



# CALIBRATION CERTIFICATE

SERIAL NUMBER: CTPC-9999

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owned by  
 Adrián H. Mazza  
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is hereby issued to  
 BIOMEDICAL COMPANY  
 2300 PARK AVENUE  
 NEW YORK (10037)  
 UNITED STATES

for calibration of  
 HE INSTRUMENTS  
 TECHPATIENT CARDIO V3  
 ECG SIMULATOR  
 SERIAL NUMBER: TPC9999

### CALIBRATION CONDITIONS

|                   |              |
|-------------------|--------------|
| Temperature       | (25 ± 1) °C  |
| Relative Humidity | (50 ± 5) %HR |

### STANDARDS USED FOR CALIBRATION

| MANUFACTURER    | MODEL # | SERIAL #   | CALIBRATION DUE |
|-----------------|---------|------------|-----------------|
| Hewlett Packard | 3846B   | 2231A05836 | 31/05/2011      |
| Hewlett Packard | 5314A   | 2024A03904 | 14/04/2011      |

### CALIBRATION PROCEDURE

Calibration to standards by direct measurement according to specific procedure SP01EN.

### TEST RESULTS

We hereby confirm that the above equipment has been tested and calibrated, and conforms to the manufacturer's specifications on the calibrated values, as listed on the Operator's Manual.

| SELECTED %DC | LEAD | DC VOLTAGE | MEASURED VALUE | COMBINED UNCERTAINTY (k=2) |
|--------------|------|------------|----------------|----------------------------|
| 0 %          | I    | 0.000000 V | -0.000004 V    | ± 0.000006 V               |
| 0 %          | II   | 0.000000 V | -0.000003 V    | ± 0.000006 V               |
| 0 %          | III  | 0.000000 V | -0.000001 V    | ± 0.000006 V               |
| 0 %          | V1   | 0.000000 V | -0.000003 V    | ± 0.000006 V               |
| 0 %          | V2   | 0.000000 V | -0.000002 V    | ± 0.000006 V               |
| 0 %          | V3   | 0.000000 V | -0.000005 V    | ± 0.000006 V               |
| 0 %          | V4   | 0.000000 V | 0.000003 V     | ± 0.000006 V               |
| 0 %          | V5   | 0.000000 V | -0.000002 V    | ± 0.000006 V               |
| 0 %          | V6   | 0.000000 V | 0.000001 V     | ± 0.000006 V               |
| 12.5 %       | II   | 0.000500 V | 0.000497 V     | ± 0.000006 V               |
| 25 %         | II   | 0.001000 V | 0.000999 V     | ± 0.000006 V               |
| 50 %         | II   | 0.002000 V | 0.001998 V     | ± 0.000006 V               |
| 100 %        | I    | 0.002000 V | 0.002001 V     | ± 0.000006 V               |
| 100 %        | II   | 0.004000 V | 0.004004 V     | ± 0.000006 V               |
| 100 %        | III  | 0.002000 V | 0.001998 V     | ± 0.000006 V               |
| 100 %        | V1   | 0.004000 V | 0.004003 V     | ± 0.000006 V               |
| 100 %        | V2   | 0.004000 V | 0.004000 V     | ± 0.000006 V               |
| 100 %        | V3   | 0.004000 V | 0.004002 V     | ± 0.000006 V               |
| 100 %        | V4   | 0.004000 V | 0.003999 V     | ± 0.000006 V               |
| 100 %        | V5   | 0.004000 V | 0.003995 V     | ± 0.000006 V               |
| 100 %        | V6   | 0.004000 V | 0.004001 V     | ± 0.000006 V               |



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## TEST RESULTS (CONT.)

| SELECTED BPM | PULSE INTERVAL | MEASURED VALUE | COMBINED UNCERTAINTY (k=2) |
|--------------|----------------|----------------|----------------------------|
| 60 BPM       | 1.0000 s       | 0.999963 s     | 0.000010 s                 |
| 80 BPM       | 0.7500 s       | 0.749973 s     | 0.000008 s                 |
| 100 BPM      | 0.6000 s       | 0.600102 s     | 0.000006 s                 |

## TRACEABILITY AND CONFORMITY

Combined uncertainty was calculated using a coverage factor  $k=2$  corresponding to an approximate confidence level of 95% considering a normal distribution. It includes terms that consider the measurement method and the instrument behavior during calibration. No terms evaluating long term behavior are included.

The test results on this Certificate refer to the moment and conditions when the measurements took place. HE Instruments takes no responsibility on the eventual damages that might occur by the misuse of this Certificate.

This Certificate is not to be duplicated, partially or as a whole, without prior written approval of HE Instruments signed by its owner, Mr. Adrián H. Mazza.

HE Instruments measurement standards are traceable to INTI (National Metrology Institute of Argentina) and to NIST (National Institute of Standards and Technology), signatories of the CIPM Mutual Recognition Arrangement.

Certified By

On this Date

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