It may not be the disease...
It may not be the doctor's fault...
It may not be the medication...

BUT THE FAULTY MEDICAL EQUIPMENT THAT KILLS!!!

Have you calibrated your medical equipment recently???
IT'S WORTH SOMEONE'S LIFE!!!

Calibration Team (For Technical Queries)

Contact: Mr.G.Srinivasa Raja (Scientist) - 9840862782
         Mr.S.Dinesh - 9025825698
         Mr.V.Mohan Raj - 9042720927

Business Liaison Team (For Business Queries)

Contact: Mr.R.Suresh (Team Lead) - 9940273897
         Mr.M.Aswath - 9843415145
         Ms.S.Gayathri - 9597400421

THE COORDINATOR
NHHID
2nd floor, Kalanjiyam Building,
Opp. To Mining Engineering, CEG campus,
Anna University, Chennai-600025
Phone: 044-22357942/7938/7941

nhhidcalib@gmail.com     www.nhhid.org
About the Centre

National Hub for Healthcare Instrumentation Development (NHHID) was established in Anna University with DST funding in 2011 for promoting and accelerating indigenous development of healthcare instrumentation. Centre for Calibration and Testing of Medical Equipment (CCTME) is a sophisticated laboratory of NHHID equipped with state-of-the-art calibrating equipment, IEC standards, operating procedures and trained professionals guided by faculty experts to perform calibration of medical devices to ensure reliable performance for quality healthcare. We provide Credible traceability certificates along with calibration reports.

What is Calibration?

Calibration is the act of checking or comparing accuracy of measuring equipment with a Standard under specified conditions.

Why Calibrate Medical equipment?

- Calibrating equipment periodically ensures,
- Accuracy
- Reproducibility
- Reliability
- Longer life of equipment
- Uniform Performance of multiple units

Benefits of calibrating medical devices

- Superior quality of healthcare
- Enhance patients confidence
- Mandate for accreditation process (like NABH)
- Provides patients safety against electrical hazards
- Reduces risk due to equipment malfunction and increases patients safety

Our services

- On-site and in-house testing and calibration of medical devices
- Diagnosis of problems and recommendation for service
- Quality Assurance check for radiological equipment as per AERB protocols
- Free recalibration (within Chennai)

Advantages of our services

- Brand value
- Authenticity
- Constant updates
- Training

Standards followed

ISO/IEC 17025 - General requirements for the competence of testing and calibration laboratories.
IEC 60601-2-12 - Medical electrical equipment - Part 2: Particular requirements for the safety of lung ventilators for medical use.
IEC 60601-2-4 - Medical electrical equipment -Part 2: Particular requirements for the safety of cardiac defibrillators and cardiac defibrillators monitors.
IEC 60601-2-2 - Medical electrical equipment - Part 2-2: Particular requirements for the safety of high frequency surgical equipment.
IEC 60601-2-24 - Medical electrical equipment - Part 2-24: Particular requirements for the safety of infusion pumps and controllers.

And other standards..
CALIBRATION FACILITY AND CAPABILITY

VITAL SIGNS SIMULATOR
- BP APPARATUS
- PULSE OXIMETER
- PATIENT MONITORING SYSTEM
- ECG MACHINE

DEFIBRILLATOR ANALYZER
- DEFIBRILLATOR
- PACEMAKER

GAS FLOW ANALYZER
- VENTILATOR
- ANESTHESIA WORKSTATION
- BIPAP
- BOYLES APPARATUS
- FLOW METER
- SUCTION PUMP

ELECTROSURGICAL ANALYZER
- DIATHERMY/CAUTERY

nhhidcalib@gmail.com
www.nhhid.org
GO INDIGENOUS SERVE MANKIND
CALIBRATION FACILITY AND CAPABILITY

INFUSION PUMP ANALYZER

FOR

SYRINGE PUMP

INFUSION PUMP

FOR

INFANT INCUBATOR

INCUBATOR ANALYZER

FOR

BABY WarMER

ELECTRICAL SAFETY ANALYZER

FOR

APPLICABLE FOR ALL EQUIPMENTS

DIGITAL METER

FOR

OT LIGHT

nhhidcalib@gmail.com

www.nhhid.org

GO INDIGENOUS SERVE MANKIND
CALIBRATION FACILITY AND CAPABILITY

FETAL SIMULATOR FOR FETAL DOPPLER

DIALYSIS ANALYSER FOR DIALYSIS MACHINE

PHOTOTHERAPHY RADIOMETER FOR PHOTOTHERAPHY UNIT

DIGITAL TACHOMETER FOR TMT SPEED TEST

DIGITAL TACHOMETER FOR CENTRIFUGE SPEED TEST

nhhidcalib@gmail.com  www.nhhid.org

GO INDIGENOUS SERVE MANKIND
RADIOLOGICAL ANALYZERS

- X-ray (Mobile, Fixed, Portable)
- CT
- Mammography
- Fluoroscopy
- C-arm
- Interventional radiography
- Linear accelerator
- Dental X-ray (OPG & IOP)
- DEXA Scan (BMD)

