

CERTIFICATE OF COMPLIANCE

Certificate Number 2016-10-18-E248249
Report Reference E248249-D1000-1/A0/C0-UL
Issue Date 2016-10-18

Issued to: Esco Micro Pte Ltd
Applicant Company: 21 Changi South St 1
486777
Singapore

Listed Company: Esco Micro Pte Ltd
21 Changi South St 1
486777
Singapore

This is to certify that representative samples of CO2 incubator
A-BC-D-E-F-G-H-I-J-K <Refer to Miscellaneous Enclosure titled 'Model Details' for additional details>

Have been investigated by UL in accordance with the Standard(s) indicated on this Certificate.

Standard(s) for Safety: UL 61010-1, 3rd Edition, May 11, 2012, Revised July 15 2015, CAN/CSA-C22.2 No. 61010-1-12, 3rd Edition, Revision dated July 2015

Additional Standards: IEC 61010-2-010: 2014 (Ed 3), EN 61010-1 (Ed 3), EN 61010-2-010 (Ed 3)

Additional Information: See the UL Online Certifications Directory at www.ul.com/database for additional information.

Only those products bearing the UL Certification Mark should be considered as being covered by UL's Certification and Follow-Up Service.

Look for the UL Certification Mark on the product.

This is to certify that representative samples of the product as specified on this certificate were tested according to the current UL requirements.



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The A-BC-D-E-F-G-H-I-J-K model series is a CO2 incubator (controlling of cell culture growth dependent parameters and conditions) essential for experimental work in cell, micro and molecular biologies and widely used in scientific research. During normal operation, A-BC-D-E-F-G-H-I-J-K model series is able to heat up to 60 degree Celsius. There is a decontamination mode (Swiftcon™) and this feature allows the end user to clean the product using high temperature. The decontamination cycle involves the product heating up to 90 degree Celsius, maintaining at that temperature and cooling down to room temperature.

Model Differences

The nomenclature model naming is A-BC-D-E-F-G-H-I-J-K, where "A" is the Brand variant with CCL being CelCulture and CLM being CelMate. CelMate does not have a decon pump, so it will take a longer duration (approximately 5h) for cooling phase during the Decontamination mode as compared to CelCulture. "B" is the chamber size with 050, 170 and 240 representing 50L, 170L and 240L variants respectively. "C" is the sensor options with A being TC Sensor and CO2 control, B is the IR (Infra-Red) sensor and CO2 control; and T is IR sensor with both CO2 and O2 control. "D" is the Voltage ratings with -7 referring to Japan, 100Vac, 50/60Hz; -8 is referring to Europe, 220 - 2240Vac, 5-/60Hz and -9 referring to North America and Canada. "E" by default denotes ULPA filter is installed; otherwise NF (No Filter) used. "F" by default denotes the main door is Curved; otherwise FD (Flat Door) is used. "G" by default denotes the chamber is Stainless Steel; otherwise CU (100% Copper) is used. "H" by default denotes the unit exterior is powdered coating electroGalvanized (eG); otherwise SS (Stainless Steel) is used. "I" by default denotes the chamber is using normal air jacket; otherwise WJ (Water Jacket) is used. "J" by default denotes unit not installed with Peltier module; otherwise P is used. "K" by default denotes unit not installed with UV features; otherwise UV is used.

Additional Information

Project 4787078893 (Aug 2016)

Full evaluation of A-BC-D-E-F-G-H-I-J-K CO2 incubator model series

Technical Considerations

- The product was investigated to the following additional standards (from country differences):
UL 61010-1, 3rd Edition, 2012-05-11 / CAN/CSA-C22.2 No. 61010-1, 3rd Edition, 2012-05, EN 61010-1:2010
Additional: IEC 61010-2-010: 2014 (Ed 3), EN 61010-1 (Ed 3), EN 61010-2-010 (Ed 3)
- The following additional investigations were conducted: N/A
- The product was not investigated to the following standards or clauses: N/A
- The following accessories were investigated for use with the product: N/A
- No Other Considerations.

Engineering Conditions of Acceptability

When installed in an end-product, consideration must be given to the following:

None