CODEX
BEAUTY LABS

# Chapter: Sustainability

## Sections



## Our Commitment to Planet Earth

Codex Beauty is committed to the principles of sustainability, which we have integrated into our business strategy through our Codex Beauty Code:

We embrace our responsibility for environmental stewardship, and we are committed to integrating environmental practices and sustainability principles into our core business strategy. From wild harvesting of organic raw materials to green polyethylene packaging material, our goal is to have a zero carbon footprint and zero contribution of plastic into the ocean, and to support the preservation of the arctic wilderness.

We carefully consider the environmental impact of our operations, from raw materials sourcing to water consumption and waste production in manufacturing to packaging that minimizes the carbon footprint of transportation and disposal. We only work with companies that are equally committed to promote sustainability. We audit all of our suppliers to ensure that they support and monitor sustainability in their operations, that they treat their labor force with equality and dignity, and that they are committed to using their local community as suppliers and workers.

Codex Beauty also strives to continuously improve its products, operations and logistics. To this end, our quality group closely monitors developments in the international regulatory framework for both terrestrial and marine ecosystems, in order to protect our environment at a global level through the adoption of innovative technologies.


## Sustainable Packaging

### i) Green Polyethylene Containers

Our tubes are made from green polyethylene, a plastic resin produced using sugarcane ethanol, a renewable raw material. Traditional polyethylene is produced from fossil fuels, such as oil or natural gas. By being plant-based, the production of green polyethylene captures and fixes carbon dioxide from the atmosphere, thereby helping to reduce greenhouse gas emissions. Green polyethylene maintains the same properties, performance and versatility of application as traditional petroleum-based polyethylene (fossil origin) and is recyclable through the same recycling chain as traditional polyethylene. Therefore, our customers can leverage already existing recycling programs. In 2020, Codex Beauty will partner with an international recycling corporation in order to facilitate the return of its primary and secondary packaging as well as minimize both ocean plastic and landfill waste.

A Life Cycle Assessment (LCA) was made on our primary packaging tubes. The product carbon footprint is derived from a combination of activity data provided by Codex Beauty and its suppliers (primary data) as well as emission factors extracted from internationally recognized metrics. Greenhouse gas (GHG) activity data is then multiplied by GHG emission factors to produce carbon metrics. Carbon emissions for the product assessed included those derived from the extraction and processing of virgin raw materials, the transport of these materials to our packaging manufacturer, the (modeled) manufacturing of the tubes, and their transportation to our formulator's filling facility.


The life cycle assessment of the green plastic indicated that biopolymer made from ethanol removes 3.09 kilograms of CO2 from the air with each kilogram produced. The table below shows the comparison of green PE vs. Normal (fossil) PE. (ref: GreenPE-LCASummary2017 CarbonTrust_v.2_230.pdf)

| Impact category | Unit | Green PE | Fossil PE |
|---|---|---|---|
| Climate Change | kg CO2 eq | -3.09 E+00 | 1.86E+00 |
| Ozone Depletion | kg CFC-11 eq | 4.07 E-05 | 2.12E-06 |

For practical reference, 1 kg $CO_2e$ is released by driving an average car 2.3 miles (3.7 km).

Following a review of this study and its associated emissions factor by Carbon Footprint Ltd, it was decided, that the emissions factor to use in the Codex Beauty product footprint assessment would be -0.98 kg $CO_2e$ per kg of material (Green PE). The reduction accounted for exclusion of land use credits (-1.10 kg $CO_2e$), bagasse burning and electricity cogeneration credits (0.16 and -1.17 kg $CO_2e$ respectively).

