

# FAQ

## BIOPLASTICS



### SOURCING AND PRODUCTION OF BIOPLASTICS BY OUR PARTNER

QUESTION	ANSWER
What is bioplastic and what is the source material for the bioplastic you use?	<p>Bioplastic is a type of material that is fully sourced (bio-based) or partially sourced (bio-attributed) from renewable and biological materials rather than fossil-based raw materials.</p> <p>The bioplastics we use are called bio-attributed plastics, which are produced using a mass-balance approach (also referred to as a chain-of-custody approach).</p> <p>The source material for our bioplastic is renewable and biological materials that come from recycled food waste, also called second-generation feedstock. The use of second-generation feedstock allows us to avoid using raw materials used for food production.</p>
Is the bioplastic material in your endoscopes made exclusively from renewable material? If not, why not?	<p>At this time, it is not feasible to use 100% renewable material. This is because the plastic producers' facilities are geared for significantly greater production than the current demand in the market for bio-based feedstock.</p> <p>Instead, we use bio-attributed plastics, which are made from 50% bio-based (renewable) material.</p> <p>With bio-attributed plastics, bio-based feedstock is verified and certified under a mass-balance approach. Using this approach, our supplier ensures that an increasing amount of bio-based feedstock will be added to the plastic batch, thus accelerating our transition to a more renewable sourcing of material in production. In this way, the feedstock is added to a big batch, which will gradually become more bio-based.</p>
Is the bioplastic material used in your medical devices considered renewable?	<p>The material used in our medical devices is derived from bio-based feedstock, which is considered renewable.</p> <p>In general, feedstock in plastics can either be non-renewable (fossil-based) or renewable (bio-based).</p> <p>Fossil-based feedstock is considered non-renewable because it is sourced from oil, which is a finite resource that is pumped from the ground.</p> <p>The material in our products is not biodegradable. However, it is considered renewable because it is sourced from naturally regenerating organic sources.</p>

## SOURCING AND PRODUCTION OF BIOPLASTICS BY OUR PARTNER

QUESTION	ANSWER
What is the nature of the second-generation feedstock that the bioplastic material in your medical devices is derived from, and why is this important?	<p>The renewable and biological materials used in our medical devices are derived from waste material and by-products known as second-generation feedstock (such as recycled food waste). Other types of renewable and biological feedstock that could be used include vegetable fats and oils and sawdust.</p> <p>It is important to us that second-generation feedstock is used because it is not employed for food production.</p>
Why do you use the term “bioplastics”, when your material is only partially made from biological raw material?	<p>It is generally accepted to use the term “bioplastics” for types of plastic that are fully or partially made from biological raw materials, rather than fossil-based raw materials.</p> <p>Our products are made from bio-attributed plastics, a type of bioplastic that uses a mix of fossil-based and biological raw material and is produced using a mass-balance approach as prescribed in the ISCC PLUS certification scheme.</p>
What does the term “bio-attributed plastics” mean?	<p>The bioplastic material in our products is called bio-attributed plastics. Bio-attributed plastics are a type of bioplastic made from a mix of fossil-based and biological raw material, and a mass-balance approach is then employed to track the different source materials used.</p> <p>With bio-attributed plastics, bio-based feedstock is verified and certified under a mass-balance approach. The supplier ensures that an increasing amount of bio-based feedstock will be added to the plastic batch, thus accelerating the transition to a more renewable sourcing of material in production.</p>
What percentage of the plastic in your medical devices comes from bio-based feedstock?	<p>The bioplastic material in our products is called bio-attributed plastics. These plastics are made from a combination of bio-based (renewable) and fossil-based (non-renewable) feedstock.</p> <p>These two sources are traced using a mass-balance (also referred to as a chain-of-custody) approach. This process is certified and documented under the ISCC PLUS certification.</p> <p>With the mass-balance approach used, we can verify that 50% of the feedstock used in the plastic comes from bio-based feedstock.</p>
Are bioplastics a threat to biodiversity?	<p>We are very mindful of the fact that choosing new materials might introduce other challenges related to environmental sustainability. That is why we have chosen to use second-generation bio-based feedstock. In this way, we avoid raw materials that would otherwise be used for food production.</p>

## TRACKING AND TRANSPARENCY

QUESTION	ANSWER
What is a mass-balance approach?	<p>Our supplier of second-generation feedstock uses a mass-balance approach, a method which allows us to increase the use of renewable resources in our products. With this approach, fossil-based and renewable bio-based materials are mixed during the production of bioplastics.</p> <p>The fossil-based and bio-based molecules are then tracked throughout the production process, making it possible to trace the bioplastic content. In this way, we are able to verify the bioplastics in our products and ensure transparency.</p>
Are Ambu's products certified for bioplastics?	<p>Ambu's products are not certified, but we purchase our raw materials from an ISCC Certified partner. Furthermore, we use our quality management system to track and trace the material from supply to finished product.</p>
How do you document that the material is bio-based?	<p>We purchase the material from an ISCC Certified partner, which also has ISCC PLUS certification for the feedstock and the material they sell to us.</p> <p>In this way, we can track the material to verify that it is going into the right products; achieve the same CO<sub>2</sub>e savings without the certification; and offer our products at a better price for the customer.</p>

