

# One Shot FBS 50 mL bottles



## Introduction

We are committed to designing our products with the environment in mind—it's part of how we enable our customers to make the world healthier, cleaner, and safer. This fact sheet provides the rationale behind the environmental claim that packaging of Gibco™ One Shot™ Fetal Bovine Serum (FBS) in 50 mL bottles results in generation of 33% less plastic waste than aliquotting from 500 mL bottles. This results in less risk of contamination and improved consistency, but also less waste to manage in the lab.

## Product description

Researchers who aliquot FBS typically freeze and then thaw it at least twice before using it. It is a lengthy process requiring close monitoring and unnecessary reagent handling that can compromise results. The One Shot FBS 50 mL bottles eliminate the need to aliquot, which means that the FBS is frozen and thawed just once. Because the bottle is engineered specifically to withstand the freeze/thaw process, the risk of cracking or lids popping off, which can happen with conical tubes, has been eliminated. The result is less risk of contamination, improved consistency, and more time to spend on your research.

A



B



Figure 1. Comparison of the plastic waste generated by (A) One Shot FBS 50 mL bottles compared to (B) aliquotting FBS from a 500 mL bottle.

**Table 1. Comparison of the amount of plastic waste generated by aliquotting FBS vs. using One Shot FBS packaged in 50 mL bottles.**

| Steps in procedure          | Plastic description       | No. used | Piece weight (g) | Total weight (g) | Step in procedure     | Plastic description | No. used | Piece weight (g) | Total weight (g) |
|-----------------------------|---------------------------|----------|------------------|------------------|-----------------------|---------------------|----------|------------------|------------------|
| 1. Original container       | 500 mL bottle             | 1        | 79.4             | 79.4             | 1. Original container | 50 mL bottle        | 10       | 15.9             | 159.0            |
| 2. Aliquot to conical tubes | 25 mL serological pipette | 1        | 18.8             | 18.8             |                       |                     |          |                  |                  |
|                             | 50 mL conical tube        | 10       | 14.0             | 140.3            |                       |                     |          |                  |                  |
|                             |                           |          | <b>Total</b>     | <b>238.5</b>     |                       |                     |          | <b>Total</b>     | <b>159.0</b>     |
|                             |                           |          |                  |                  |                       |                     |          | Waste reduction  | 33%              |

### Green features

#### Less waste and use of fewer resources

Using the One Shot FBS 50 mL bottles generates 33% less waste than aliquotting from a 500 mL bottle (Table 1). By using less plastic, less petroleum feedstock is consumed, and less greenhouse gas is generated. In the lab, a typical customer using 20 L of FBS per year would get back almost 7 hours of time and generate 7 lb less plastic waste by choosing One Shot FBS 50 mL bottles. Generation of

less plastic waste means that the One Shot FBS 50 mL bottles help reduce not only our customers' environmental impact but also their waste disposal costs. This supports our customers' local sustainability programs such as zero waste, while saving time and improving quality and consistency. This represents a win for our company, our customers, and the environment.

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