review:** A systematic evaluation to determine if programs and related activities achieve planned expectations, including the review or challenging of a written program, inspection observations, documentation of activities, corrective actions, and trends to determine the correlations between documented procedures and activities and actual execution.

**3.4 Certification:** A procedure by which a third party gives written assurance that a product, process, or service is in conformity with established standards.

**3.5 Certification Body (CB):** An administrator that is licensed and approved by the Upcycled Food Association to assess and determine whether a system, Input, or product fulfills the requirements stated in the Standard.

**3.6 Companion Pet Food:** Plant or animal material intended for consumption by pets in a domestic setting such as, but not limited to, cats or dogs.

**3.7 Consumer Goods:** Product(s), Input(s), UI(s), PUI(s), or Minimal Content PUI(s) intended for direct sale to retail consumer and/or for retail consumer use, including, but not limited to, food and beverage, foodservice, dietary supplements, companion pet food, cosmetics, personal care products, and household cleaners, along with Inputs used to produce these goods, rather than commercial or industrial Input(s) or products sold business to business.

**Note:** For the purposes of this Standard, any Inputs that may be ultimately used in the production of Consumer Goods are also considered Consumer Goods.

**3.8 Cosmetics:** "Articles intended to be rubbed, poured, sprinkled, or sprayed on, introduced into, or otherwise applied to the human body... for cleansing, beautifying, promoting attractiveness, or altering the appearance." Included in this definition are products such as skin moisturizers, perfumes, lipsticks, fingernail polishes, eye and facial makeup preparations, shampoos, permanent waves, hair colors, toothpastes, and deodorants, as well as any material intended for use as a component of a cosmetic product.<sup>6</sup>

**3.9 Designation (Designating):** The process of determining the categorization as an intended UI, Minimal Content PUI, or PUI in accordance with this Standard.

**3.10 Durable Goods:** Tangible products that can be stored or inventoried and that have an average shelf life of at least three years.<sup>5</sup>

**3.11 Food Loss and Waste:** Food and/or associated inedible parts removed from the food supply chain such as, but not limited to, biomaterial/processing, compost/anaerobic process, landfill, not harvested/plowed in, and animal feed.<sup>7</sup>

**3.12 Input(s):** Any food material, product, or byproduct of food production, or portion within, diverted from, but not limited to, an agricultural, aquaculture, or food production setting, that would typically be destined for a food loss or waste destination,<sup>7</sup> that instead is used in the production of an ingredient or Consumer Good.

**3.13 Inspection:** An extensive desk audit and/or physical examination of a facility/site and its equipment and observation of practices conducted during the course of an audit in order to collect information to determine compliance with specified requirements, often structured to lead to an evaluation of programs and systems.

**3.14 Lot/ Production Number:** A distinctive combination of letters, numbers or symbols, or any combination thereof from which the complete history of the manufacture, processing, packaging, holding, and distribution of a batch or lot of finished products can be identified.

**3.15 Major Non-Conformity:** A systemic non-conformity that could affect the compliance of an Input or Upcycled Ingredient with UI or PUI requirements.

**3.16 Manufacture or Manufacturing:** All operations associated with production of Input(s) and product(s) seeking a designation of UI, Minimal Content PUI, or PUI. This includes but is not limited to production, preparation, packaging, labeling, testing, and quality control of an Input or finished product.

**3.17 Mark:** A label or symbol that is used to indicate to consumers that a particular good and/or service has met certain standards.

**3.18 Minimal Content PUI:** A PUI that meets all requirements set forth within this Standard but does not meet or exceed the thresholds for an aggregate of ≥10% Input(s) content by weight or tonnage diverted as a result of yearly production. It can be assumed that Sections and requirements referring to PUIs extend to Minimal Content PUIs unless explicitly stated within the Standard.

**Note:** The concept of a Minimal Content PUI takes regulatory precedent from the USDA National Organic Program (NOP)<sup>8</sup>. While the USDA National Organic Program does not require or permit brands with less than 70% organic content to be certified, the USDA NOP does require brands to produce these products in accordance with the regulation and protect organic integrity. Further, the regulation requires that manufacturers with less than 70% organic content still comply with the record-keeping requirements of the USDA NOP.

**3.19 Minor Non-Conformity:** A non-conformity that is immaterial or does not pose a compliance threat to the relevant Input(s) or Upcycled Ingredient(s) (Ex: a different processing aid is used in the formulation of a UI).

**3.20 Non-Conformity:** Any deviation from criteria within the Standard or deviation from operations not approved by the CB.

**3.21 Non-Compliance:** A failure by the Applicant/Operator to comply with the requirements of the Standard, or failure to take corrective action in the event of a deviation from requirements. A non-compliance may be classified as major or minor depending on the systemic nature of the offense and/or the significance of the non-compliance.

**3.22 Non-Durable Goods:** Tangible products that can be stored or inventoried and that have an average life of less than three years. These products are intended for immediate use or consumption over a short period of time. Such products may be ingestible (i.e., food or dietary supplements), or used in other ways in the household (cleaning products, personal care products, pet food, cooking aids). Non-durable goods include, but are not limited to, disposable tableware, clothing, and paper.<sup>4</sup>

**3.23 Operator:** An organization that possesses certification for a UI, Minimal Content PUI, or PUI.

**3.24 Original Producer:** The origin of an Input and the point at which it is diverted, such as, but not limited to, a farm or production facility.

**Note:** Measurement of food loss and waste at the point of diversion is in alignment with the World Resources Institute Food Loss and Waste Protocol.<sup>7</sup>

**3.25 Product Containing Upcycled Ingredient(s) (PUI):** Includes, but is not limited to, a food, menu item, beverage, dietary supplement, companion pet food, cosmetic, personal care, or household cleaning product that includes Inputs and is intended for human use/ consumption. PUIs shall include Inputs and meet the criteria set forth within this Standard and are certified as such. PUIs shall be composed of an aggregate of  $\geq 10\%$  upcycled Input(s) or meet the tonnage diverted threshold (See Table 1). Single or multi component Inputs (certified as a UI, PUI, Minimal Content PUI, or otherwise) may be used within a PUI seeking certification.

**Note:** The concept of PUI is inherently referring to a certified PUI. An uncertified PUI will be referred to as such or referred to as a product “seeking designation of PUI” within this Standard.

**3.26 Upcycled Foods<sup>1</sup>:** Upcycled Foods use ingredients (Inputs) 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.

**3.27 Upcycled Ingredient (UI):** Input(s) originally produced for use in human food that otherwise would not have gone to human use/ consumption, procured and produced using verifiable supply chains, and have a positive impact on the environment that meets the criteria set forth within this Standard and is certified as such. UIs may be consumer facing goods or used in a PUI or Minimal Content PUI assuming compliance with requirements of the Standard. UIs shall be composed of an aggregate of  $\geq 95\%$  upcycled Input(s). UIs may comprise multiple Inputs as long as it meets the criteria of  $\geq 95\%$  diverted material.

**Note 1:** The concept of UI is inherently referring to a certified UI. An uncertified UI will be referred to as such or referred to as an Input or product “seeking designation of UI” within this Standard.

**Note 2:** Products and ingredients containing  $>5\%$  processing aids and other additives shall not qualify for the designation of UI.

**3.28 Virgin ingredient:** An ingredient that contains no upcycled content.

## 4. Requirements for Certification

### 4.1 Initial Application for Certification

The Applicant/Operator shall comply with the following requirements:

**4.1.1** Execute a signed UFA license agreement and service agreement with a UFA authorized CB.

**4.1.2** Execute a signed agreement permitting public listing of all UIs, Minimal Content PUIs, and PUIs and their associated Applicant/Operator.

**4.1.3** Submission of documents, procedures and records for review as set forth in this Section (Section 4).

### 4.1.4 General Information for UI or PUI Certification

The Applicant/Operator shall provide information about the Input(s), product, operation, and production practices. This information shall include, but is not limited to:

- 1) Name and address of Applicant/Operator, farms, or manufacturing facility or facilities.
- 2) Name and address of parent company, if applicable.
- 3) Name of Input(s) or product(s) seeking a designation of UI, Minimal Content PUI, or PUI.
- 4) Name of current Upcycled Certified™ designation (if applicable) and necessary descriptors [Ex: spent barley from brewing, romaine leaves, Upcycled Certified™ grape seed flour (UI)] for each product listed in 4.1.4 3).
- 5) Form of Input(s) (Ex: partial, whole, etc.).
- 6) Physical state(s) of Input, (Ex: fresh, dried).
- 7) Name and address of Original Producer of Input(s), (Ex: name of farm, manufacturer, etc., if applicable).
- 8) Other identification information or applicable Original Producer's information as required by CB.

