

Climate cabinet for tissue culture

Various climate conditions can be created for tissue culture. This well insulated climate cabinet can be used to automatically achieve and maintain the configured condition. The cabinet has been equipped with the necessary equipment and the advanced ABC processor.



Heating and Cooling

An electrical heating element in combination with a direct expansion cooling machine will ensure that the desired temperature inside the cabinet is reached and maintained. An oversized cooling block ensures little dehumidification will take place. A filter has been assembled on top of the climate cabinet for the process air. With a number of hoods, various process quantities can be achieved.

Cooled drawers

By guiding the air flow of the conditioned air through the trays, the soils will be on a cold surface. This is to prevent the condensation of moisture against the lids. And subsequently, it prevents drops of condensation on the lid from interfering with the exposure of light.

Humidifier

It is optional to use a humidifier when a high level of humidity is necessary.

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Lighting and lighting mixes

The cabinet can be equipped with lighting of TLD fixtures or LED lamps. This can be done in various time stages and with or without gradual scale transition; use LED lamps for instance to create a day and night rhythm with dusk and morning glory. The use of various lighting mixes, with or without a dimmable option, is also possible.

Models and process

The process can take place based on fixed configured values or in various steps (stages). The temperature and light composition can be configured per stage. The temperature range of the cabinet can be configured between 2°C and 40°C with the lighting off. Between 4 °C and 40°C, the lighting will be enabled.



Fase	1	2	3	4	5
Tijdsduur (uu.mm)	72.00	144.00	168.00	72.00	144.00
Sterkte (Lux)*	xxxx	yyyy	zzzz	aaaa	bbbb
Rood (%)	27	26	25	24	23
Groen (%)	26	26	27	28	29
Blauw (%)	21	22	23	24	25
Verrood (%)	26	26	25	24	23
T° (°C)	25	25	30	35	25
RV (%)	60	70	52	38	30
AV (gr/kg)	12.0	14.0	14.0	14	6

ABC processor

Use the advanced ABC processor to configure and reach every desired air condition (temperature), light intensity and color spectrum on a touch screen. This can be done in various time stages and with or without gradual scale transition; day and night rhythm with dusk and morning glory as an option. The composed menu can be saved as pre-set and used for the next test; 32 pre-sets in total.

The entire process is controlled with the ABC processor which is provided with a touchscreen. One ABC processor/touchscreen can operate several drying cabinets. Use the ABC processor to configure the air circulation, the temperature and the desired moisture content per phase. When a drying menu has been configured, this can be saved as a pre-set. The menu can be called up again easily. All settings and measurement values can be saved to your pc using the ABC PC program. These values can be called up again in a graphic or table for analysis. This makes it possible to, if needed or desired, have a tailored adjustment of the processes (pre-sets).

Furthermore there is an SMS module to send an sms in case of emergencies, and a MCM module for operation and monitoring (including graphics) from your smartphone or tablet. The ABC guard thermostats will intervene when the temperature in the cabinet becomes too low or too high. All equipment will be shut down to prevent damage, followed by an alarm. After the alarm, an sms message with detailed information can be send to the responsible persons.