## DISPOSAL OF BIOPLASTIC MATERIAL

Does using bioplastics make the products recyclable?	<p>Strict safety regulations regarding the recycling of medical devices that come in contact with bodily fluids make the recycling of our endoscopes unfeasible at the current time.</p> <p>However, we are already well on our way towards a more sustainable future, with pilot programs and initiatives aimed at recycling in all major markets by 2025.</p> <p>The introduction of bioplastics in our single-use endoscopes is one tangible example of how we are reducing the environmental footprint of our products while working on a recyclable solution.</p>
How does the introduction of bioplastic material affect the environmental footprint of your medical devices?	<p>The bioplastics, we use in our endoscope handles, is a bio-ABS plastic material that has 70% lower carbon footprint, compared to regular ABS plastics.</p> <p>The carbon footprint of the end product is therefore also reduced, however the reduction is far from as significant as on raw material level.</p> <p>At the moment we only use bioplastics in our endoscope handles. The endoscope consists of many other forms of material such as electronics, other types of plastics and metal.</p> <p>Using bioplastics in the handle is just the first important step towards introducing this material into more parts of our endoscopes.</p> <p>The use of this bioplastic material in our endoscope handles sends a message aimed at driving positive change in the industry in the area of global sustainability.</p>

## DISPOSAL OF BIOPLASTIC MATERIAL

QUESTION	ANSWER
What is ABS plastic?	<p>There are many different types of plastic. ABS plastic, or Acrylonitrile Butadiene Styrene, is one type of plastic. ABS plastic is a common thermoplastic material, which you might know from Lego Bricks. We use it in the endoscope handle for several reasons, as it is a material that is both sturdy, durable and has a high impact resistance. Together with the fact that the material adheres to our normal quality and safety requirements, these properties are crucial for materials used in medical devices as we need to ensure patient safety.</p> <p>The bio-attributed ABS we use in our endoscope handles is produced from a mix of bio-based feedstock and conventional feedstock.</p>
Why don't you use biodegradable materials in your medical devices?	<p>One reason we do not use biodegradable plastic (plastic that can be decomposed by the action of living organisms) is due to considerations regarding the quality and safety of the products.</p> <p>Another reason is that biodegradable material can be difficult to recycle and can contaminate the recycling stream. Consequentially, many biodegradable bioplastics end up in landfills.</p> <p>Biodegradable plastics in landfills decompose slowly and produce methane gas, which is up to 80 times more harmful than CO<sub>2</sub>.</p>
Won't your use of bioplastics contaminate the recycling stream?	<p>No, because we do not use biodegradable plastics, which are difficult to recycle and can contaminate the recycling stream. Instead, we use bioplastics that have the potential to be recycled.</p>
How much of the bioplastics that you use are from bio-based feedstock?	<p>Using a mass-balance approach, we can verify that 50% of the feedstock used in the plastic is from bio-based feedstock.</p>

## AMBU'S SUSTAINABILITY STRATEGY

What is your overall sustainability strategy?	<p>Advancing in the area of sustainability is one of our company's four strategic pillars. Within sustainability, we have two main focus areas:</p> <p>First, we are working towards getting as close as possible to net-zero emissions in collaboration with suppliers and other partners.</p> <p>Second, we are focusing on introducing bioplastics and recycling programs together with partners and customers.</p> <p>In addition to these long-term focus areas, we have a number of activities that will help ensure a sustainable future.</p>
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## AMBU'S SUSTAINABILITY STRATEGY

### QUESTION

### ANSWER

Why do you use plastic in your products?

Plastic is an excellent material to use in medical devices. It is easy to work with during production and use, and its flexibility conforms to the human anatomy in a way that is gentle on the patient.

On the other hand, it is true that plastic is made from crude oil, which is a non-renewable fossil resource that releases CO<sub>2</sub> when incinerated. By introducing bioplastics in our endoscopy products, we are working towards a solution that is practical and beneficial for both patients and the environment.

What is the Plastic Bank® program and what is the nature of your partnership with them?

Plastic Bank® is a for-profit social enterprise with which we have partnered.

While we work towards finding future possibilities for the safe processing and recycling of scopes, we have partnered with Plastic Bank® to support the collection of ocean-bound plastic waste and to improve the lives of vulnerable coastal communities.

## AMBU'S SUSTAINABILITY STRATEGY

Which Ambu products are covered by the Plastic Bank® agreement?

By 2025, all aScope products on the market will be covered:

- aScope 3 Slim, Regular, Large
- aScope 4 Broncho Slim, Regular, Large
- aScope 5 Broncho, All sizes
- aScope 4 RhinoLaryngo Slim, Intervention
- aScope 4 Cysto
- aScope Duodeno: 1.0 and 2.0
- aScope Gastro
- aScope Gastro Large
- aScope Colon
- aScope Uretero

As more aScope products are added to our portfolio, we expect the agreement to also include those products.



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