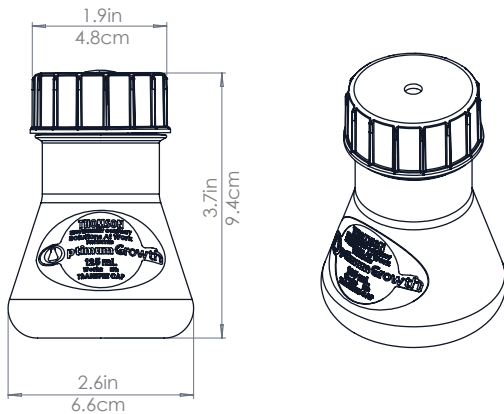


## Optimum Growth® 125mL-LE Flask Technical Data Sheet

Product Description	Part #	Sterility
Optimum Growth® 125mL Flask w/ Low Evaporation Cap	931110-11	10 <sup>-6</sup>

# OptimumGrowth®



### Introduction

Designed for mammalian and insect cell culture. Maximized fill volume increases versatility and efficiency of shaker cabinet space.

### Specifications

Top Style	Threaded Cap, 1/4" Vent, 0.2µm PTFE membrane
Flask Material	Polystyrene, proprietary copolymer blend
Flask Bottom	Baffled
Sterility (SAL)	10 <sup>-6</sup>
Packaging	Single bagged

### Fill Volume & Shake Speeds For Mammalian, Hybridoma, Insect & Microbial

#### Optimum Growth® Best Working Volume 16-32%

Flask Size	Fill Volume	Working RPM Range*	Vol./Size Ratio
125mL	20-40mL	100-200   90	16-32%

\* 1" (2.54cm) | 2" (5.08cm)

### FAQ's

#### What is the optimal use of Low Evaporation flasks?

Low evaporation (LE) flasks are best suited for incubators that have no humidity control component. LE flasks prevent the concentration of media components to levels that limit growth and high viability due to evaporation. With the LE flask, incubation systems with no humidity can run experiments longer and increase yields while benefiting from Thomson Optimum Growth® Flask's enhanced mixing.

#### Why do Optimum Growth® Flasks perform better than other disposable flasks for mammalian cell lines (CHO, HEK293, etc.) & insect cell lines (SF-9, SF-21, High Fives, Trichoplusia ni)?

Optimum Growth® Flasks are designed for high aeration and low shear providing enhanced mixing. Optimum Growth® Flasks achieve high aeration due to a unique baffle design that has been optimized for mammalian and insect cell lines. They provide enhanced gas exchange with low shear mixing, which can increase yields significantly when combined with both nutrient enriched media and proper pH balance.

#### Are the Optimum Growth® Flasks single-use?

Yes, the Optimum Growth® Flasks are designed for single-use and are not autoclavable.

#### High cell death and a large amount of foam and/or cell clumping issues?

Experiencing high cell death and foaming in the Optimum Growth® Flasks is usually due to cell shearing. Adding up to 1% surfactant will reduce foaming and increase cell viability without stressing the cells. Ensure that the shaker is set to the proper speed and that flasks are filled to recommended volumes.

#### What can I do if the doubling time for my cell culture is longer than expected when using the Optimum Growth® Flasks?

This varies between cell types and strains, as well as with environmental conditions. If the doubling time for your culture is taking longer than expected or desired in the Optimum Growth® Flasks, we recommend increasing the shake speed beyond our recommended speeds by 10 to 20 RPM. The reason for the increased doubling time is that the oxygen transfer rate (OTR) may be lower with higher fill volumes, and the increase in speed will increase the OTR.

#### What clamps and shakers work best with the Optimum Growth® Flasks?

Optimum Growth® Flasks are designed to shake in 1" or 2" orbit shakers. Recommended shakers include, Eppendorf®, INFORS HT®, Kuhner®, Fisher Scientific®, and VWR®. Utilizing a sticky mat or rug gripper pad is recommended for under 200RPM.

Eppendorf®	INFORS HT®	Kuhner®	Fisher Scientific®	VWR®
M1190-9001	12202	SM310125	11-676-013	57019-676

#### Experiencing difficulty removing the shake flasks from the sticky mat?

We recommend:

1. Spray ethanol on the sticky mat until you reach the desired stickiness. Ethanol will lower the bonding strength, as will any alcohol.

**2. Use a rug gripper pad on top of the sticky pad.**

\*Thermo Fisher Scientific, P/N 24040032, or Sigma Aldrich®, P/N 59920C

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