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## OptiChrome PLUS

Code EKAMH960

### PRODUCT DESCRIPTION

OptiChrome PLUS is an instrument for the automatic control of temperature and humidity values, to optimize the quality of the chromosome preparations.

OptiChrome PLUS has been designed with the specific aim of enabling cytogeneticist to create the ideal environment for the evaporation of the fixative during the final step of chromosome preparations, choosing the best temperature and humidity within a wide range of values.

OptiChrome PLUS ensures high quality and reproducible results in any condition.

### KEY FEATURES

#### ***Programmability of the instrument***

Temperature and humidity values are set directly by the operator on a 7" touch-screen colour display; the data can be stored creating up to 9 programs, names and details completely customizable.

#### ***Control of temperature and humidity***

These two parameters are controlled within the evaporation chamber using Hygrothermal sensor, calibrated with certified reference probes.

#### ***Operating Capacity***

The instrument is equipped with 4 drawers with independent opening; each drawer can accommodate up to 6/8 slides (depends on the size), for a total of 24/32 slides.

#### ***Flexibility***

The instrument is designed to accept both rectangular and round slides, to meet all Cytogenetics lab needs (samples from peripheral blood, bone marrow, amniotic fluid or from other tissues).

#### ***Elimination of toxic fumes***

Evaporation of the mixture of methanol/acetic acid produces definitely harmful fumes that, in the long run, create a significant risk. OptiChrome PLUS is equipped with two active carbon filters that have the specific function to adsorb these vapours, contributing to the protection of users health.

When the filters are exhausted, after 830 hours of use, the instrument itself shows on the display the need to replace the filters.

#### ***Presence of a self-diagnostic systems***

The software that controls the instrument is equipped with a system of self diagnostic able to verify the proper functioning of the machine. When the OptiChrome PLUS is switched on, it performs a complete check of his main components. In case



of anomalies detection, the instrument is stopped in order to prevent damage to the instrument, and the type of error is shown on the display.

***Preparation of a remote control tool (available soon)***

The instrument is designed to be implemented in the future with a remote control system, through Ethernet channel. This interface will allow the software upgrade, technical assistance and remote management tool. Using a USB key will be possible to download the log files for a quick assistance.

## **CONSTRUCTION FEATURES**

- Front and rear body: sheet metal, treated with epoxy paint.
- Side body: white polymethacrylate
- Stainless steel AISI 304 shelf (optional)

## **SPECIFICATIONS**

***Temperature control system***

- Cooling / heating: Peltier and resistance
- Heat dissipation: forced circulation of cool water

***Ventilation***

- From bottom to top, uniformly spread inside the chamber
- Filtration on active carbon (output)

***External Dimensions/Weight***

- 540x630x540 mm (HxWxD)
- 65 kg

***Operating ranges***

- Temperature range 20°C-40°C (accuracy  $\pm 0.5^\circ$ )
- Humidity range 35°C-60°C (accuracy  $\pm 2\%$ )

***Operating cycles***

- Up to 9 programs

***Viewing data***

- Touch-screen colour display.

## **SAFETY**

OpiChrome PLUS complies with the following directives:

- 2006/95/CE Low Voltage, standard EN61010-1 (2013)
- 2004/108/CE Electromagnetic Compatibility, standard EN 61326-1 (2008).

## **MAINTENANCE**

Routine maintenance is simple to perform. A weekly monitoring is required for the level of distilled water in the tank, and for the cleaning of the evaporation drawer. The active carbon filters should be replaced every 6-12 months, depending on the amount of work, with wide margin of safety.

It's highly recommended to maintain the high efficiency of the instrument, to perform a preventive maintenance and calibration of the sensors that detect the temperature and humidity inside the machine.



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## Cooling unit

Code: EKAMH953

### KEY FEATURES

EKAMH953 is a cooler designed for cooling water, intended for use in combination with OptiChrome PLUS, EKAMH960 (EuroClone SpA).

By means of flexible tubes with "quick couplings" the cooling unit is connected to OptiChrome. On the cooling unit the blue tube is connected to the OUTLET nozzle and the red tube to the INLET nozzle; on the OptiChrome the blue tube is connected to the INLET nozzle and the red tube to the OUTLET nozzle.

When the instrument is switched on, the pump maintains circulating cool water in the system, meanwhile the refrigeration compressor brings the temperature to the set value, shown by the thermostat display. Once the pre-set temperature is reached, the refrigeration unit is turned off, while the water circulation is maintained. The machine controls the cooling fan speed to limit the noise due to airflow. The pump has a magnetic rotor, this prevents any water leakage or inside or outside the instrument.

### CONSTRUCTION FEATURES

- Skinplate chassis
- Base with 4 wheels for easy moving
- Stainless steel inner tank
- 4 meters of tubes made of plastic material

### SPECIFICATIONS

Dimensions: 400x310x630 mm (LxWxH)

Weight: 43 kg

Water flow rate: 3 litres/min

Outlet temperature: 13 °C +/-2 °C

Pump pressure: 4 bar

Installed power: 750 w

Noise level: <65 db

Temperature range of fluid treated: +40°C to +6°C

Operating ambient temperature: 0°C/+37°C

Max operating pressure downstream of the pump: 7 bar



## SAFETY

The Cooler complies with the following directives:

- 2006/42/CE Machinery Directive
- 2004/108/CE Electromagnetic Compatibility (EMC)
- 2006/95/CE Low Voltage (LVD)

## MAINTENANCE

Routine maintenance is simple to perform.

Periodically clean the grid of incoming air and the condenser fins of the cooling unit, to prevent dust to block the air passage leading to malfunction of the refrigerant system.

If the water level in the reservoir goes below the minimum level, an alarm and a light (fill) turn on, warning to refill the water tank.

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