Sustainability

# Introducing the Bioproduction Sustain Program

A comprehensive program that helps you meet your sustainability goals

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## The Thermo Scientific<sup>™</sup> Bioproduction Sustain<sup>™</sup> Program,

focusing on bioprocessing containers and cell factory systems, is a forward-thinking initiative designed to help customers achieve their sustainability goals without compromising quality or performance.

Recognizing our customers' desire to maintain the consistent performance of their trusted products while reducing their carbon footprint, our program enables on both fronts. We provide the same reliable products customers have depended on for decades while helping them reduce their carbon footprint.

#### Key benefits:

 Lower your carbon footprint claim a quantifiable emissions reduction for Thermo Scientific<sup>™</sup>

BioProcess Containers (BPCs) and Thermo Scientific<sup>™</sup> Nunc<sup>™</sup> Cell Factory<sup>™</sup> systems to make tangible progress toward your sustainability goals

No revalidation needed

enrolling in the program is seamless because customers can continue using products integrated into their existing workflows without any physical or material changes



# Reduce your carbon footprint without compromising quality and performance

## Background

Many single-use plastic products on the market already contain a percentage of alternate feedstocks. The industry-wide adoption of a practice known as "mass balance" tracks the utilization of these renewable feedstocks across the supply chain and enables their benefits to be allocated to specific products, aligning with sustainability goals while maintaining production efficiency and cost-effectiveness.

This process operates on principles very similar to renewable energy procurement. Many companies claim that they are powered entirely by renewable electricity. They achieve this by matching their electricity usage with an equal amount of renewable electricity certificates from the same grid region. These certificates are generated for every unit of renewable electricity generated, enabling one party to claim the benefit. By paying a premium for this, companies can claim a lower carbon footprint while continuing to receive the same reliable energy supply.

The Bioproduction Sustain Program mirrors this approach. We coordinate with our resin suppliers to prioritize sustainability, helping to ensure that they secure enough sustainable feedstocks to align with our commitment to reduce the environmental impact of bioprocessing workflows. Importantly, the plastics themselves remain unchanged—identical in formulation, grade, and performance characteristics. Through this approach, we can offer customers a significantly lower carbon footprint for products with decades of proven performance.





Figure 1. (A) Companies can claim the environmental impact of renewable electricity generated within the power grid by purchasing its chain of custody tracking certificates. (B) Companies can claim the lower carbon footprint of second-generation bio-circular feedstocks to reduce their overall environmental impact.

#### Principles and equivalency

Plastic resins have traditionally been produced from fossil fuel-based feedstocks, a process that generates significant greenhouse gas emissions and depletes nonrenewable resources. As governments and industries worldwide prioritize decarbonization, many major resin manufacturers are transitioning toward renewable, bio-circular feedstocks.

Since the resin monomers-the fundamental component of resin manufacturing generated from fossil fuel-based and bio-circular feedstocks-are identical, manufacturers can directly substitute renewable feedstocks for fossil-based ones. This substitution results in a 1:1 direct reduction of fossil fuel-based feedstock through replacement with bio-circular feedstock.

#### Traceability

The Bioproduction Sustain Program leverages the International Sustainability and Carbon Certification (ISCC) PLUS certification system



to deliver chain-of-custody traceability for bio-circular feedstocks and to help lower carbon footprints throughout the supply chain, from our raw material suppliers to manufacturing facilities. This independent third-party certification provides customers with confidence that our certified products meet strict sustainability and traceability requirements.

#### Impact of the Bioproduction Sustain Program

**Potential annual savings:** 151 metric tons



Equivalent to ... gasoline-powered passenger vehicles driven for one year

• 2,000-liter monoclonal antibody (mAb) workflowwith 100 runs per year, you could save ~151 metric tons of carbon, which is equivalent to removing 35.2 gasoline-powered cars from the road for a year\*

\* Conversion performed by the USEPA Greenhouse Gas Equivalencies Calculator.

# **Potential annual savings:** 280 metric tons Equivalent to ...



• Adherent-cell vaccine production workflow-with 100 runs per year of 90 cell factory systems per run, you could save 280 metric tons of carbon, which is equivalent to removing 65.3 gasoline-powered cars from the road for a year\*

#### Supporting your sustainability journey

When you enroll in the Bioproduction Sustain Program, you will receive an annual Scope 3 emissions report detailing your emissions reduction from the purchase of qualifying products.\*\* This report serves as a vital tool for tracking your sustainability efforts and measuring your impact, enabling you to showcase your commitment to reducing emissions.

#### **Customer support and resources**

At Thermo Fisher Scientific, we empower our customers with the knowledge and tools necessary for success. Our dedicated support team is available to assist you with questions regarding the Bioproduction Sustain Program. We also offer valuable resources, including:

- **Training sessions**—access training materials and workshops that can help your team understand the program and its benefits
- Customized carbon reduction estimates—we can work with you to estimate the carbon reduction achievable through this program

\*\* A minimum purchasing threshold of eligible products may apply.



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## Recycle your bioprocess containers and support your sustainability goals

Thermo Fisher is offering a convenient connection to a North American bioprocess container (BPC) recycling service with Triumvirate Environmental.<sup>†</sup> Join us in making a commitment to environmental sustainability in bioprocessing.



Learn more and get started at thermofisher.com/bpcrecycling

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