

# Densitometers

## DEN-1, Densitometer (Suspension turbidity detector)

Densitometer **DEN-1** is designed for measurement of cell suspension's turbidity in the range 0.3 - 5.0 McFarland units (100x10<sup>6</sup> cells/ml - 150x10<sup>7</sup> cells/ml). DEN-1 provides the opportunity to measure solution turbidity in a wider range (5.0 - 15.0 McFarland units) however, it is necessary to remember that in this case the standard deviation values increase.

Densitometer **DEN-1** is used for 1) determining concentration of cells (bacterial, yeast cells) in the fermentation process, 2) detection of susceptibility of microorganisms against antibiotics, 3) identification of microorganisms with various test-systems, 4) measuring optical density at fixed wavelength and 5) quantitative evaluation of concentration of dyed solutions that absorb green light.

The operation principle is based on measurement of optical density with digital presentation of the results in McFarland units.

The unit is calibrated at the factory and keeps calibration without power supply. However, if necessary it is possible to calibrate the unit by 2 - 6 points in 0.5 - 5.0 McFarland unit range. Both commercial standards (e.g. produced by BioMerieux, Lachema, etc.) and the cell suspensions prepared in the laboratory can be used for calibration.

DEN-1



A-16



We offer 2 versions of DEN-1:

- 1) **DEN-1** which is functioning only from external power supply,
- 2) **DEN-1B** which is working from external power supply as well as accumulator AA type battery (3 sets),

Model **DEN-1B** is more sensitive instrument having optical density resolution range till 0.01 McF comparing to 0.1 McF (model DEN-1).

McF standard ranges are available on request.

### Specification (DEN-1):

- Light source light diode
- Wavelength  $\lambda = 565 \pm 15 \text{ nm}$
- McFarland unit range 0.3 - 15.0
- Precision  $\pm 3\%$
- Measurement time 1 s
- Recommended external diameter of tube 18 mm
- Sample volume 16 mm (when using **A-16** adaptor) not less than 2 ml
- Data presentation digital indicator
- Overall dimensions 165x115x75 mm
- Weight, not more 0.9 kg
- Power supply External power supply DC 12V, 300mA
- McFarland unit standard deviation:
  - 0.5 McF  $0.5 \pm 0.1$
  - 3.0 McF  $3.0 \pm 0.1$
  - 6.0 McF  $6.0 \pm 0.2$
  - 7.5 McF  $7.5 \pm 0.2$

### Catalogue number

DEN-1	BS-050102-AAF
DEN-1B	BS-050104-AAO
A-16	BS-050102-AK

DEN-1B



### Specification (DEN-1B):

**DEN-1B** has the same specification as **DEN-1** and some additional features:

- 2 power options: battery (3 x AA type) or mains operated
- Large bright LCD
- High measurement resolution - 0.01 McF

ALA-1/4

## ALA-1/4, 4-channel fluorometer

ALA-1/4 is the first multi channel rotator type fluorescence detector that allows detection of the fluorophores lights emission in the reaction mixes with a closed-tube method immediately after PCR.

ALA-1/4 is a four-channel high speed detector of fluorescence/quenching ration of DNA probe combined with a fluorescence/quenching molecules. Level of fluorescence depends on the quantity of the positive amplification after thermocycling of DNA probes. The instruments substitutes for electrophoresis and gel-documentation step of amplicon detection. The closed-tube method ensures biosafety conditions in the DNA diagnostic Labs.

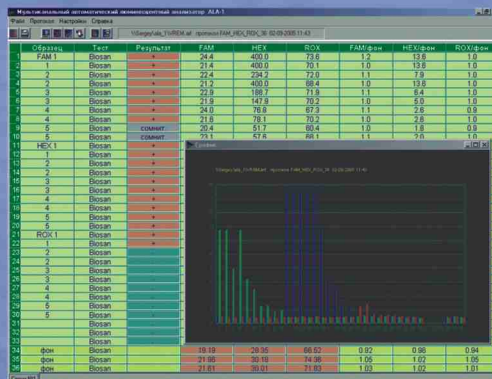
### FEP

Biosan FEP (Fluorescence detection with End Point analysis) is the revolutionary new line of kits with fluorescence detection that allow to:

- Carry out the experiment with closed test tubes, thus eliminating the chances of contamination.
- Perform the amplification and detection processes in the same room with reduced personnel costs.
- Detect in 4 channels (Fam, Joe, Rox, CY-5)
- Register, interpret and store the results obtained.
- Simultaneously detect a variety of infections pathogens.
- Eliminate the need for electrophoresis and gel run storing instruments.

### Catalogue number

ALA-1/4	BS-010120-AAA
Rotor R-36/0.5	BS-010120-AK
Rotor R-48/0.2	BS-010120-BK



### Specification:

- Rotor 0.5/36 for Eppendorf tubes (0.5 ml) 36 pieces
- Rotor 0.2/48 for Eppendorf tubes (0.2 ml) 48 pieces
- Registration channel 4
- Detection system photomultiplier
- First Channel FAM (excitation/emition wavelength 460 nm to 515 nm)
- Second Channel JOE, HEX, R6G (excitation/emition wavelength 532 nm to 570 nm)
- Third Channel ROX (excitation/emition wavelength 570 nm to 605 nm)
- Fourth Channel CY-5 (excitation/emition wavelength 630 nm to 670 nm)
- Type of measurement data accumulation (till 2000 measurements) during rotor spin.
- PC connection through USB (Windows compatible)
- Overall dimensions 400x250x190 mm
- Weight, not more 8,5 kg
- Power supply 220/240 V, 50/60 Hz, 30 W



ALA-1/4 is developed in cooperation with Interlabservis, Russia, which has exclusive rights for distribution of ALA-1-4 in CIS countries.