



**ACCREDITATION COMMISSION FOR CONFORMITY ASSESSMENT BODIES**

**CAB Accreditation Guidance Document**

**Document Title:           Classification System For Calibration Laboratories**

**Document Number:       ACCAB-GD-3.0-C**

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<b>Revision Number</b>	<b>Revision Date</b>	<b>Paragraph Number</b>	<b>Description of Revision</b>	<b>Revision Author</b>
01	1/06/12	3.3.1.12	Addition of Scopes	
02	1/08/12	3.3	Reference to SI	

<b>GD-3.1</b>	<b>Purpose:</b>
GD-3.1.1	To ensure that the ACCAB applicants and accredited Calibration Laboratories can precisely define as possible each of the Calibration parameter for which it seeks accreditation.
<b>GD-3.2</b>	<b>Scope:</b>
GD-3.2.1	This guidance note is published for the informative use for the applicants and accredited Calibration Laboratories who follow the ACCAB accreditation.
<b>GD-3.3</b>	<b>Operation:</b>
GD-3.3.1	The scope of accreditation issued by ACCAB to its accredited laboratories is a formal document. The scope contains information for which accreditation has been granted in regards to types of calibrations performed, techniques used and detection limits.
GD-3.3.2	It is the obligation of the laboratory to prepare its proposed scope of accreditation before its initial assessment. The proposed scope of accreditation will be examined by the assessor during onsite assessment for accuracy and entirety. The laboratory and the assessor are required to sign the proposed scope of accreditation and submit it to ACCAB for review with the assessment report. The proposed scope of accreditation may be modified by ACCAB as a result of technical review of the assessment report.
GD-3.3.3	The scope of accreditation is subject to review during the accreditation and re-accreditation assessment. In case of routine surveillance the scope is subject to review in case it requires any changes.
GD-3.3.4	It is ACCAB policy to use SI (The International System of Units) for reporting results of measurements on scope of accreditation.
GD-3.3.5	ACCAB suggests that NIST SP 811 and ISO 31 series documents are used as direct guidance on the use of symbols and numbers. As it is obligatory on part of the ACCAB applicants and accredited Calibration Laboratories to know and understand the requirements of SI on their scope of accreditation.
GD-3.3.6	The classification is based on the Classification System for Calibration employed by the National Association of Testing Laboratories (NATA) in Australia. The ACCAB acknowledges the copyright of NATA in this respect.

	Classification	Sub Classifications
GD-3.3.6.1	<b>Electrical quantities</b>	<input type="checkbox"/> AC Current <input type="checkbox"/> DC Current <input type="checkbox"/> L.F. & H.F. Current <input type="checkbox"/> AC Voltage <input type="checkbox"/> DC Voltage <input type="checkbox"/> L.F. & H.F. Voltage <input type="checkbox"/> AC Resistance 1 kHz <input type="checkbox"/> DC Resistance <input type="checkbox"/> AC Power & Energy <input type="checkbox"/> Capacitance & Dielectric Loss Angle (Tanδ) 50 Hz <input type="checkbox"/> Capacitance (120 Hz & 1 kHz) <input type="checkbox"/> L.F. & H.F. Capacitance <input type="checkbox"/> L.F. & H.F. & Microwave Power <input type="checkbox"/> L.F. & H.F. & Microwave Attenuation <input type="checkbox"/> Inductance (1 kHz) <input type="checkbox"/> L.F. & H.F. Inductance <input type="checkbox"/> L.F. & H.F. Impedence <input type="checkbox"/> Microwave Impedance & Q Values <input type="checkbox"/> AC Ratio <input type="checkbox"/> Phase Angle
GD-3.3.6.2	<b>Magnetic quantities</b>	<input type="checkbox"/> dipole moment <input type="checkbox"/> flux <input type="checkbox"/> pole strength <input type="checkbox"/> vector potential <input type="checkbox"/> MMF <input type="checkbox"/> flux density <input type="checkbox"/> field intensity <input type="checkbox"/> polarization <input type="checkbox"/> inductance <input type="checkbox"/> permeability <input type="checkbox"/> magnetization <input type="checkbox"/> vector H <input type="checkbox"/> magnetic moment <input type="checkbox"/> reluctance
GD-3.3.6.3	<b>Time &amp; Frequency</b>	<input type="checkbox"/> Frequency <input type="checkbox"/> Time <input type="checkbox"/> Rotation Frequency <input type="checkbox"/> Antenna measuring range
GD-3.3.6.4	<b>Dimensional quantities</b>	<input type="checkbox"/> Length <input type="checkbox"/> Vertical length measuring equipments <input type="checkbox"/> Horizontal length measuring equipments <input type="checkbox"/> Co-ordinate measuring machines