**Note:** An Applicant/Operator producing a consumer facing product utilizing their own Input stream(s) is not required to first certify the Input(s) as a UI or PUI in order for said product to be certified as a UI or PUI.

Example: A french fry manufacturer includes potato peels (a byproduct of french fry production), they have milled and dried in a flour blend. In this case, the french fry manufacturer may seek certification for the milled, dried potato peels as a UI. The french fry manufacturer may also seek UI/ PUI certification for the flour blend which includes the milled, dried potato peels as an Input. This may be done without first certifying the milled, dried potato peels as a UI since the french fry manufacturer owns its Input stream.

Example: An independent restaurant includes aquafaba (garbanzo bean water) as an egg replacer in a recipe. Previously, upon opening a can, garbanzo bean water was drained and discarded. In this case, the restaurant may seek PUI certification for the menu item(s) that utilize the aquafaba. This may be done without first certifying the aquafaba as a UI since the independent restaurant was the origin of the previously considered waste aquafaba.

**Note:** If ownership of an Input is transferred to be used in an outside Applicant/Operator's products, that Input would not be considered a UI or PUI without an Audit and is prohibited from being marketed as such.

Example: A french fry manufacturer sells potato peels (a byproduct of french fry production) to a potato chip manufacturer. If the french fry manufacturer did not have the potato peels certified as a UI, the onus would be on the Applicant/Operator (potato chip manufacturer) to provide all necessary documentation to substantiate the supply chain of the potato peels for inclusion in the potato chip manufacturer's product seeking a designation of PUI.

An Applicant/Operator seeking a designation of UI or PUI that includes UI or PUI shall provide documentation to verify this status.

## 4.2 Technical Certification Requirements

**4.2.1** The Applicant/Operator shall provide an Attestation (See Note 2) that attests to applicable core food safety and other applicable requirements and regulations related to the product seeking a designation of UI and/or PUI (See Note 2, Table 1).

**Note 1:** Proof of FDA compliance, GMP, GAP, Certified HACCP, or GFSI benchmarked certifications shall satisfy this requirement. Certified Organic, Gluten Free, or other product certifications in themselves do not fulfill the requirements of Section 4.2.1.

**Note 2:** Attestation Requirements:

- 1) All Attestations shall include the signature and the printed name of the party signing the Attestation, and the date.
- 2) The party signing the Attestation shall have sufficient knowledge of the supply chain to authoritatively sign on behalf of the Applicant/Operator.
- 3) If appropriate, Attestations should be accompanied by supporting documentation.
- 4) At the discretion of the CB or the UFA, Attestations may be required in additional situations not explicitly identified in Section 4.

**4.2.2** The Applicant/Operator shall provide an Attestation stating that the Input(s) were originally produced for use in human food and would have otherwise gone to a food loss or waste destination and identifying those destination(s).

**Note:** The Attestation may be generated using a questionnaire that creates a transparent paper trail to provide accountability

**4.2.3** The Applicant/Operator shall provide an Attestation describing and providing proof of diversion, via bill of lading or paid invoice from the original producer.

**Note 1:** If Applicant/Operator is seeking a designation of a PUI and they purchase a UI or PUI or multiple UIs or PUIs, the only documentation needed from the supplier of the UI(s) or PUI(s) is:

- 1) A certificate listing the specified UI(s) and/or PUI(s).
- 2) Bill of lading, receipt, or other relevant chain of custody evidence showing the quantity of UI(s) and/or PUI(s) purchased.

**Note 2:** If an Applicant/Operator is seeking the designation of a PUI and they do not purchase UIs or PUIs for use within, the onus is on the Applicant/Operator to procure all documentation necessary to substantiate compliance with Section 4.2.

**Note 3:** If the Applicant/Operator is a restaurant or other foodservice establishment, proof of purchase shall be required.

**4.2.4** The Applicant/Operator shall have a standardized naming convention in place to ensure Auditing and traceback capabilities of Input(s) or product(s) seeking a designation as a UI, Minimal Content PUI, or PUI.

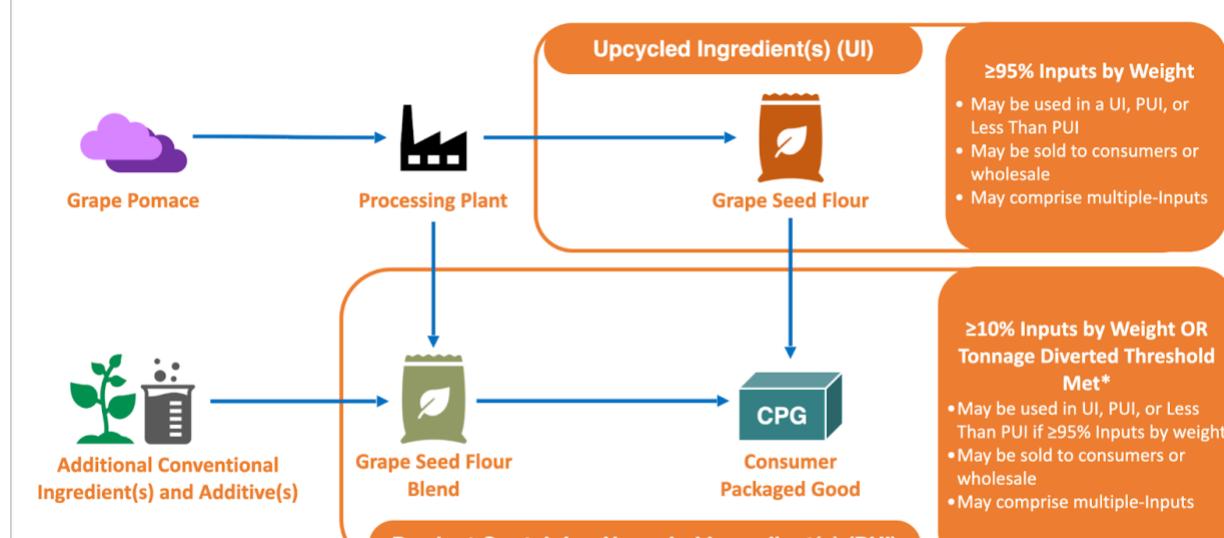
**4.2.5** The Applicant/Operator shall provide a calculation spreadsheet showing tonnage diverted as a result of yearly production and percentage of Inputs and/or UIs or PUIs within the product seeking the designation of UI, Minimal Content PUI, or PUI (See Section 4.3). Formulations shall be disclosed to the extent necessary to confirm certification compliance and the product designation of UI, Minimal Content PUI, or PUI.

### 4.3 Calculating Formulation, Input Percentages, and Tonnage Diverted

#### 4.3.1 Designating UIs, Minimal Content PUIs, and PUIs

The Applicant/Operator shall assign the designation of UI, Minimal Content PUI, or PUI to each Input or product under consideration for certification.

**Figure 1: Differentiating UIs and PUIs**



**Notes:** A product that does not meet or exceed the minimum ≥10% Input(s) by weight or tonnage diverted as a result of yearly production thresholds may qualify for a Less Than PUI designation (See Section 4.3.1 for more details). \*See Table 1 for thresholds.

UIs shall be composed of:

- 1) An aggregate of ≥95% Input(s) by weight (See Table 1)

UIs may be composed of:

- 1) Multiple Inputs
- 2) An aggregate of ≤5% by weight processing aids and other additives

PUIs shall be composed of:

- 1) An aggregate of ≥10% Input(s), UI(s), and/or PUI(s) by weight (See Table 1) OR
- 2) Meet or exceed a threshold for total tonnage of Input(s) based on production records over the previous year (preceding 12 months upon date of certification application) (See Table 1)

**Note:** Market forecasts, sales projections, or extrapolated data may be used in the absence of production and sales data from the past 12 months.

A product that does not meet or exceed the minimum  $\geq 10\%$  Input content by weight or tonnage diverted thresholds may qualify for a Minimal Content PUI designation.

Minimal Content PUIs shall be composed of:

- 1) An aggregate of  $<10\%$  Input(s), UI(s), or PUI(s) by weight AND
- 2) Less than the threshold for total tonnage of Input(s) based on production records over the previous year (preceding 12 months upon date of certification application) (See Note 2, Section 4.2.1, Table 1).

PUIs shall include Inputs, UIs, and/or PUIs (See Section 4.1.4.). See Section 4.3.4 for factoring in the reconstitution of dehydrated Inputs, Section 4.3.5 for examples of calculating percent UI by weight, and Section 4.3.6 for calculating tonnage diverted as a result of yearly production.

