

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 15.0 McFarland units (DEN-1) 0.00 to >15.00 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: 0.5 to 15.0 McFarland units (DEN-1), 0.00 to >15.00 McFarland units (DEN-1B)**
- **Measurement time: 1 second**
- **Precision: $\pm 3\%$**
- **Standard deviation at 3.00 McF units: ± 0.1 McF**
- **User calibration option**



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 0.5-15.0 McF and 0->15.00 McF, 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)

Bright LED display readings, conveniently shown in McFarland units, are clearly visible

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 3×10^8 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 and DEN-1B » Specifications

Densitometers – specification			
Densitometers			
• = option			
		DEN-1	DEN-1B
			
		h: 75mm d: 115mm w: 165mm weight: 0.7kg	h: 75mm d: 115mm w: 165mm weight: 0.7kg
Light source		LED	
Wavelength	nm	565 ± 15	
Range	McFarland units	0.3 to 15.0	0.00 to 15.00
Precision		±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
Operating temperature range	°C	+ 4 to 40	
Independent power supply		-	3 x AA batteries
External power supply		Input AC 120-230V, 50/60Hz Output DC 12V	
Input voltage	V dc	12	
Power consumption	W	1 (0.08A)	0.1 (0.007A)

Accessories	
DEN MCF STDS set of liquid McFarland standards in 16mm ø glass tubes. 0.5 / 1.0 / 2.0 / 3.0 / 4.0 can be decanted into an alternative tube (shelf-life no longer valid). Requires D16 adaptor, supplied with DEN-1 / DEN-1B.	•
D16 spare tube adaptor for tubes with 16mm outer diameter (included as standard)	•



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Use the above details to contact us if this literature doesn't answer all your questions.

Pricing on any accessories shown can be found by keying the part number into the search box on our website.

The specifications listed in this brochure are subject to change by the manufacturer and therefore cannot be guaranteed to be correct. If there are aspects of the specification that must be guaranteed, please provide these to our sales team so that details can be confirmed.