X-RAY DOSIMETER

TOR IQ Phantom
Head and body Phantom
Mammographic phantom
CTIQ Phantom

SURVEY METER

FOR RADIATION SURVEY

nhhidcalib@gmail.com
www.nhhid.org

GO INDIGENOUS SERVE MANKIND
## Critical care equipments

<table>
<thead>
<tr>
<th>S.No</th>
<th>Equipment</th>
<th>Testing Parameter</th>
<th>Unit charges (Rs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Patient Monitoring system</td>
<td>ECG simulation</td>
<td>1500</td>
</tr>
<tr>
<td></td>
<td></td>
<td>NIBP</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Spo2</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Pulse Oximeter</td>
<td>O2 Saturation</td>
<td>500</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Heart rate</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Ventilator/Anesthesia ventilator</td>
<td>Full breadth test</td>
<td>1500</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Pressure/Leak test</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Continuous flow test</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Electrical safety test</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>ECG machine</td>
<td>ECG waveform simulation</td>
<td>750</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Electrical safety test</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Infant phototherapy</td>
<td>Irradiance test</td>
<td>500</td>
</tr>
<tr>
<td>6</td>
<td>Defibrillator</td>
<td>Energy</td>
<td>1000</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Charge time</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Electrical safety test</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Infusion pump/Syringe pump</td>
<td>Flow test</td>
<td>750</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Occlusion test</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Dual flow rate test</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>PCA test</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>Surgical Diathermy</td>
<td>Power distribution test</td>
<td>1000</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Output test</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>HF leakage test</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>REM alarm test</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>BP apparatus</td>
<td>Pressure test</td>
<td>250</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Leak test</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>Boyles apparatus</td>
<td>Full breadth test</td>
<td>1100</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Pressure/leakage test</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Continuous flow test</td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>Fetal/Maternal Monitor/CTG</td>
<td>Fetal heart rate</td>
<td>750</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Electrical safety test</td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>Flow meter/Suction</td>
<td>Flow rate</td>
<td>250</td>
</tr>
</tbody>
</table>

## Radiological equipments

<table>
<thead>
<tr>
<th>S.No</th>
<th>Equipment</th>
<th>Testing parameters</th>
<th>Unit charges(Rs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>X ray</td>
<td>As per AERB protocols</td>
<td>5500</td>
</tr>
<tr>
<td>2</td>
<td>CT</td>
<td>As per AERB protocols</td>
<td>9500</td>
</tr>
<tr>
<td>3</td>
<td>Mammography</td>
<td>As per AERB protocols</td>
<td>5000</td>
</tr>
<tr>
<td>4</td>
<td>Radiation survey</td>
<td>As per AERB protocols</td>
<td>2000</td>
</tr>
</tbody>
</table>

## Terms and Conditions

1. Service Tax @15% and other applicable taxes at the time of payment.
2. Report Delivery: Within 20 days after settling full payment.
3. Execution of work: Within 14 days from your confirmed order.
4. Billing: Variations from the work order will be taken into account and based on that final bill will be prepared.
5. The Standards used for calibration are traceable to National/ International Standards.
6. Quality of service will not be compromised for any reasons.
To create awareness as well as to provide this service to IMA-NHB hospitals, a meeting was held at Koodal Hall of Anna University between NHHID and IMA-TNSB office bearers on 16th April 2016. As an outcome of this meeting, 44 IMA-NHB hospitals in Chennai, Erode, Coimbatore, Madurai and Vellore were benefited by the testing and calibration of their medical equipment. NHHID appeals to the Tamil Nadu hospitals to make use this facility fully to ensure that the treatment rendered in their premises is with calibrated instruments and of higher quality and reliability. Together we should make this joint initiative of DST-TST and Anna University a big success and worthy model to emulate throughout the country.
Some Testimonial Feedback

“Reliable traceability certificates are provided. Pre visit NABH members were very much satisfied with the calibration reports.”
- BME, Cancer Institute, Adayar

“Perfect work by the experts. They provided the best solution for service too.”
- Girishwari Hospitals, Teynampet

“The coordination from the staffs was pleasing. And they were professional in handling the equipments”
- Manisundaram Medical Mission Hospital, Vellore

“Professional work done by the team. It would be even much better if service was provided along with calibration.”
- VeeCare Hospitals, Chennai

“We were unaware of calibration until the team explained it. And we are satisfied with their solutions too.”
- Arasan Eye Hospital, Erode

“From now on we will source our calibration requirements with Anna University calibration centre only.”
- Mahalakshmi Hospitals, Ambattur

OUR TECHNICAL MANAGEMENT TEAM

Our expert group is trained & certified in ISO 17025 LQMS & Measurement Uncertainty.

Dr. S. Muttan  
HOD,  
Dept. of ECE, Anna University

Dr. Shenbaga Devi  
Associate Professor & Director  
Centre for Medical Electronics, Anna University

Dr. S. Srinivasan  
Assistant Professor, Dept. of Instrumentation, Anna University

Dr. Bharanidharan Ganeshan  
Associate Professor, Medical Physics, Anna University

Dr. M. Sasikala  
Associate Professor, Centre for Medical Electronics, Anna University

Dr. S. Poonguzhali  
Associate Professor, Dept. of ECE, Anna University

Dr. M. Mythily  
Assistant Professor, MIT, Anna University

nhhidcalib@gmail.com  www.nhhid.org