PUIs containing an aggregate of  $\geq 95\%$  Inputs (See Note 2, See Section 4.3.5) shall be eligible for a designation of UI. This eligibility shall be noted on the Certificate. PUIs containing PUIs or Minimal Content PUIs comprised of an aggregate of  $<95\%$  Input(s) content shall be subject to further formulation review when used as an Input in a PUI to ensure compliance with thresholds are met for tonnage diverted or percent Inputs by weight.

**Note 1:** This allows all CBs to predetermine eligibility for a PUI to qualify as a UI.

**Note 2:** The % Input(s) content by weight shall be calculated using CB provided formulation weights of Minimal Content PUIs or PUIs used within a PUI seeking certification. The numerator of this calculation shall exclude any portion of a UI, Minimal Content PUI, PUI, or otherwise that is not comprised of Inputs.

#### 4.3.2 Minimum Threshold for UIs

UIs certified in accordance with this Standard shall contain a minimum percentage of an aggregate of  $\geq 95\%$  Inputs by weight which shall be considered Inputs with the possible addition of processing aids or other additives as needed. See Section 4.3.4 for reconstitution of dehydrated Inputs and Section 4.3.5 for calculating percent UI by weight.

**Note:** Products and ingredients containing  $>5\%$  processing aids and other additives shall not qualify for the designation of UI.

#### 4.3.3 Minimum Thresholds for PUIs

PUIs certified in accordance with this Standard shall either:

- 1) Contain a minimum aggregate of  $\geq 10\%$  Input(s), UI(s), and/or PUI(s) (See Note 2, Section 4.3.1, Table 1). OR
- 2) Meet or exceed a threshold for total tonnage of Inputs due to production over the previous year (See Section 4.3.1) based on annual gross product sales (See Table 1). In accordance with Section 4.3.1 Market forecasts, sales projections, or extrapolated data may be used in the absence of production and sales data from the past 12 months.

**Note:** A product that does not meet or exceed the minimum aggregate of  $\geq 10\%$  Input(s) by weight or tonnage diverted as a result of yearly production thresholds may qualify for a Minimal Content PUI designation.

#### 4.3.4 Reconstitution of Dehydrated Inputs

For the purposes of tonnage diverted or percent Input(s) by weight calculations, Inputs that are rehydrated prior to mixing may not be rehydrated beyond the hydration level at the point of diversion. The onus is on the Applicant/Operator to provide rationale for the hydration level at the point of diversion.

Example: Rationale for the hydration level of dehydrated potatoes.

"University of Idaho Agricultural Extension Measuring Potato Dry Matter Content on Farm"  
<https://www.extension.uidaho.edu/publishing/pdf/CIS/CIS1219.pdf> (Accessed 10/24/2020).

"Potatoes are mostly water (75 to 85%), and the water content varies with variety, maturity, growing location, seasonal effects, fertilization program, and storage conditions."

Based on the above review, dehydrated potatoes could be reconstituted up to 85% as provided by the academic or regulatory reference.

**Note:** In the event that an academic or regulatory reference cannot be provided, the onus shall be on the manufacturer to provide evidence-based documentation for the moisture content.

#### 4.3.5 Calculating Percent Input(s) by Weight

The calculation of the percentage of Input(s) in a product formulation is based on the total weight of the Input(s) as a percentage of the total formula by weight. Added water shall not be included in this calculation. Packaging materials, substrates and other vehicles, such as tea bags, non-ingestibles, and wipes, shall not be included as part of the formulated weight of the product.

**Example 1:** 50 lbs of potato skins are discarded at a manufacturer that produces packaged mashed potatoes. Instead of composting them, the potato skins are dried and ground into a flour weighing 20 lbs total. This flour is purchased by an Applicant/Operator who intends to use it in a product seeking a designation as a PUI. The Applicant/Operator procures all necessary documentation from the supplier to substantiate compliance with Sections 4.1.4 and 4.2.3. This Input is used in a packaged pancake mix seeking a designation as a PUI. The net weight of the final batch after mixing is 200 lbs. For the purpose of the weight calculations, this batch of pancake mix is considered to have 10% Inputs, calculated as the net weight (20 lbs) of the potato flour at the point of mixing divided by the net weight (200 lbs) of the final product at the point of mixing.

$$\frac{20 \text{ lbs of upcycled potato flour}}{200 \text{ lbs pancake mix (seeking designation of PUI)}} = 10\% \text{ upcycled ingredients by weight}$$

**Note:** It is acknowledged that in order for an ingredient to be considered a UI it must contain an aggregate of ≥95% Input(s) consistent with Section 3.26. In the above example processing aids were <5% therefore 100% credit shall be given for the upcycled potato flour so long as it meets the definition established in Section 3.26. If processing aids had been >5% it would no longer qualify for the designation of UI.

**Example 2:** 100 lbs of grape pomace from a winery is diverted from becoming compost and instead sold to an ingredient manufacturer. The Applicant/Operator (ingredient manufacturer) procures all necessary documentation from the supplier to substantiate compliance with Sections 4.1.4 and 4.2.3. The Applicant/Operator sorts the pomace to remove the seeds from the stems and skins. The seeds (50 lbs) are dried and ground into a flour (30 lbs) with the remaining 10 lbs attributed to moisture loss and an additional 10 lbs being composted. The Applicant/Operator provides all necessary documentation to substantiate compliance with Section 4.2. This resulting grape seed flour is used as an Input in a batch of packaged cookies seeking a designation of PUI. The final batch of cookies at the point of mixing weighs 210 lbs., however 10 of those pounds are from added water, which is excluded from the calculation. For the purpose of the weight calculations, these cookies are considered to have 15% Input(s), calculated as the net weight (30 lbs) of grape seed flour at the point of mixing divided by the net weight of the final product at the point of mixing (200 lbs) excluding any added water.

$$\frac{30 \text{ lbs of upcycled grape seeds}}{200 \text{ lbs cookies (seeking designation of PUI)}} = 15\% \text{ upcycled ingredients by weight}$$

**Note:** The clarification provided in the note in Example 1 also applies.

**Example 3:** Calculating percentage of UI in a continuous production process: 1000 lbs of corn germ is normally discarded. Instead, the Applicant/Operator decides to create a product using the germ in a new granola bar which is seeking the designation of PUI. The corn germ is dried to 800 lbs total and ground to a smaller size with 200 lbs attributed to moisture loss. The ground germ is added at 20 lb/hr to a continuous production line that delivers 100 lb/hr of finished granola bars. For the purpose of the percent by weight calculations, these granola bars are considered to have 20% Inputs, calculated as the rate of ground germ at the point of mixing divided by the rate of final product to be produced at the point of mixing:

$$\frac{20 \text{ lbs of ground germ}}{1 \text{ hr}} \times \frac{1 \text{ hr}}{100 \text{ lbs of bars}} = 20\% \text{ upcycled ingredients by weight}$$

**Note 1:** In the above example, the Applicant/Operator is vertically integrated. The 1000 lbs of corn germ that is normally discarded can be considered a UI within the Applicant/Operator's granola bar seeking a designation as a PUI. The Applicant/Operator may elect to also certify the corn germ material as a UI if the Applicant/Operator thinks that there may be a market opportunity to sell this material to other Applicants/Operators seeking UIs for inclusion in their product seeking a designation as a PUI.

