

[illegible]



											5–50 μm (micro-CT); 0.1–1 mm (high-resolution DEXA). -BMD Measurement Range: 0–2.5 g/cm^2 -Accuracy: $\pm 1\text{--}2\%$ -Precision: 0.5–1% coefficient of variation (CV) for repeat scans. -Scan Time :1–30 minutes (depends on resolution and sample size). -Sample Size: Up to 12 cm diameter (micro-CT); small-animal whole-body scans (DEXA). -Radiation Dose :Very low (micro-CT: <100 mGy; DEXA: <10 μSv).	
										1	<u>Viscometer</u> - Viscosity measuring range: 1 - 2,000,000 cP - Accuracy: $\pm 1\%$ of full scale - Rotation speeds: 0.3, 1.5, 6, 12, 30, 60 rpm - touch screen with simple interface - Immersion temperature sensor :	٣



											up to 100 °C - Spindle set: consisting of L1, L2, L3, L4	
										1	<u>Surface tension with the ring method (Du Nouy method)</u> -Torsion dynamometer, 0.01 N - Surface tension measuring ring -Magnetic stirring bar, -Right angle boss-head clamp -Crystallising dishes,various sizes -Silk thread -Glass tubes,straight, 150 mm, 10 -Stopcock,1-way,straight, glass -Silicone tubing, various diameters diameter: 7 mm -Bulb pipettes, various sizes Volume: 10-12 ml -Bulb pipettes, various sizes Volume: 20-30 ml -Pipettor -Pipette dish -Graduated cylinders, various sizes Volume: 100-120 ml -Ethyl alcohol -Olive oil,pure 100 ml	ε



										1	<u>IR Thermometer / Dew-Point Meter</u> - 3 in 1 Combi-instrument for environment measurement - Infrared surface measurement - Dew-Point Range: -40°C to +100°C High-accuracy models: -60°C to +60°C (for low-humidity applications). - Dewpoint calculation - Air temperature measurement - Relative humidity measurement - Evaluation-LED and audible alarm	٥
										1	<u>Direct determination of lung volume from a spirogram</u> - Spirometer - Sensor for measuring the respiratory volume - measurement software for different operating systems	٦
										1	<u>Physical Fitness</u> -Needle electrodes: Stainless steel or platinum-iridium needles with a recording surface at the tip.	٧



											-Amplifier: -Boosts weak electrical signals -High input impedance ($>100\text{ M}\Omega$) - Filters: - Bandpass filtering (typically 20 Hz – 15 kHz for needle EMG; 10 Hz – 600 Hz for sEMG) (e.g., power interference). -Analog-to-Digital Converter (ADC): - Sampling rates: 1–3kHz for clinical use; up to 15 kHz for research. -Visualizes signals: as waveforms (oscilloscope).	
										1	<u>Blood pressure measurement</u> - Blood Pressure - Sensor for measuring blood pressure 0 -320 mmHg - measurement software	8
										1	<u>The Stroop effect (lie detector)</u> <u>–Skin Resistance</u> - Skin Resistance - Sensor for measuring the conductivity of the skin (GSR) 0 - 8 μS -Set with 15 self-sticking electrodes for ECG and Skin Resistance	9



											- measurement software	
										1	<u>Electrocardiography (ECG)</u> - ECG measuring device 0 – 4 mV -Set with 20 self-sticking electrodes for ECG and Skin Resistance - measurement software	10
										1	<u>Electromyograph</u> -Needle electrodes: Stainless steel or platinum-iridium needles with a recording surface at the tip. -Amplifier: -Boosts weak electrical signals -High input impedance ($> 90 \text{ M}\Omega$). - Filters: Bandpass filtering (30 Hz – 10 kHz for needle EMG; 10 Hz – 500 Hz for sEMG) (e.g., power interference). - Analog-to-Digital Converter (ADC): Converts analog muscle signals to digital data for analysis. Sampling rates: 1–4 kHz for clinical use; up to 20 kHz for research. -Visualizes signals as waveforms (oscilloscope-like display).	11



