



Calibration Certificate


Object	Dialysis Meter
Manufacturer	IBP
Type	LF330
Serial No.	98510010
Inventory No.	K822L11
Customer	Fresenius Medical Care Belgium
Date of calibration	08.10.2007 14:28
IBP Order No.	240591
Certifikate No.	243155
Number of pages of the certificate	- 3 -

The calibration certificate documents the traceability to national standards, which realize the physical units of measurement according to the international System of Units (SI).

IBP guarantees the keeping of the specification for the temperature- pressure- and voltage measurement for the time of one year. Concerning the conductivity and pH-measurement, in between check-ups by the user are advisable. For the monthly conductivity measurement use fresh standard 14,00 mS/cm. The pH-measurement needs to be calibrated with two solutions before each measurement. The user is obliged to have the device recalibrated at appropriate intervals.

This calibration certificate may not be reproduced other than in full extent.

Calibration certificates without signature and seal are not valid.

 IBP Medical GmbH Ikarusallee 15 D 30179 Hannover www.ibpmt.com	Date 15.10.2007	Head of production  Horst Müller	Person responsible  Norman Zajonc
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Reference Device and Standard Solution

Channel	Reference unit	Serial number	Calibration mark
Conductivity	HDM99XP	200531000600R001	KAL IBP243607
Temperature	Testotherm Test 781/DQF826	04780/0193	T10223 DKD-K-11201 06-03

1. Calibration Object

The dialyse measuring device is a high precision measuring device for the measuring of conductivity, temperature.

2. Method of the Calibration

The calibration took place by comparison of the „right value“- which is being shown by reference device the respectively by the standard solution - with the notice „shown value“ of the calibration device.

3. Environmental Conditions

Temperature: $23\text{ °C} \pm 3\text{ °C}$

Before the calibration the examinee has been acclimated in the measuring room for more than 24h.

4. Measuring Conditions

The respective measuring conditions and adjustments on the calibration object are listed under „Remarks“.

Measuring Results

Temperature

Range	Right Value	Shown Value	Allowed Deviation
100 °C	5,0 °C	4,7 °C	± 0,2
	25,0 °C	24,9 °C	± 0,2
	34,0 °C	34,0 °C	± 0,2
	37,0 °C	36,9 °C	± 0,2
	40,0 °C	39,9 °C	± 0,3
	55,0 °C	55,0 °C	± 0,3
	80,0 °C	79,8 °C	± 0,5

Conductivity

Range	Right Value	Shown Value	Allowed Deviation
Auto	0,0 µS/cm	0,0 µS/cm	± 0,7
	50,0 µS/cm	50,0 µS/cm	± 0,7
	1000 µS/cm	1003 µS/cm	± 7
	2,77 mS/cm	2,78 mS/cm	± 0,07
	6,70 mS/cm	6,68 mS/cm	± 0,07
	12,50 mS/cm	12,50 mS/cm	± 0,07
	14,00 mS/cm	14,01 mS/cm	± 0,07
	15,70 mS/cm	15,72 mS/cm	± 0,07
	19,50 mS/cm	19,51 mS/cm	± 0,07

Cellparameter: 0,471 1/cm
Adjusted TC in device: 2,07 %/K

Additional Remarks

None.