**Note 2:** The clarification provided in the note in Example 1 also applies.

**Example 4:** Calculating percentage of UI per batch of product formulation containing a product seeking the designation of UI (potato skin flour) and a previously PUI (spent grain flour blend): 50 lbs of potato skins are regularly composted at a manufacturer that produces packaged mashed potatoes. Instead of composting them, the potato skins are dried and ground into a flour weighing 20 lbs total with the remaining 30 lbs attributed to moisture loss. This potato skin flour is sold to an Applicant/Operator who intends to use it in a product seeking a designation as a PUI. The Applicant/Operator procures all necessary documentation from the supplier to substantiate compliance with Sections 4.1.4 and 4.2.3. This potato skin flour is combined with 10 lbs. of previously certified spent grain flour blend (PUI) and other additional ingredients to create a packaged muffin mix. The Applicant/Operator provides documentation that the spent grain flour was previously certified. The net weight of the final batch after mixing is 200 lbs. For the purpose of the percent by weight calculations, this batch of pancake mix is considered to have 15% Inputs by weight, calculated as the sum of the net weight (20 lbs) of the potato flour and spent grain (10 lbs.) at the point of mixing divided by the net weight (200 lbs) of the final product at the point of mixing.

$$\frac{20 \text{ lbs of upcycled potato flour} + 10 \text{ lbs UI spent grain flour}}{200 \text{ lbs pancake mix (seeking designation of PUI)}} = 15\% \text{ upcycled ingredients by weight}$$

**Note:** The clarification provided in the note in Example 1 also applies.

**Example 5:** Calculating percentage of UI in instances where the product does not meet or exceed the ≥10% Input(s) content by weight threshold and receives the Minimal Content PUI designation: Juniper berries from a distillery that produces gin were previously landfilled. Instead, 10 lbs of juniper berries are sold to a cosmetic Applicant/Operator that uses them as a flavoring agent in their lip care balm, a product seeking a designation as a PUI. The Applicant/Operator procures all necessary documentation from the supplier to substantiate compliance with Sections 4.1.4 and 4.2.3. The net weight of the final lip care balm batch after mixing is 300 lbs. Additionally, it is important to note the Applicant/Operator does not meet the minimum tonnage diverted as a result of yearly production. For the purpose of the weight calculations, this batch of lip care balm is considered to have 3% Inputs, calculated as the net weight (10 lbs) of the juniper berries at the point of mixing divided by the net weight (300 lbs) of the final product at the point of mixing. This product may qualify for a Minimal Content PUI designation.

$$\frac{10 \text{ lbs of upcycled juniper berries}}{300 \text{ lbs lip care balm (seeking designation of PUI)}} = 3\% \text{ upcycled ingredients by weight}$$

#### 4.3.6 Calculating Tonnage Diverted

The calculation for tonnage diverted shall be based on the tons (ton = 2,000 lbs) of Input(s) diverted from the original producer(s) used to produce an Input or product seeking a designation of UI or PUI over the 12 months preceding the date of initial application or application for renewal (See Figure 1 within 4.3.1). The weight of the Input(s) shall include moisture lost in later processing steps such as drying or baking, provided that such moisture loss is documented on chain of custody documentation as specified in Sections 4.2.4, 4.3.4, 4.4, and 4.5.

**Note:** For products seeking the designation of PUI, the tonnage thresholds as required in Table 1 and Section 4.3.1 shall be the sum of all Inputs associated with the production of Inputs, UIs, or PUIs included within said product provided that:

- 1) The Applicant/Operator procures all necessary documentation from the supplier to substantiate compliance with Section 4.1.4 and 4.2.3 for any uncertified UI or PUI AND
- 2) Moisture loss is documented on chain of custody documentation as specified in Sections 4.2.4, 4.3.4, 4.4, and 4.5.

**Example 1:** Calculating tonnage diverted 35 tons of blueberry pomace is discarded in the preceding 12 months at an Applicant/Operator that produces blueberry puree. Instead of composting the pomace, it is dried then milled for inclusion as a functional ingredient within a skin cream. The yield of dried, milled pomace is 10 tons. The Applicant/Operator is seeking the designation of PUI for the skin cream. The tonnage diverted is 35 tons even though the final weight of the milled pomace is 10 tons. The Applicant/Operator reports \$9.75 million in annual sales from the skin cream in the past year, putting them in the “Tier 3 Product” category (See Table 1) which requires “annual PUI production results in ≥25 tons/ year of Inputs.” This tonnage diverted as a result of yearly production of the skin cream exceeds the threshold and therefore could be certified as a PUI provided this information is documented on chain of custody

documentation as specified in Sections 4.2.4, 4.3.4, 4.4, and 4.5 and other requirements of the Standard are met.

**Example 2:** Calculating tonnage diverted to meet or exceed the PUI tonnage diverted as a result of yearly production threshold in a product seeking the designation of PUI that does not meet or exceed the  $\geq 10\%$  Input(s) by weight threshold: 15 tons of juicing pomace including carrot, apple, and kale are discarded in the preceding 12 months by the Applicant/Operator that produces juice. Instead of composting the juice pomace it is dried and ground into a powder for inclusion in a dog treat seeking a designation as a PUI as natural flavoring. The final juice powder makes up 3% of the treat by weight which does not meet or exceed the percentage threshold of  $\geq 10\%$  by weight in order for the Applicant/Operator to seek a designation of PUI (though the Applicant/Operator may seek a designation of Minimal Content PUI). The Applicant/Operator reports \$4.25 million in annual sales from the treat in the past year, putting them in the "Tier 2 Product" category (See Table 1) which requires "annual PUI production results in  $\geq 10$  tons/ year of Input(s)." This tonnage diverted as a result of yearly production of the treats exceeds the threshold and therefore could be certified as a PUI provided this information is documented on chain of custody documentation as specified in Sections 4.2.4, 4.3.4, 4.4, and 4.5 and other requirements of the Standard are met.

**Table 1: Certification Minimum Thresholds**

Annual Gross Product Sales	Upcycled Ingredient (UI)	Product Containing Upcycled Ingredients (PUI) <sup>4</sup>		
Tier 1 Product \$<2 million annual gross product sales	$\geq 95\%$ of the content by weight shall be formulated from Inputs <sup>1,2</sup>	$\geq 10\%$ of the content by weight shall be formulated from Inputs <sup>2,3</sup>	Or	Annual PUI production results in $\geq 5$ tons/ year of Inputs <sup>2,4</sup>
Tier 2 Product \$2-\$5 million annual gross product sales	$\geq 95\%$ of the content by weight shall be formulated from Inputs <sup>1,2</sup>	$\geq 10\%$ of the content by weight shall be formulated from Inputs <sup>2,3</sup>	Or	Annual PUI production results in $\geq 10$ tons/ year of Inputs <sup>2,4</sup>
Tier 3 Product \$5-\$25 million annual gross product sales	$\geq 95\%$ of the content by weight shall be formulated from Inputs <sup>1,2</sup>	$\geq 10\%$ of the content by weight shall be formulated from Inputs <sup>2,3</sup>	Or	Annual PUI production results in $\geq 25$ tons/ year of Inputs <sup>2,4</sup>
Tier 4 Product \$25-\$50 million annual gross product sales	$\geq 95\%$ of the content by weight shall be formulated from Inputs <sup>1,2</sup>	$\geq 10\%$ of the content by weight shall be formulated from Inputs <sup>2,3</sup>	Or	Annual PUI production results in $\geq 100$ tons/ year of Inputs <sup>2,4</sup>
Tier 5 Product >\$50 million annual gross product sales	$\geq 95\%$ of the content by weight shall be formulated from Inputs <sup>1,2</sup>	$\geq 10\%$ of the content by weight shall be formulated from Inputs <sup>2,3</sup>	Or	Annual PUI production results in $\geq 200$ tons/ year of Inputs <sup>2,4</sup>

<sup>1</sup> Meets requirements within Sections 4.3.1, 4.3.2, 4.3.4, and 4.3.5.

<sup>2</sup> Input(s): Any food material, product or byproduct of food production, or portion within, diverted from but not limited to an agricultural, aquaculture, or food production setting, that would typically be destined for a food loss or waste destination,<sup>7</sup> that instead is used in the production of an ingredient or retail Consumer Good.

<sup>3</sup> May include UI(s) or PUI(s) and meets requirements within Sections 4.3.1, 4.3.3, 4.3.4, 4.3.5, and Note 2, Section 4.3.1.

<sup>4</sup> Meets requirements within Sections 4.3.1, 4.3.4, and 4.3.6.

**Note:** If available, annual gross sales product shall be the preceding 12 months of product-specific sales upon date of certification application/renewal. As noted within Section 4.3.1, market forecasts, sales projections, or extrapolated data may be used in the absence of production and sales data from the past 12 months.

<sup>5</sup> A product that does not meet or exceed the minimum  $\geq 10\%$  Input(s) content by weight or tonnage diverted as a result of yearly production thresholds may qualify for a Minimal Content PUI designation.

