iWorx TA Exercise Physiology Teaching Kits

SETTING THE STANDARD FOR EASE-OF-USE

iWorx offers complete solutions for the teaching of exercise physiology as well as advanced, high performance systems for metabolic research. iWorx TA Control Module is the heart of iWorx TA systems and is designed to simplify many of the tedious set-up and calibration routines typically required to perform a lab.

The HEK-TA-200 Kit (shown) includes the research grade GA-200 Gas Analyzer and the HEK-TA-300 Kit includes the Teaching Grade HEK-TA-300 Gas Analyzer..

Exercise Physiology Kits

In addition to either the GA-200 or GA-300 Gas Analyzer and Calibration Kit, iWorx Exercise Physiology Kits include:

- TA Control Module with iWire-compatible Biopotential (ECG, EMG) Recording Module, Built-in Stimulators, and LabScribe Software with the Metabolic Calculations Module
- Reusable 1000L and 300L Flow Head
- Polar® Heart Rate Monitor Transmitter/Receiver
- Non-Invasive Blood Pressure Sensor
- Temperature Sensor
- Grip Force Sensor
- Event Marker
- Pulse Plethysmograph
- Heart Sounds Sensor
- Striated Muscle Transducer
- Face Mask, Head Gear Assembly and Non-rebreathing Valve
- Mixing Chamber, Electrodes and Tubing
- Courseware and Cables

iwire COMPATIBLE

Metabolic Measurements

The kits are suitable for recording and measuring:

- Basal Metabolic Rate (BMR)
- Resting Metabolic Rate (RMR)
- Respiratory Exchange Ratio (RER)
- Basal Metabolic Rate (BMR)
- Resting Metabolic Rate (RMR)
- Respiratory Exchange Ratio (RER)
- Sedentary to light activity VO_2 and VCO_2
- VO_2 max
- as well as the measurement of blood pressure, cardiograms, myograms, encephalograms, reflex responses, heart rate, spirometry, and more.

iworx

iWorx Systems, Inc.

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iWorx Exercise Physiology Courseware

EVERYTHING YOU NEED FOR THE EXERCISE PHYSIOLOGY TEACHING LABS

iWorx courseware includes over 50 experiments and 175 exercises in metabolic, cardiovascular and neuromuscular physiology, as well as all of the components and professionally developed courseware you need to conduct the labs. Use pre-configured teaching kits or iWorx unique LabsByDesign approach to simply choose only the equipment you need for the labs you want to teach.

Exercise Physiology/Kinesiology Experiments

- Resting Metabolic Rate (RMR / Respiratory Exchange Ratio)
- Regulation of Body Temperature and the Respiratory Exchange Ratio (RER)
- Metabolic and Thermal Response to Exercise
- Recovery from Exercise
- Exercise, Blood Pressure, and Oxygen Saturation Levels
- Resting, Active, and Exercising Metabolic Rates

Human Circulation

- Blood Pressure, Peripheral Circulation, and Body Position
- Blood Pressure, Peripheral Circulation, and Imposed conditions
- Pulse Wave Velocity
- Pulse Contour Analysis

Human Heart

- The Electrocardiogram (ECG) and the Pulse
- Heart Sounds and the Electrocardiogram (ECG)
- The Effects of Exercise on the Electrocardiogram (ECG) and the Pulse
- The Six-Lead Electrocardiogram
- The Diving Reflex
- Heart Rate Variability (HRV)

Human Muscle

- Grip Strength and Electromyogram (EMG) Activity
- Electromyogram Activity in Antagonistic Muscles
- Oculomotor Muscle Activity
- Response, Work, Summation and Tetanus in Human Muscle

Human Spirometry

- Breathing Parameters at Rest and after Exercise
- Breathing and Gravity
- Factors that Affect Breathing Patterns
- Lung Volumes and Heart Rate

Human Nerve

- Auditory and Visual Reflexes
- Stretch Receptors and Reflexes with Reflex Hammer
- Stretch Receptors and Reflexes with Plethysmograph

Human Psychophysiology

- Electroencephalogram (EEG) Wave Patterns and Cortical Arousal using Snap Electrodes
- Heart Rate, Blood Pressure
- Personality and Vagal Tone
- Vigilance and Reaction Time
- Cynicism/Hostility and the Hot Reactor

Small Animal Physiology

- Small Animal Respiratory Exchange Ratio

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