ESCO SCIENTIFIC

When should the CO_2 Incubator's ULPA Filter be replaced?

CCL-170_-_-HHS

CO_2 Incubators provide optimal growth and development of cells by maintaining physical parameters such as temperature, humidity, CO_2, and O_2 levels. It provides the perfect condition not only to sustain your culture but also the growth of unwanted contaminants.

TABLE 1. COMMON CONTAMINANTS INSIDE THE CO_2 INCUBATOR CHAMBER

Contaminants	Particle size (µm) in diameter
Viruses	0.005 to 0.3
Bacteria	0.3 to 60
Fungi	2 to 10
Molds	3 to 30
Yeast	5 to 10

ULPA filter ensures that all contaminants from both room air and chamber air are filtered and only clean air is being recirculated. It removes 99.999% of particles that are 0.1 to 0.2 microns in size or greater. If the filter is not replaced, contaminants can harbor inside the CO_2 Incubator chamber that can greatly affect the cell samples. Hence, it is necessary to conduct preventive maintenance and get replacements done. It is highly recommended to change the ULPA filter once a year or when the filter is already loaded to maintain cleanliness within the CO_2 Incubator chamber.

Contact your local Esco office for quotation inquiries!

References:

[1] Engineering ToolBox. 2005. *Particle Sizes*. https://www.engineeringtoolbox.com/particle-sizes-d_934.html

[2] Mold vs. Particulate Matter. 2019. *Digital Environment. PP2.0 - Handout-Home Inspection_REV1.0*. https://digienv.com/lib/frontend/pdf/homeins/mold_vs_pm.pdf

[3] Yeast Fundamentals. 2021. https://wyeastlab.com/yeast-fundamentals

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