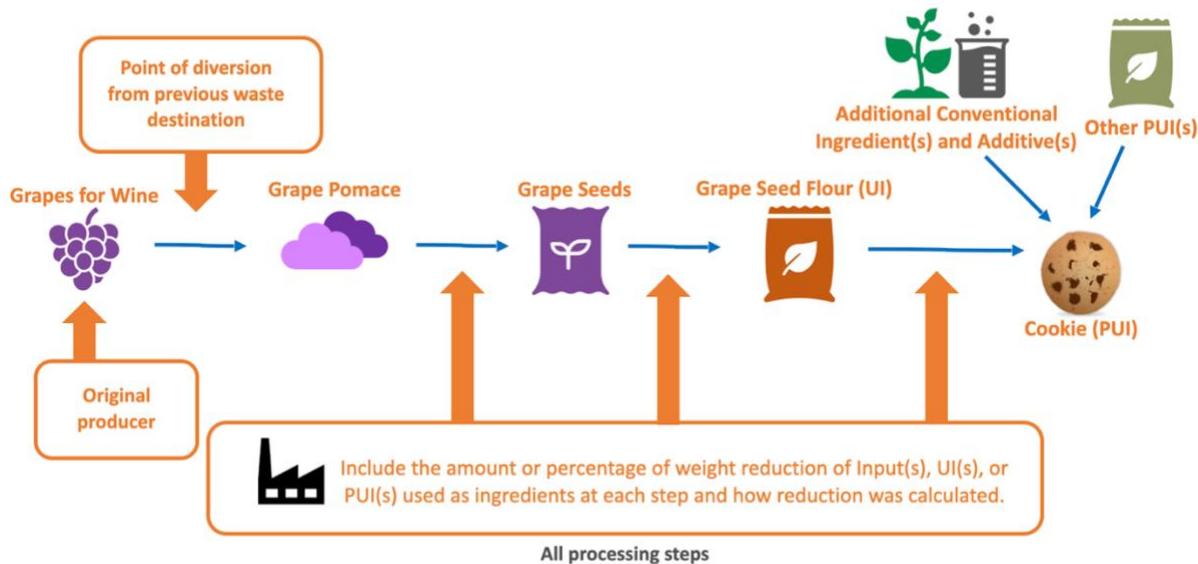
#### 4.4 Traceability

An Applicant/Operator seeking a designation as a UI and/or PUI for a product shall provide traceability documents/procedures/records as outlined in Sections 4.4.1-4.4.5.

**4.4.1** The Applicant/Operator shall provide a Production Flow Chart (indicating the original producer of the Input).

**Example:**

**Figure 2: Example Production Flow Chart**



The Production Flow Chart shall include incoming Input(s), UI(s), PU(s), and other ingredients and all processing steps including the amount or percentage of weight reduction at each step as required in Section 4.3.4. It shall also include how the amount or percentage weight reduction was calculated unless previously certified UIs or PUIs are being used (See Section 4.1.4, See Figure 2).

**Note 1:** For restaurant or other food establishments the production flow chart may be a circular production showing that Input(s) is then used in the production of other menu items.

**Note 2:** The Applicant/Operator shall meet the requirements outlined in Section 4.4.1 which may be satisfied using any relevant documentation.

**4.4.2** The Applicant/Operator shall demonstrate the ability to trace Inputs from receipt through to finished product seeking a designation of UI, Minimal Content PUI, or PUI via linked lot/production numbers on process paperwork utilizing the naming convention identified in Section 4.2.4.

**4.4.3** The Applicant/Operator shall provide complete documentation of the Input(s) present in the product seeking designation as a UI, Minimal Content PUI, or PUI including:

- 1) Chain of custody evidence the Input has been diverted from original producers (Ex: bill of lading) and signed Attestation stating the source of the Input in accordance with Sections 4.2.1 and 4.2.3.
- 2) Total tonnage diverted from the original producer(s) used to produce the product seeking a designation of UI, Minimal Content PUI, or PUI over the 12 months preceding the date of initial application or application for renewal. See Section 4.3.6.

**Note:** Proof of Certification for the UI or PUI shall be dated within the past 18 months. Additional documentation from the supplier that may be required as outlined in Section 4.2.3.

- 1) Chain of custody evidence that the Input has been transferred to the Applicant/Operator (Ex: bill of lading). This documentation shall reference total tonnage transferred from original producer to Applicant/Operator including all intermediaries (if necessary) (See Section 4.3.6) and necessary documentation and compliance with Sections 4.2.2, 4.2.3, and 4.2.4.

**4.4.4** Documentation shall be provided indicating the identity of the Input(s), UI(s), or PUI(s) is preserved throughout storage, transportation, and production in accordance with good manufacturing practices including:

- 1) Statement describing how the Input(s) is (are) captured to be diverted.
- 2) Statement describing how the Input(s), UI(s), or PUI(s) is (are) protected from contamination and commingling.
- 3) Necessary documentation and compliance with Sections 4.2.2, 4.2.3, and 4.2.4.

#### **4.5 Additional Traceability Requirements for PUIs**

The Applicant/Operator shall provide chain of custody evidence that the Input(s), UI(s) or PUI(s) are present in the product seeking designation as a PUI as sold (Ex: documented finished product formulation as sold that verifies use of Input(s), UI(s), and/or PUIs in the finished product). Documentation shall include:

- 1) Proof of compliance with Sections 4.2.2, 4.2.3, and 4.2.4.
- 2) Percentage by weight of each Input, UI, Minimal Content PUI, or PUI in the finished product formulation as sold. See Section 4.3.5.
- 3) The amount or percentage of weight reduction as each Input, UI, Minimal Content PUI, or PUI is transformed into the finished product as sold in accordance with Sections 4.3.1 and 4.3.4.

#### **4.6 Food Loss and Waste Assessment**

The Applicant/Operator shall provide the following information in order to assess where, and the degree to which, food/ ingredient waste does or may occur during the production of the product seeking a designation of UI or PUI.

- 1) Identify areas where food loss and waste occurs during final manufacturing of the product seeking a designation of UI or PUI, the causes of that food loss and waste, and potential mitigation strategies to address these. This may be done by highlighting areas within the Production Flow Chart (Figure 1, Section 4.4.1).
- 2) Describe relevant data and/or metrics collected to monitor food loss and waste generated such as but not limited to % yield and weight/volume of waste due to production.
- 3) Identify personnel involved in efforts to monitor food loss and waste generated during production.

#### **4.7 Public Statement/ Declaration of Commitment**

The Applicant/Operator shall make available a public statement on a website or other publicly available medium, (or at minimum, where the Operator has no public medium, on UFA's website) and permit UFA to post on UFA's website:

- 1) The Applicant/Operator's Upcycled Certified™ Program enrollment status.
- 2) The intent to further reduce food loss and waste by expanding the Applicant/Operator's upcycling efforts.

#### **4.8 Training Provided by Applicant/Operator**

**4.8.1** Documents/procedures/records of proper training on ensuring Upcycled Certified™ Program integrity shall include but are not limited to:

- 1) Employees shall receive initial and annual refresher training.
- 2) Purpose and requirements of the Standard and certification program as applicable to job responsibilities.
- 3) Policies and procedures related to compliance with requirements of the Standard and certification program as applicable to the job responsibilities.
- 4) Work instructions related to specific tasks required to maintain compliance with the Standard and certification program.

**4.8.2** Employee training shall be in accordance with the Applicant/Operator's documented policies and procedures for maintaining compliance.

**4.8.3** All employee training records shall be maintained at the production facility for a period of three (3) years and available for review during CB Inspections.

#### **4.9 Renewal**

**4.9.1** Operators shall submit all applicable documentation as outlined in Sections 4.1-4.11.

**4.9.2** Operators shall be required to demonstrate at the next annual monitoring that changes to the Standard were implemented, or alternatively, that the Operator is in compliance with any extension or deviation granted by the CB.

**4.9.3** Operators shall be responsible for payment of fees associated with annual certification services, additions, and updates according to the terms of the CB agreement and the UFA License Agreement.

**4.9.4** Operators shall be subject to annual Audit by the CB. In instances where CB suspects the potential of egregious Non-Conformities with the Standard, the CB reserves the right to conduct unannounced Audits to confirm compliance.

**4.9.5** Certification is an annual process and shall be renewed every twelve months. The CB may elect to initiate the annual certification cycle up to 90 days in advance to ensure timely processing. Certificates exceeding 90 days passed their annual monitoring date may be questioned as to current status. Status of compliance requests shall be sent to brands and if necessary, confirmation from the CB.

**4.9.6** At the time of renewal, Operators shall be held to the requirements of the new version of the Standard if one exists at that time (See Section 7.11).

**4.9.7** Other requirements as requested by the CB.

#### **4.9.8 Review Triggered by the Reformulation of Product Designated as a UI or PUI**

In case a product reformulation triggers a reduction or increase in the tonnage diverted as a result of yearly production of the UI or PUI, or in the percentage by weight of Inputs, UIs, and/or PUIs, the UI or PUI may be subject to review to ensure ongoing compliance.. These situations shall be addressed on a case-by-case basis with the CB.

#### **4.9.9 Mid-year UI or PUI additions**

In the case that an Operator would like to add additional products seeking the designation of UI, Minimal Content PUI, or PUI to its certificate, it shall notify the CB in writing. The CB shall commence the certification evaluation process consistent with the requirements outlined in this Standard.

