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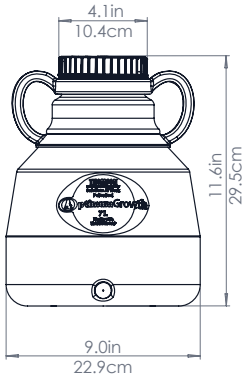
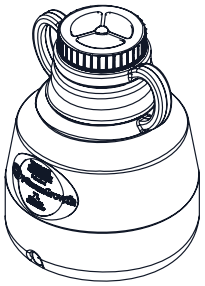
Optimum Growth® 7L Flask Technical Data Sheet

Product Description	Part #	Sterility
Optimum Growth® Flask 7L	931117	10^{-6}

OptimumGrowth®





Introduction

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

Specifications

Top Style	Threaded Vent Cap, 0.2µm PTFE membrane
Flask Material	Polystyrene, proprietary copolymer blend
Flask Bottom	Baffled
Sterility (SAL)	10^{-6}
Packaging	Double Bagged

FAQ's

How to successfully change vessels from spinner flasks & roller bottles to Optimum Growth® Flasks?

Cells adapted to Spinner Flasks and Roller Bottles can be easily transitioned to Optimum Growth® Flasks. Adjusting existing cultures from different formats to Optimum Growth® Flasks requires reducing the volume and shake speeds of the first 1-2 passages. The addition of up to 1% of surfactant* to the media may be needed due to spinner flasks and roller bottles having lower shear than shake flasks. Once the cells have adjusted to the Optimum Growth® shake flasks utilize the recommended shakes speeds.

Fill Volume & Shake Speeds

Mammalian & Hybridoma Cells

Fill Volume	Working RPM Range	Vol./Size Ratio
2.8L - 5L	140-150 I 100 (1" (2.54cm) | 2" (5.08cm))	40-70%

Insect Cells

Fill Volume	Working RPM Range	Vol./Size Ratio
6L	135	86%

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. 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.

What are the Transfer Caps that go along with the Optimum Growth® Flasks?

Type	Connection	Tubing	Part #
Bidirectional	Male Luer Lock, Tube Fuse	C-Flex® 16 ID: 1/8" (3.1mm), OD: 1/4" (6.35mm)	931470-8

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.

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 Scienfitic®, and VWR®. Utilizing a sticky mat or rug gripper pad is recommended for the 7L Flask and for under 170RPM. Clamps made for 5L Flasks may fit, please check with the shaker manufacturer.

Experiencing difficulty removing the shake flasks from the sticky mat?

We recommend:

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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