		<input type="checkbox"/> Surface plate <input type="checkbox"/> Angle <input type="checkbox"/> Elongation <input type="checkbox"/> Surface roughness
GD-3.3.6.5	<b>Mechanical quantities</b>	<input type="checkbox"/> Mass (mass & density mass standards) <input type="checkbox"/> Weighing instruments <input type="checkbox"/> Pressure <input type="checkbox"/> Vacuum <input type="checkbox"/> Force <input type="checkbox"/> Torque <input type="checkbox"/> Hardness <input type="checkbox"/> Notch toughness <input type="checkbox"/> Acceleration
GD-3.3.6.6	<b>Acoustical quantities</b>	<input type="checkbox"/> Acoustic Pressure <input type="checkbox"/> Acoustic Power <input type="checkbox"/> Vibration Amplitude/ acceleration, <input type="checkbox"/> Frequency <input type="checkbox"/> Attenuation. <input type="checkbox"/> Ultrasonic intensity <input type="checkbox"/> Ultrasonic pressure <input type="checkbox"/> Ultrasonic total power <input type="checkbox"/> Vibration amplitude <input type="checkbox"/> Ultrasonic velocity <input type="checkbox"/> Ultrasonic Attenuation
GD-3.3.6.7	<b>Volumetric quantities</b>	<input type="checkbox"/> Volume <input type="checkbox"/> Flow – fluid <input type="checkbox"/> Flow-gas <input type="checkbox"/> Density-solid matter <input type="checkbox"/> Density-fluid <input type="checkbox"/> Density-gas <input type="checkbox"/> Emission test equipments <input type="checkbox"/> Gas measurement equipments <input type="checkbox"/> Alcoholmeter <input type="checkbox"/> Water Flow Measurement <input type="checkbox"/> Petroleum and other Non-aqueous Liquid Flow Measurements <input type="checkbox"/> Gas velocity <input type="checkbox"/> Viscosity
GD-3.3.6.8	<b>Optical quantities</b>	<input type="checkbox"/> Infrared Radiation <input type="checkbox"/> Fiber Optics Measurement (For Silica Based Fibers) <input type="checkbox"/> Fiber Optics Components Measurement <input type="checkbox"/> Fiber Optics Measurements

GD-3.3.6.9	<b>Ionizing radiation</b>	<input type="checkbox"/> Activity radionuclide's <input type="checkbox"/> Yield of neutron sources <input type="checkbox"/> Thermal neutron flux density <input type="checkbox"/> Fast neutron flux density (14 MeV) <input type="checkbox"/> Exposure (Co-60 ref) <input type="checkbox"/> X-rays & Gamma rays <input type="checkbox"/> Absorbed dose (fast electrons X-rays and gamma rays) (co-60) <input type="checkbox"/> Dose equivalent
GD-3.3.6.10	<b>Temperature, humidity &amp; thermo physical properties</b>	<input type="checkbox"/> Temperature <input type="checkbox"/> Humidity <input type="checkbox"/> Specific Heat
GD-3.3.6.11	<b>Chemical Analysis, reference materials</b>	<input type="checkbox"/> Reference materials-gas <input type="checkbox"/> Reference material-fluid <input type="checkbox"/> Reference material solid matter <input type="checkbox"/> Chemistry measurement equipments