#### **4.10 Additional Data Capture**

The purpose of this section is to gather information for potential future requirement inclusion in this Standard. While submitting this documentation is required for certification, the content of those submissions shall not be a determining factor in the awarding of certification to this Standard.

##### **4.10.1 GHGE Accounting**

Identify the sources of Scope 1 & 2 GHGE associated with all supply chain activities and processes from original producer through to final product manufacturing. See Annex B Section B.3.1 for more details.

##### **4.10.2 Displacement Credit**

Identify the “most similar” Virgin Ingredient or ingredient-system that would be replaced by the Input(s) within the product seeking the designation of UI, Minimal Content PUI, or PUI (Ex: spent grains replacing oats in a granola bar). See Annex B Section B.3.2 for more details.

##### **4.10.3 Additional Information for Submission**

- 1) Description of how a product seeking a designation of UI or PUI aligns with the framing of Input(s) as value-added within the Definition of Upcycled Food<sup>1</sup>.
- 2) Description of how the Applicant/Operator is considering their upcycling process in the context of GHGE.
- 3) Description of any measures the Applicant/Operator is taking to improve the social and environmental impacts that result from processing or producing UIs or PUIs.
- 4) Description of the Applicant/Operator's vision for ensuring the UI or PUI has a positive environmental impact going forward.
- 5) Description of the Applicant/Operator's strategy for communicating overall benefits of UI and PUI to their customers.

#### **4.11 Other documents as requested by the CB.**

### **5. Request for Deviation**

#### **5.1 Any request for deviation from requirements of the Standard shall be provided in writing to the CB.**

**5.2 The CB in consultation with the UFA, shall consider but is not obligated to grant the request for deviation and shall not be obligated to return any portion of fees paid if the Applicant/ Operator chooses to discontinue certification as a result of the request for deviation decision.**

**5.3 The CB shall not be responsible for any costs incurred by Applicant/ Operator related to nonconforming product which is the subject of rejected deviation request or other noncompliance.**

**5.4 To apply for a deviation, the Applicant/ Operator shall complete the request for deviation – Upcycled Certification Program form and submit to CB. Fees may apply as per the fee schedule for CB services.**

**5.5 Requested deviations, in instances of Force Majeure, shall be considered on a case-by-case basis. Operators shall provide a written request to the CB documenting the situation and proposed course of action for approval.**

**5.6 The CB, in consultation with the UFA, shall produce a written response back to the Applicant/ Operator regarding the request for deviation within 10 business days.**

### **6. Requirements of the Upcycled Food Association**

#### **6.1 Review of the Upcycled Certified™ Standard**

Standard requirements review will take place periodically and any changes in requirements shall be communicated to the CB within 30 days of finalized changes with an effective date no sooner than 90 days from the notification date. This review includes but is not limited to the facilitation of

public comment, document revisions, publishing and notification of changes to the CBs to subsequently incorporate into certification requirements.

## **6.2 UFA Data Obligations**

Without prejudice to the other provisions of the Standard, UFA shall take all reasonable precautions to preserve the integrity and prevent any corruption or loss, damage, or destruction of the data such as but not limited to brand names, product names, status of certification, which is subject to this Standard.

## **6.3 Marketing and Promotion of the Standard**

UFA shall market the Upcycled Certified™ Program via website(s), media, social media platforms, and other methods of communication in order to educate consumers, retailers, distributors, producers, and other stakeholders and promote its wide adoption and use. UFA shall maintain an online database of certified brands and products.

## **6.4 Review of Marketing Materials**

All marketing materials including, but not limited to, social media, public statements, or printed materials may be subject to UFA review and surveillance.

## **6.5 Trademark Registration and Maintenance**

UFA shall register and maintain trademarks associated with the Upcycled Certified™ Program.

## **6.6 Oversight, Onboarding, Training, and Calibration of CBs**

UFA shall be responsible for the appointment, onboarding, initial training, calibration, and general oversight of all CB's licensed and approved to assess and determine whether a system, Input, or product fulfills the requirements within the Standard.

## **6.7 CB Appointment and Scope**

UFA selects and approves CB's according to a rigorous process that shall include an initial assessment of the CB's demonstrated proficiency as a certifier for other programs. CB contracts are offered at the UFA's discretion and contain provisions including, but not limited to, administration of the Standard, industry sector competency, data access, collection of fees from the Applicant/Operator, reporting, quality of service, confidentiality and quality control.

## **6.8 CB Guidance**

A central process is the issuance of CB Guidance related to interpretation of the Standard in an effort to ensure the Standard is applied consistently across all Applicant/Operators. CB Guidance is issued at the discretion of UFA through a process that may include input from the UFA Board and/or the Standards Committee.

## **6.9 Fee Collection**

The UFA shall collect any applicable fees including, but not limited to, the product license fees from the CB and/or Applicant/Operator.

## **6.10 CB Audit**

UFA reserves the right to conduct announced or unannounced Audits of the CB(s) to ensure their ongoing compliance with this Standard.

# **7. Requirements of the Certification Body**

## **7.1 Conflicts of Interest**

The CB shall have no commercial, financial, or other conflicts of interest that could potentially compromise their status as an impartial third party suitable to determine compliance with this Standard. The CB shall identify risks to impartiality on an ongoing basis and demonstrate how it eliminates/reduces those ongoing risks.

## **7.2 Impartiality**

The CB shall make services available to the eligible Applicant/Operator. CB policies and procedures shall not be used to impede or inhibit access by Applicants and access shall not be conditional based upon Applicant/Operator size or membership in any organization including the UFA. The CB may decline an application for certification in the event of conflict with CB policies or capacity to service the Applicant/Operator, if the Applicant/Operator operates within one of the areas identified as ineligible for certification as outlined in Section 1.2, or if the Applicant/Operator fails to meet the requirements of the Standard.

## **7.3 Training**

The CB shall identify training requirements for each criterion contained within the Standard in an effort to ensure competency and apply uniform procedures for training and performance monitoring of auditors and other technical staff.

## **7.4 Assuring Applicant/Operator Compliance**

The CB shall follow the procedures outlined in Section 9 and any relevant contracts or agreements external to the Standard such as, but not limited to, CB service agreements and Applicant/Operator license agreements for issuing notices of Non-Compliance to Applicant/Operators due to any Non-Conformities with the Standard.

## **7.5 Confidentiality**

The CB shall apply uniform procedures and transparent policies to maintain the confidentiality of Applicant/Operator recipes, formulations, and other intellectual property.

## **7.6 Customer Interface**

The CB shall be responsible for engaging with the Applicant/Operator in all matters pertaining to the Standard including, but not limited to, clarification of requirements of the Standard, compliance as outlined in Section 9, and labeling considerations as outlined in Section 10 and Annex A: Mark Usage Guideline.

## **7.7 Inspection of Harvest Operations, Processing, or Other Facilities**

The CB shall conduct an onsite, virtual, or desk Audit to verify the processes and procedures required within the Standard. The Applicant/Operator shall permit the use of teleconference and remote inspection technology to permit virtual access to the site by the authorized CB. These technologies may include, but are not limited to, secure live-stream camera or recorded video, video conferencing platforms, and/or photographs, and secure file-sharing cloud platforms. The CB may identify an appropriate risk analysis or random selection process for the number of fields, processing lines to observe, etc., to verify compliance.

## **7.8 Technical Review**

The CB shall conduct a technical review of Audit reports, documents and records, and any other documentation as required by this Standard to determine the degree of compliance and any required corrective measures.

## **7.9 CB Data Obligations**

Without prejudice to the other provisions of the Standard, CB shall take precautions to preserve the integrity and prevent any corruption or loss, damage or destruction of the data, which is collected in accordance with this Standard. Upon certification approval, the CB shall provide the tonnage diverted per tonnage of UI, Minimal Content PUI, or PUI and % Input(s) content by weight to the Applicant/Operator.

## **7.10 Information Sharing with UFA**

CB shall provide Applicant/Operator information to the UFA as requested. See Section 6.2. This information may be used by UFA to Audit the certification body as described in Section 6.10, for future versions of the Standard, or to facilitate the collection of aggregated data related to the overall impact of the program. Such information shall be held in strict confidence by UFA and only shared publicly in aggregated and anonymized form to demonstrate the overall impact and continued improvement of the program unless otherwise agreed to by the Applicant/Operator.

## **7.11 Standard Requirements Update**

Any changes in requirements shall be communicated to the Applicant/Operator within 30 days of finalized changes with an effective date no sooner than 90 days from the notification date.