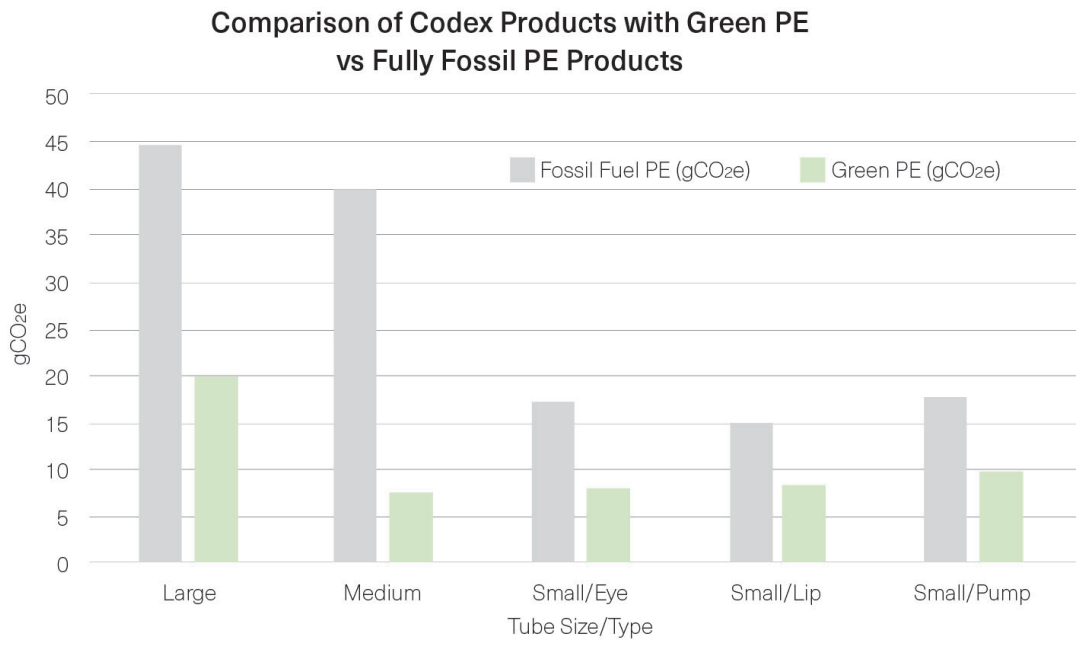
The carbon footprint calculation of the carbon footprint for our various airless tubes is shown in the table below:

| Process | Emissions ($gCO_2e$) | | | | |
|---|---|---|---|---|---|
| | Lilac | Jasmine | Iberis | Iris | Violet |
| | Large | Medium | Small/Eye | Small/Lip | Small/Pump |
| Raw Materials | -0.42 | -10.98 | 0.29 | 1.45 | 1.80 |
| Transport of Raw Materials | 1.77 | 1.65 | 0.68 | 0.60 | 0.70 |
| Manufacture | 15.78 | 14.37 | 6.09 | 5.34 | 6.30 |
| Distribution | 2.66 | 2.48 | 1.03 | 0.90 | 1.06 |
| Total $cCO_2e$) | 19.79 | 7.52 | 8.09 | 8.29 | 9.86 |

Note that our smallest and largest tubes contains some components that are fossil-fuel based polypropylene so that they are not yet as carbon efficient as the medium sized tube. When compared with an equivalent tube manufactured using only fossil-fuel based polyethylene plastics, we can see that green PE packaging significantly reduces the carbon footprint.

| Tube Size | Tube Name | Product | Fossil Fuel PE ($gCO_2e$) | Green PE ($gCO_2e$) | Percentage Change |
|---|---|---|---|---|---|
| Large | Lilac | Exfoliating Wash | 44.52 | 19.78 | -56% |
| Medium | Jasmine | Day Cream/Superfood | 39.92 | 7.52 | -81% |
| Small/Eye | Iberis | Eye Gel Cream | 17.13 | 8.09 | -53% |
| Small/Lip | Iris | Lip Butter | 14.97 | 8.28 | -45% |
| Small/Pump | Violet | TBD | 17.66 | 9.86 | -44% |

The highest decrease (81%) is clearly for the medium size tube that is 100% green PE, which tells us that we need to maximize the green PE content of the other tubes to minimize carbon footprint. Therefore, we are working with our supplier to replace all fossil-fuel polypropylene components with green PE equivalents.



