

15 Densitometers

Densitometers

DEN-1 for 0.3-5.0 McFarland units

DEN-1B for 0.00-6.00 McFarland units, battery powered



Densitometers » DEN-1 and DEN-1B

Densitometers

DEN-1 and DEN-1B

Compact and efficient benchtop densitometers for measuring turbidity of cell suspensions in a variety of life-science applications.

The densitometers are designed and factory calibrated to measure turbidity in the range of 0.3 to 5.0 McFarland units (DEN-1), 0.00 to 6.00 McFarland units (DEN-1B) with a small standard deviation. If required, they can deliver a wider measurement range (up to 15.00 McFarland units), but with a greater standard deviation.

- **Measurement range: 0.3 to 5.0 McFarland units (DEN-1), 0.00 to 6.00 McFarland units (DEN-1B)**
- **Measurement time: 1 second**
- **Precision: $\pm 3\%$**
- **Standard deviation at 3.00 McF units: ± 0.1 McF**
- **User calibration option**

2
year warranty

Designed for tubes with an outer diameter of 18 mm.
16 mm tubes can also be accommodated by using the optional tube adaptor D16 (included)

Factory calibrated – retains calibration without power supply. Can be user calibrated with commercial standards or cell suspensions prepared in the laboratory

DEN-1 and DEN-1B units are calibrated for operation in range 0.3-5 McF and 0-6McF, but it is possible to measure turbidity from 0McF to 15McF (note: the standard deviation of the values increases).



DEN-1B densitometer shown (suspension turbidity meter)

Readings, conveniently shown in McFarland units, are clearly visible on the **bright LED display**

Extremely compact design with small footprint and low profile – fits easily into the smallest workspace

Powered by 3 x AA batteries (DEN-1B only) or via external 12v power supply

Note: 1 McF unit is approximately equal to $3^8 \times 10$ CFU/ml

Applications:

- Life-science - typical applications include determining concentration of cells (bacterial and yeast cells) in the fermentation process, detecting the susceptibility of micro-organisms to antibiotics, identifying micro-organisms with various test systems, and measuring optical density at fixed wavelength

		Densitometers	
		DEN-1	DEN-1B
Light source		LED	
Wavelength	λ nm	565 $\pm$ 15	
Range	McFarland units	0.3 to 15.0	0.00 to 15.00
Precision		$\pm 3\%$	
Measurement time	sec	1	
Tube diameter,	external diameter	18	
	with D16 adaptor	16	
Sample volume	ml	≥ 2	
Display / display resolution		LED / 0.1 McF	LCD / 0.01 McF
External power supply		12V	
Independant power supply		-	3 x AA batteries
Ambient temperature range	$^{\circ}\text{C}$	+ 4 to 40	
Power supply	V	100-240	

DEN MCF STDS set of latex particle suspension McFarland standards (0.5/1.0/2.0/3.0/4.0) require D16 for use	●
DEN MCF 18 STDS Set of 5 Mcfarland reference standards, 18mm diameter, for user calibration	●
D16 spare tube adaptor for tubes with 16mm outer diameter (included as standard)	●