#### **7.12 Decision on Certification and Collection of Fees for Service.**

**7.12.1** The CB shall verify the responses are adequate and if so, approve the Applicant for certification or the Operator for renewal.

**7.12.2** Upon approval, the CB shall provide:

- 1) A letter of notification of certification to the Applicant/Operator with the listed UIs, Minimal Content PUIs, or PUIs approved for certification.
- 2) Notification to the UFA that the Applicant/Operator has been approved for certification with the listed UIs, Minimal Content PUIs, or PUIs.
- 3) A certificate stating the respective UI, Minimal Content PUI, and/or PUI is "Certified under the Upcycled Certified™ Program by (CB name)," and including, but not limited to, the certificate number, name of the certified Operator, lists of UIs, Minimal Content PUIs, and/or PUIs, facility location, and effective date.

**7.12.3** The CB shall collect the applicable fees for certification service from the Applicant/Operator.

**7.12.4** The CB may choose to withhold the certificate until the fees have been paid by the Applicant/Operator. The Applicant is subject to denial of certification or suspension for failure to pay fees.

**7.13** The CB shall be responsible for reviewing all packaging, which shall be truthful and not misleading, prior to an Applicant/Operator using the certification Mark to ensure compliance with the Brand Guideline, but neither the CB, nor UFA shall be liable for any other elements of the packaging or marketing materials (packaging, marketing claims, labeling requirement, etc....).

**7.14** UFA reserves the right to require CBs perform additional duties to ensure Applicant/Operators are in compliance with the requirements of the Standard.

**7.15** The CB is compliant with/accredited to ISO 17065<sup>o</sup>for a comparable scheme in the food & feed sector (Ex: Organic, Vegan, GFSI recognized standards).

## **8. Complaint Handling**

**8.1** The Applicant/Operator shall have in place documented policies and procedures to handle complaints related to products with a designation of UI, Minimal Content PUI, or PUI.

**8.2** The Applicant/Operator shall maintain records of complaints and actions taken.

**8.3** Complaints shall be kept on file for a period of three (3) years and available during Inspection at each production location.

## **9. Corrective Action and Withdrawal or Suspension of Certification**

### **9.1 Corrective Action**

The CB shall evaluate submitted documents including, but limited to, reports, products, labels, documents and records for conformance with the Standard. In the event the CB detects any unapproved deviation, variance, or Non-Conformity in the UI, Minimal Content PUI, or PUI from Standard requirements, or improper or unauthorized use of the Mark or UFA name, CB shall notify the Operator in writing and require the Operator, at its own expense, to undertake corrective action to ensure that the UI, Minimal Content PUI, or PUI complies with Standard requirements. The Operator shall have 30 days to submit corrections, corrective actions, and evidence of implementation to the CB.

#### **9.1.1 Failure to Comply**

Upon Applicant/Operator failure to comply with any of the requirements of this Standard, or failure to undertake corrective action to the CB's satisfaction, CB may issue a letter of suspension which shall notify the Operator of the nature of the failure and the period of suspension of the Operator's

right of Labeling, if applicable. A reinstatement fee may be applied. In the event the Operator fails to take corrective action to resolve the cause of suspension, the license agreement shall be terminated. An Applicant/Operator may re-apply after corrective action mitigation obligations have been satisfied.

### **9.1.2 Public Notice**

In the event the CB has confirmed evidence that a UI, Minimal Content PUI, or PUI in the marketplace has a continued Non-Conformity, CB shall contact the Operator and act in support of corrective/remedial steps taken by the Operator to address the non-Conformity, including, if necessary, public notification and/or a product recall undertaken by the Operator. In the event the Operator does not take action to address a significant non-Conformity related to the UI, Minimal Content PUI, or PUI, UFA reserves the right to contact appropriate government agencies, other parties in the supply chain, and/or issue public notifications advising of the non-Conformity.

### **9.2 Withdrawal or Suspension of Certification**

**9.2.1** Once an Applicant has achieved certification, the Operator shall maintain its programs to ensure continuing compliance with the requirements of certification.

**9.2.2** An Operator may withdraw from certification at any time but shall be responsible for payment of any fees due to a CB or the UFA and shall maintain compliance with the applicable terms of any service or license agreements which remain in effect.

**9.2.3** A CB may suspend certification of a UI, Minimal Content PUI, or PUI if it deems the Operator has failed to maintain compliance or is otherwise in violation of the terms of the Standard.

**9.2.4** If an Applicant/Operator chooses to withdraw a UI, Minimal Content PUI, or PUI from certification or from seeking certification, or if an Operator's certification is suspended by the CB, the Applicant/Operator must notify the authorized CB in writing of the request to withdraw and where applicable, shall cease use of the certification Mark, and cease representing its products as certified on the effective date of withdrawal.

**9.2.5** UFA and/or CB shall not be responsible for any costs incurred by the Applicant/Operator related to the printed labels which are the subject of rejected variance requests or other UI, Minimal Content PUI, or PUI Non-Compliance. It is the Applicant/Operator's responsibility to ensure they have received written confirmation of label compliance from CB, or any applicable regulatory body or agency, prior to printing labels or using the Mark.

## **10. Labeling**

### **10.1 Upcycled Certified™ Mark**

**10.1.1** UIs or PUIs may:

- 1) Use the Upcycled Certified™ Mark in accordance with Section 10 and Annex A: Brand Guideline.
- 2) UIs or PUIs may use additional language on package and in promotional materials, in this section as described in Section 7.13 and Annex A: Brand Guideline.

**Note:** Refer to Section 10.3.2 and Annex A: Mark Usage Guideline for Minimal Content PUI Mark use.

**10.1.2** All marketing materials may be subject to UFA review and surveillance.

**10.1.3** All packaging materials shall be submitted to the CB for approval prior to using the certification Mark.

**10.1.4** Failure to comply with this Standard, Annex A: Mark Usage Guideline, license agreement, or other relevant requirements may result in the issuance of non-Conformities.

**10.1.5** For permissible colors see Annex A: Mark Usage Guideline. In all cases the Mark shall be from the original design files provided by the CB.

**10.1.6** For competing/conflicting marks see Annex A: Mark Usage Guideline.

### **10.2 Labeling Requirements for UIs or PUIs Labeled for use within a UI or PUI**

**10.2.1** UIs, Minimal Content PUIs, or PUIs labeled for use as an Input within a UI, Minimal Content PUI, or PUI may display the Mark and/or the language “Upcycled Certified™” on spec sheets, product labels, and other documentation necessary for further sale of the UI, Minimal Content PUI, or PUI.

**10.2.2** Companies with UIs, Minimal Content PUIs, or PUIs are encouraged to label Input(s) as “Upcycled Certified™” on consumer facing packaging. To avoid consumer confusion between UI or PUI and self-proclaimed items it is encouraged to not alter the order of words, i.e., do not use: “Certified Upcycled”.

### **10.3 Labeling Requirements for PUIs**

**10.3.1** PUIs shall identify which ingredients are Input(s) in the Ingredient List on final packaging or menus. This can be identified by:

- 1) Indication mark (Ex.: Bananas\*, \* = upcycled)
- 2) Input name (Ex.: “upcycled bananas”)
- 3) In the event an Applicant/Operator uses both Input(s) and ingredients that are otherwise identical (Ex: a pot pie containing upcycled broccoli florets and non-upcycled broccoli florets, an indication mark (^ or other) shall accompany the ingredient, noting elsewhere on packaging that the PUI contains both Input(s) and ingredients (Ex.: “^contains both upcycled and non-upcycled broccoli”).

**Note 1:** If use of the term "upcycled" is not allowed in the Ingredient List by a regulatory body, language elsewhere on the label shall be used to identify which ingredients are Inputs.

**Note 2:** Consumer facing UIs shall follow the labeling requirements for PUIs.

**10.3.2** Minimal Content PUIs (products that do not meet or exceed the minimum aggregate of ≥10% Input content by weight or tonnage diverted as a result of yearly production):

- 1) May use the Upcycled Certified™ Minimal Content Mark on the back of pack in accordance with the placement and size restrictions outlined in the Annex A: Mark Usage Guideline.
- 2) Shall not use romance language or content that is graphic in nature to refer to any Inputs within the Minimal Content PUI.

**10.4** Operators participating in the Upcycled Certified™ choosing to display the certification Mark shall follow the requirements within this section, those described in Section 7.13 and Annex A: Mark Usage Guideline.