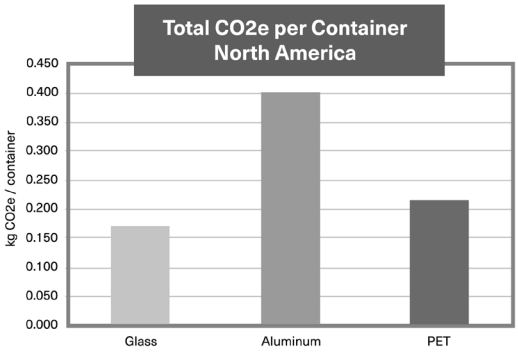

We have been granted approval to use the Carbon Footprint Standard for all of our tubes: $CO_2e$ Assessed Product logo. The Carbon Footprint Standard is an internationally recognized standard for demonstrating low carbon credentials.

ii) High Quality Glass

Green PE materials are unfortunately incompatible with pure oil or pure hydrosol formulations. Furthermore, reliable dropper and spray dispenser technologies are not yet available in green PE materials or a tube form factor. Similarly, products based on dry solids such as exfoliating grains or clay masks, do not have green PE solutions yet. Therefore, the current airless tube design is unavailable as a form factor for these products. Glass, however, is fully compatible with oils, hydrosol sprays, and solids, so dropper bottles, spray bottles, and jars are utilized, respectively.

Glass is a sustainable, fully recyclable material which provides environmental benefits. Our high quality glass is manufactured in Europe and we encourage customers to recycle the glass container after usage. Codex Beauty will implement a formal recycling program in 2020.

We should note, however, that the life cycles of glass, because it is easily recycled, provides a carbon footprint that is 20% smaller than traditional PE and 57% smaller than aluminum.




**Assumptions:**
355ml container weights
• North American post-consumer content:

• Glass: 25%
• Aluminum: 43%
• PET: 2%

• Typical US grid: Michigan area

Complete cradle-to-cradle comparisons with other packaging materials highlight glass's advantage in carbon footprint.

Nevertheless, even glass is not as carbon efficient as green PE, and therefore we are looking for alternatives in this area and welcome new ideas.

iii) Recyclable, Lightweight Paperboard

Our carton is made from renewable fresh fiber that originates from sustainably managed forests. Our lightweight and recyclable paperboards are a good example of products that are sustainable throughout their life cycle.

Our packaging cartons are PEFC certified. PEFC, The Program for the Endorsement of Forest Certification, work throughout the entire forest supply chain to promote good practice in the forest and to ensure that forest-based products are produced with respect for the highest ecological, social and ethical standards.

## Transportation:

Our packaging is designed to provide robust product protection while reducing carton weight and volume, in order to maximize the number of products on a pallet and minimize its weight. Our shipping packaging is also designed and optimized for this purpose. For example, our initial shipping box size was selected to provide flexibility in the number of products shipped, without wasting filling material (too big) or wasting cardboard by requiring two boxes to ship larger orders (too small). We will revisit this design every six months based on our customer purchasing habits and our shipping statistics, so that if the box is too large, we can create a smaller version for single product orders.

Our goal is to optimize the packing density for shipping of both the carton (secondary) and shipping (tertiary) materials so that the fuel usage to transport the products themselves is minimized.

Our aim is to reduce our carbon footprint by using the most efficient transportation means and routes: for example, by choosing environmentally friendly options such as sea or ground freight instead of air freight. Whenever possible, we streamline our logistical supply chain and work with high quality local and global suppliers.

As our company grows in sales volumes, we will constantly monitor our production locations and corresponding logistical routes to maximize our impact on sustainability.

## Social Standards:

Respect for human rights and ethical decision-making are important in our business and Codex Beauty operates in an environment of honesty, trust and transparency. We follow the labor laws in each country and we are proud of our diversity. We see our team at Codex as a tapestry, woven together from threads of all sizes and colors: beautiful in its complexity; strong in its multiplicity. As Aesop (620-560 B.C.) stated long ago, “United we stand, divided we fall.”