										1	<u>Nerve Conduction Velocity (NCV) Machine</u> -Stimulation Intensity: 0–100 mA -Pulse Duration: 0.05–1 ms (typically 0.1–0.2 ms for sensory nerves, 0.2–0.5 ms for motor nerves). -Recording Sensitivity 1–8 $\mu\text{V}/\text{division}$ (sensory nerves), 100–400 $\mu\text{V}/\text{division}$ (motor nerves). -Signal Bandwidth :2 Hz–10 kHz (adjustable based on nerve type). -Noise Level <1 μV RMS - Temperature Control Skin temperature monitoring	12
										1	<u>Eye and Vision</u> -Eye function model -Lens holder for eye model -Simulation glasses eye diseases -Glass-beaded object in L"-form -Slide mount for optical bench -glass lenses for eye function model, set of -3D glasses -Mirror -Plastic pipe -Knitting needle -Physiological vision figures -Color blindness cards	13



											-Red-Green Low vision card Card with hole, centered	
										1	<u>Phoropter</u> -Lens Precision : Increments of ± 0.25 D (sphere/cylinder), 1° axis adjustments. -Prism Range: 0–20Δ (horizontal/vertical). -PD Adjustment: 40–80 mm (manual or automated). - Vertex Distance: 0–16 mm (adjustable via knobs or digital settings). - Weight : 8–15 kg (varies by model; lighter for portable units). - Power Source :Manual operation or 12V DC motorized systems (auto-phoropters)	14
										1	<u>Optical Power Meter</u> -Portable/Handheld Optical Power Meter -Wavelength Range: 800 nm to 1700 nm (covering multimode 850/1300 nm, single-mode 1310/1550 nm, and CWDM/DWDM). - Power Measurement Range: -70 dBm to +30 dBm (0.1 nW to 10 W).	15



											- Accuracy: $\pm 2\%$ of reading (± 0.1 dB) at 23°C, traceable to NIST. - Resolution: 0.01 dBm (log scale) / 1 pW (linear scale). - Detector Type: InGaAs photodiode (user-selectable for optimized wavelength response). - Calibration: Factory-calibrated with NIST traceability; 5-point calibration certificate included. - Linearity: $\pm 0.5\%$ over full range.	
										1	<u>Inductance of solenoids</u> -Digital storage oscilloscope with USB, 100 MHz / 2CH, 1GS/s -Digital Function Generator	16
										1	<u>Standing waves</u> -Software "Measure Acoustics", single user license - Metal angle bracket for glass tube -Beaker, 100 ml - Glass tube, -Measuring tape	17
										1	<u>Stefan-Boltzmann's law of radiation with an amplifier</u>	18



											-Optical bench expert l = 600 mm -Slide mount for optical bench expert, h = 80 mm -Universal measuring amplifier -Thermopile, Moll type -power supply, variable DC: 10 V, 5 A / AC: 15 V, 5 A -Filament lamp 6V/5A -Resistor 100 Ohm 2%, 1W, G1 -Digital multimeter, 500V AC/DC, 10A AC/DC. -Connecting cable, 32 A , various length, various colors. -Shielding tube	
										1	<u>Thermal expansion in solids and liquids</u> -Dilatometer with clock gauge -Immersion thermostat Alpha A, 200 V -External circulation set for thermostat Alpha A -Bath for thermostat, -Lab thermometer,-10-+110 °C -Rubber hose, various diameters -Cannula 0.6x60 mm, -Wash bottle, 250 ml, plastic -Flat bottom flask, 100ml -Beakers, various sizes Volume: 100 ml -Ethyl acetate 200 ml	19



											-Glycerol, 200 ml -Olive oil,pure 100 ml -Rubber hose, various diameters -Pycnometer, calibrated, 30 ml - Digital multimeter, 600V AC/DC, 10A AC/DC. -Portable Balance	
										1	<u>Fibre-optics spectrophotometer</u> -Spectral range: 350 - 800 nm -Resolution: 1 nm -linear CCD with 3600 px -Integration time: adjustable from 0,1 ms to 60 s -Assembly type: Czerny Turner -Grating: 600 Lines / mm -Connection to computer: USB 2.0 -Optical fibre connection: SMA 905 - Fibre: 2 m + Fibre holder - Installed Software	20