**10.5 Romance language or content that is graphic in nature** referring to Inputs and labeling claims must be accurate, truthful, and not mislead the consumer about the Input(s) content of the UI or PUI and are subject to requirements within this section, those described in Section 7.13, Annex A: Mark Usage Guideline, and applicable law. Any PUI that bears a claim regarding the “Upcycled Certified™” on its label and fails to comply with the program requirements shall be issued a Non-Compliance and subject to the Non-Compliance procedures outlined in Section 9 and any contracts external to the Standard. Applicant/Operator may also be subject to liability under state and federal false advertising, unfair competition, and unfair and deceptive acts and practices (UDA) laws or other local, state, or national laws or regulations.

**10.6** Use of the Mark is contingent on Operators being compliant and certified to the requirements of this Standard. Any Operator found to be misusing the Mark shall be issued a Non-Compliance and subject to the Non-Compliance procedures outlined in Section 9 and any contracts external to the Standard.

**10.7** If an Applicant/Operator wishes to request a deviation to the permitted use of the Mark, the Applicant/Operator shall submit the request in accordance with Section 5.

**10.8** Custom design or sizing requests or elements not covered in the Standard or Brand Guideline shall be subject to the pre-approval of the CB and/or UFA.

## **Annex A: Mark Usage Guideline**

Annex A: Mark Usage Guideline can be found [here on the UFA website](#). An updated Annex A will be available upon publication of version 2 of this Standard. Proposed changes to Annex A are represented in "Section 10: Labeling" within this Public Comment draft.

## Annex B: GHGE Accounting (Normative)

The purpose of this section is to gather information for potential future requirement inclusion in this Standard. While submitting documentation clarified by this Annex and outlined in Sections 4.10.1 and 4.10.2 is required for certification, the content of those submissions shall not be a determining factor in the awarding of certification to this Standard.

### B.1 Overview

In alignment with the definition of Upcycled Food, UIs and PUIs must have a positive impact on the environment. Long term, GHGE will likely be used as an overarching proxy metric of environmental impact in addition to the weight of Inputs. The assessment required of the Applicant/Operator is based on a credit-debit-credit approach. This accounts for:

- 1) The benefit the Applicant/Operator provides by diverting food loss and waste for use as UI or PUI (credit);
- 2) The emissions created by transporting and processing (debit); and
- 3) The benefit provided by displacing the use of “most similar” Virgin Ingredient (credit).

A UI or PUI should emit fewer net GHGE than a similar Input or product made with similar ingredient(s).

### B.2 Scope and Timeline

GHGE accounting and reporting may not be common practice in the food industry and reporting may create a barrier-to-entry for the Applicant/Operator without the resources to conduct a full GHGE analysis. Therefore, current reporting requirements are largely qualitative and informative in nature. Future versions of the Standard will require quantitative metrics and calculation. At that time, the Applicant/Operator will be provided a database of relevant emissions factors that can be used to convert activity data into GHGE unless they have the capacity to directly measure GHGE's from their operations. The implementation date of quantitative GHGE measurement requirements is dependent upon the timing and success of education and advocacy efforts along with industry readiness.

### B.3 Current Reporting Requirements

#### B.3.1 GHGE Accounting for Scope 1 and 2 Sources

Upon application, the Applicant/Operator shall provide information related to the Scope 1 and Scope 2 GHGE<sup>10</sup> associated with production processes for the specific product seeking a designation of UI, Minimal Content PUI, or PUI. This includes, but is not limited to:

- 1) Identifying and recording all supply chain activities from the original producer through to final product manufacturing (Examples provided in Table B.1).
- 2) Identifying and recording the sources of GHGEs from these activities (Examples provided in Table B.1).
- 3) Identifying potential sources of activity data for future measurement of GHGE from these activities (Examples provided in Table B.1).

**Note:** Definitions of Scope 1 and 2 GHGE:

- 1) Scope 1 GHGE: Direct GHG emissions occur from sources that are owned or controlled by the company, for example, emissions from combustion in owned or controlled boilers, furnaces, vehicles, etc.; emissions from chemical production in owned or controlled process equipment.<sup>10</sup>
- 2) Scope 2 GHGE: Scope 2 accounts for GHG emissions from the generation of purchased electricity consumed by the company. Purchased electricity is defined as electricity that is purchased or otherwise brought into the organizational boundary of the company. Scope 2 emissions physically occur at the facility where electricity is generated.<sup>10</sup>

Most of the activity data may be found within utility bills, invoices for activities such as transportation, and other receipts. Data may be recorded monthly, and yearly average shall be reported to CB. Common sources of GHGE within food manufacturing, associated activities, and sources of those data are below (this list is not exhaustive):

**Table B.1 Common Sources of GHGE Within Food Manufacturing, Associated Supply Chain Activities, and Sources of Data**

Scope	Activity	GHGE Source	Source of Data	Possessor of Data
Scope 1 - direct emissions	Collecting and distributing materials/products (forklift, transport, etc.)	<ul style="list-style-type: none"> <li>• Natural gas</li> <li>• Fuel</li> </ul>	<ul style="list-style-type: none"> <li>• Total kilowatt hours (kWh) used from gas bills</li> <li>• Liters of fuel purchased from invoices and receipts; or vehicle mileage from vehicle logbooks or odometers</li> </ul>	<ul style="list-style-type: none"> <li>• Applicant/Operator</li> <li>• Building manager</li> <li>• Co-packer</li> <li>• Contractor</li> </ul>
	Processing (Ex: heating, drying, cookie, baking)	<ul style="list-style-type: none"> <li>• Natural</li> <li>• Fuel</li> </ul>	<ul style="list-style-type: none"> <li>• Total kilowatt hours (kWh) used from gas bills</li> <li>• Liters of fuel purchased from invoices and receipts; or vehicle mileage from vehicle logbooks or odometers</li> </ul>	<ul style="list-style-type: none"> <li>• Applicant/Operator</li> <li>• Building manager</li> <li>• Co-packer</li> <li>• Contractor</li> </ul>
Scope 2 - indirect emissions	Processing (Ex: moving, mixing, packing)	<ul style="list-style-type: none"> <li>• Purchased electricity</li> </ul>	<ul style="list-style-type: none"> <li>• Total kilowatt hours (kWh) used from electricity bills</li> </ul>	<ul style="list-style-type: none"> <li>• Applicant/Operator</li> <li>• Building manager</li> <li>• Co-packer</li> <li>• Contractor</li> </ul>

### B.3.2 Identification of the “Most Similar” Virgin Ingredient (Displacement Credit)

The displacement credit recognizes that the utilization of an Input potentially provides an environmental benefit by reducing demand for Virgin Ingredients or ingredient systems (as in some cases the Input might replace multiple ingredients within a product). Identification of the “most similar” Virgin Ingredient will help to further develop this portion for future versions of the Standard. When identifying the “most similar” Virgin Ingredient for a product seeking the designation of UI, Minimal Content PUI, or PUI (Ex: spent grains replacing oats in a granola bar) the Applicant/Operator should consider attributes such as ingredient function, ingredient or product type, nutrient content, and sensory attributes such as taste, texture, or appearance. See Table B.2 for further examples.

**Table B.2 Examples of Inputs and their “Most Similar” Virgin Ingredient**

<b>Product</b>	<b>Input</b>	<b>Most Similar “Virgin Ingredient”</b>	<b>Attributes Considered</b>
Pancake Mix	Spent Grain from Brewing (Previously Composted)	Whole Wheat Flour	<ul style="list-style-type: none"> <li>● Product Type</li> <li>● Ingredient Function</li> <li>● Nutrient Content</li> <li>● Taste</li> <li>● Texture</li> <li>● Appearance</li> </ul>
Dog Treats	Carrot Pomace from Juicing (Previously Composted)	Whole Carrots	<ul style="list-style-type: none"> <li>● Product Type</li> <li>● Ingredient Function</li> <li>● Nutrient Content</li> <li>● Taste</li> <li>● Texture</li> <li>● Appearance</li> </ul>
Pepper Jack Cheese	Out of Spec. Habanero Peppers (Previously Not Harvested)	Within Spec. Habanero Peppers	<ul style="list-style-type: none"> <li>● Product Type</li> <li>● Ingredient Function</li> <li>● Nutrient Content</li> <li>● Taste</li> <li>● Texture</li> <li>● Appearance</li> </ul>
Facial Scrub	Ground Almond Shell (Previously Landfilled)	Corn Kernel Meal	<ul style="list-style-type: none"> <li>● Product Type</li> <li>● Ingredient Function</li> <li>● Texture</li> <li>● Appearance</li> </ul>

## **Annex C: Calculation Examples**

Upon publication of the Upcycled Certified™ Standard - Version 2, Annex C: Calculation Examples was not complete. An addendum of the Upcycled Certified™ Standard including this Annex will be published upon its completion.