Intact *in vitro* Muscle Test System

1200A | 1205A

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The industry leading, easy-to-use test system for measuring the mechanical properties of isolated muscle, bundles and strips

The 1200A and 1205A isolated muscle test systems are an industry leading solution for quantifying mechanical properties of isolated muscle. These systems are ideal for a number of limb muscles including the TA, EDL, Soleus, Gastroc, diaphragm strips and smaller muscle samples in addition to artificial polymers or films.

The systems contain a stage apparatus for either mouse or rat, complete with a water-jacketed bath and oxygenating bubbler. In addition, they include our flagship dual-mode muscle lever system, high-power stimulator, data acquisition hardware and system control and analysis software on a customized PC. Experimental setup, data collection and data analysis can all be done in a matter of minutes.

Parameters such as resting length, resting force, stimulation and the actual test protocol are all set using the control software. An extensive library of standard experimental protocols such as twitch, tetanus, fatigue, force-frequency, force-velocity, stiffness and work loops are also provided with the system.

The experimental setup apparatus is adjustable allowing the researcher to lower and raise the bath to attach and manipulate the muscle. In addition, force and length are measured at only one attachment point, minimizing setup time and boosting productivity. Choose the 1200A and 1205A systems for performance, precision and progress.

System Components

300C/305C - Dual-Mode Muscle Lever System
605A - Complete Data Acquisition and Digital Controller System
800A/805A - Mouse or Rat *in vitro* Muscle Apparatus
701C - High-Power, Bi-Phase Stimulator

Features

Convenience of one test system capable of studying both mice and rats

Turn-key *in vitro* functionality

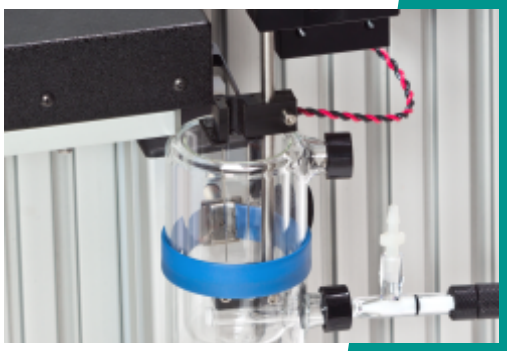
Industry leading resolution of isolated muscle measurements

Fast data acquisition and analysis software for Windows

Simple to assemble, operate, and expand as your measurement needs change

Capable of more complex multi-measurement protocols

Range of peak forces from 0.5N to 10N

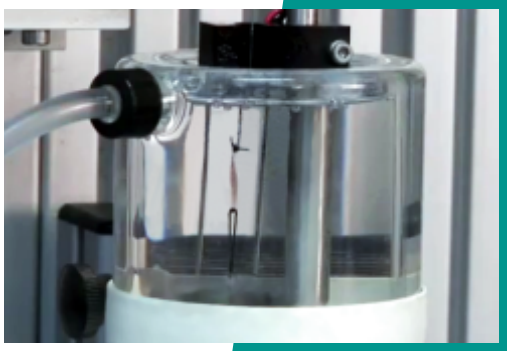


Go Beyond Isometric Measurements

Complete characterization of muscle function is achieved using our 300C series Dual Mode Muscle Levers; a force transducer and fast length motor in one. Isotonic, eccentric and force-velocity protocols are easily accomplished and supplement basic isometric twitch and tetanus measurements.

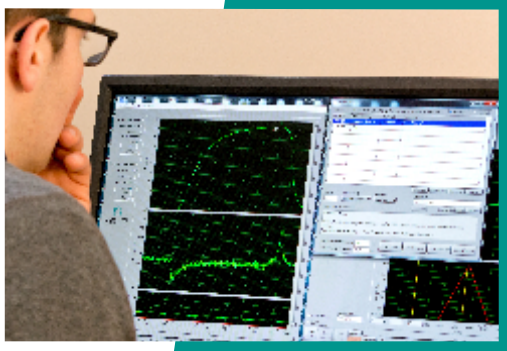
Lightning Fast Data Analysis

Experience high-throughput data analysis, including batch processing and multi-parameter calculations for hundreds of muscle samples within minutes. Downstream analysis can be completed within Aurora Scientific DMA/DMC software or exported to your analysis program of choice.



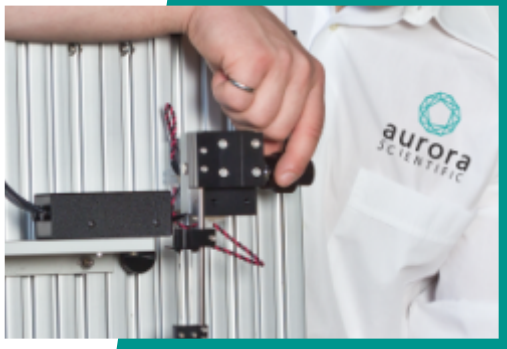
Precise and Robust Components

We pride ourselves on a long history of supplying some of the most accurate transducers and muscle physiology components for life science research. More importantly, our legacy systems dating back more than 30 years speak for themselves – we make quality products that last.



Standard Protocol Library

The protocol library includes a variety of muscle experiments for mouse and rat *in vitro* studies. Protocols include system operation and data acquisition settings optimized for sample type and measurement needs. Add your own custom protocols as well to streamline system operation with multiple lab members.



Friendly and Reliable Support

We stand by our products and by our customers. We can provide complete onsite installation, full service training and detailed instruction regarding software controls. As your partner in research we do all we can to ensure your studies stay on track and deliver the data you need.

Select Publications

Modulation of muscle atrophy, fatigue and MLC phosphorylation by MuRF1 as indicated by hindlimb suspension studies on MuRF1-KO mice.

Labeit S, Granzier H, et al. *Journal of Biomedicine and Biotechnology* (2010): Ariticle ID 693741. PMID: 20625437

Diaphragm muscle fiber weakness in pulmonary hypertension.

de Man, FS, et al. *American Journal of Respiratory and Critical Care Medicine* 183.10 (2011): 1411-1418. PMID: 21131469

Functional, morphological, and apoptotic alterations in skeletal muscle of ARC deficient mice.

Mitchell, AS, et. al *Apoptosis.* 2015 Mar;20(3):310-26. PMID: 25596718

Isometric and eccentric force generation assessment of skeletal muscles isolated from murine models of muscular dystrophies.

Moorwood, C, et al. *JoVE (Journal of Visualized Experiments)* 71 (2013): e50036-e50036. PMID: 23407283

Global Sales & Support Offices

Americas, Middle East, Africa

Aurora Scientific Incorporated
25 Industry Street,
Aurora, ON, Canada
L4G 1X6

Tel: +1-905-727-5161
Toll free (NA): +1-877-878-4784
Fax: +1-905-713-6882

Europe

Aurora Scientific Europe
Landscape House
Landscape Road, Churchtown
Dublin, D14A6P3
Ireland

Tel: +353-1-525-3300
Fax: +353-1-443-0784

Asia, Australia, New Zealand

Aurora Scientific Asia
Unit B, 10/F., Charmhill Centre
50 Hillwood Road
Tsimshatsui, Kowloon, HK

Tel: +852-3188-9946
Fax: +852-2724-2633

Global Email: info@AuroraScientific.com

Distributor

Japan

Kantoh Electronics Co., Ltd.
1-25-14, Nakacho, Meguro-ku
Tokyo, 153-0065,
Japan

Tel: +81-03-5773-5028
Fax: +81-03-5773-5029

info@Kantoh-elec.co.jp
www.kantoh-elec.co.jp

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