

PORTABLE KITS OF CHEMISTRY LABORATORY FROM NAVAL ACADEMY
„MIRCEA CEL BĂTRÂN” CONSTANȚA

Handheld WATER QUALITY METTER IP67 COMBO/ MODEL8603



It is a portable device that measure the value of pH, conductivity, salinity and D.O. (Dissolved Oxygen) with automatic compensation of temperature in liquid (fresh and sea water), which had been widely used by Aquaculture, Aquaponics or Fish Farm.

Handheld AQUA – CHECK 2



It is a portable photometer to determine concentration of substances in water.

The photometers AQUA-CHECK 2 are equally fitted for application in fields of research and education. With the photometer AQUA-CHECK complete-set a maximum of 340 individual measurements can be performed.

The photometer AQUA-CHECK 2 is a professional photometer. With the photometer it can determine in addition to the eight standard values also iron, flour and oxygen.

Due to a large variety of aquatic parameters that can be determined by the photometer AQUA-CHECK 2, it fulfills the demands of an operation in fields of industry and fisheries, aquaculture.

Technical specifications:**Measurement ranges**

Parameters	Measurement range	Accuracy of method (R^2)*
Ammonium (NH ₄ ⁺)	0 ... 2.0 mg/L	0.998
Nitrite (NO ₂ ⁻)	0 ... 1.0 mg/L	0.999
Nitrate (NO ₃ ⁻)	6 ... 120 mg/L	0.998
pH	6.0 ... 9.0 mg/L	0.970
Chlorine (Cl ₂)	0.1 ... 1.6 mg/L	0.999
Phosphate (PO ₄ ³⁻)	0.01 ... 1.5 mg/L	0.999
Silica (Si)	0.05 ... 1.0 mg/L	0.998
Copper (Cu ²⁺)	0.02 ... 3.0 mg/L	0.999
Ferrite (Fe)	0.1 ... 10.0 mg/L	0.999
Fluoride (F ⁻)	0.1 ... 1.0 mg/L	0.983
Dioxide (O ₂)	2.5 ... 18.0 mg/L	0.997

*- Coefficient of determination R^2 is a statistical rate. The closer the value gets to 1 starting from 1, the more accurate the test is.

For example: If R^2 equals 0.98, the test shows an accuracy of 98 %.

EQUIPMENT RESEARCH of Naval Academy, Chemistry laboratory:

➤ **Ultrasonic bath with heating EMMI20HC**

Container capacity: 2 liters

Ultrasound power: max. 150 Watt

Ultrasounds power control of the: 50/75/100%

Ultrasound frequency: 38 kHz

Thermal power: 200 W

Control of the adjustable warming: 30 - 80 ° C

Container internal dimensions (L x W x H): 230x118x80 mm

Exterior dimensions (L x W x H): 260x150x210 mm

Basket interior stainless steel dimensions (L x W x H): 205x100x50 mm

Timer: 1-60 min / continuu

Protection class IP 20

Supply voltage: 230 V / 50 Hz

It is used for: degasification of liquids to determine their concentration, preparation of samples for analysis, emulsions production

Device versatile, easy to use and reliable.

➤ **Microcentrifuge Nahita 4-6-10000 rpm**

Suitable for research field; Speed range: 4000 – 7000 – 10000 rpm

➤ **Automatic micropipette with variable-volume 100-1000 µl, suitable for research field**

➤ **Universal centrifuge Z306 – Hermle,**

Specifications

- Maintenance-free induction drive
- Microprocessor with large LCD display
- Lid lock

- Automatic rotor identification system with over speed protection, immediately upon rotor insertion
- Active imbalance-identification and -cut off (rotor specific)
- Imbalance tolerant drive
- A large variety of rotors and accessories
- Manufactured according to international safety regulations, i.e. IEC 61010
- Audible signal at the end of each run with several melody options
- Rotor exchange is easy to handle
- Noise level under 63 dBA at max. speed
- Improved ventilation system keeps samples cool

It is used for a wide range of applications, which covers clinical laboratory requirements, research, as well as industrial laboratory use.

- **Electrothermal Thermostatic Blast Drying Oven** used in industrial & mineral enterprises, laboratories and scientific research units for drying, baking, wax melting and disinfection. Temperature Control Range (°C): RT+10°C ~ 300°C; Temperature fluctuation: ±1°C. Temperature uniformity: ±2.5°C%.
- **Laboratory balance / electronic with external calibration weight ALN 220**, readability 0.0001g, capacity: 220 g.
- **Laboratory balance / electronic / ATA 2200**, readability 0.01g, capacity: 2200 g
- **Microscop binocular B192 with OPTIKAM WiFi digital video camera**, inocular, 360° rotating, 30° inclined with adjustable interpupillary distance and dioptric compensation, double layer with mechanical sliding stage, 125x115mm, moving range 50x30mm;
It is used for research laboratory.
- **IR VELP ZX4** is an advanced IR vortex mixer, that operating in continuous or infrared system (IR) mode, with adjustable stirring speed up to 3000 rpm, it is ideal for many applications including mixing of many kind of tubes/containers thanks to the broad range of accessories.
- **Laboratory heating mantle 500 ml Nahita**, indicating lights for heating and stirring operation Maximum heating temperature 370°C
- **Witeg digital hotplate stirrer**, ceramic-coated plate, with digital feedback control, LCD display/99,59hr. timer, up to 380°C, 0.3°C, 80 – 1500 rpm; Excellent for mixing and most general lab heating applications.