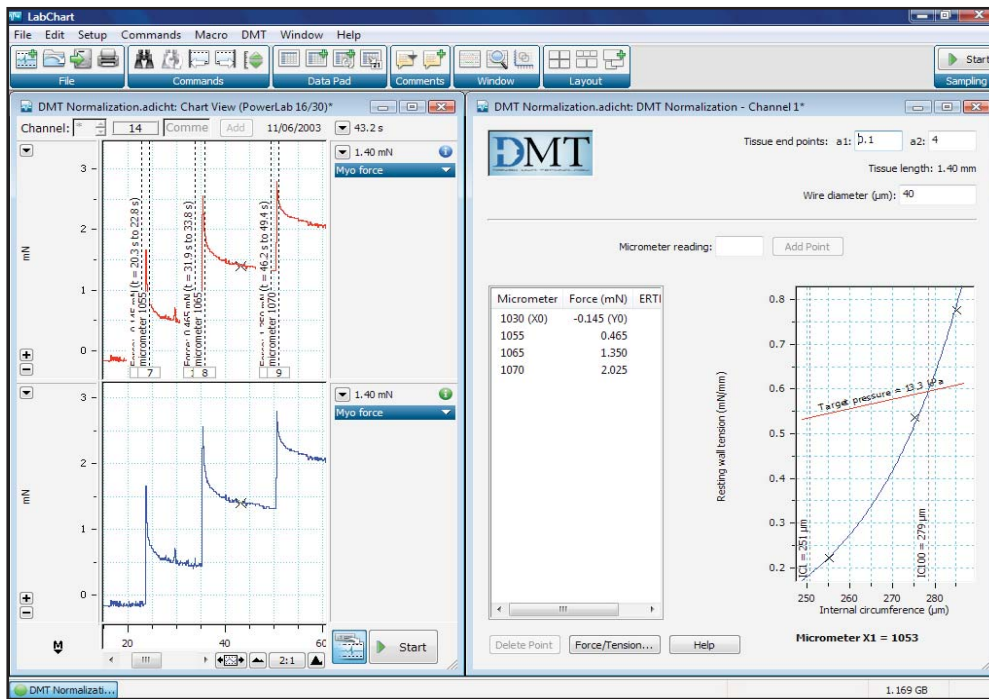


DMT Normalization

DMT Normalization Module for LabChart® Software & PowerLab®



DMT Normalization window with stepwise distension of the tissue using the micrometer and the developed force measured. The graph on the right is automatically generated from the calculated internal circumference and resting wall tension.

The DMT Normalization Module is used when performing *in vitro* experiments on isolated vessels with Danish Myo Technology (DMT) wire myographs. The module is used to calculate and set the optimal pretension conditions for microvessels or other tubular tissues prior to commencing experiments.

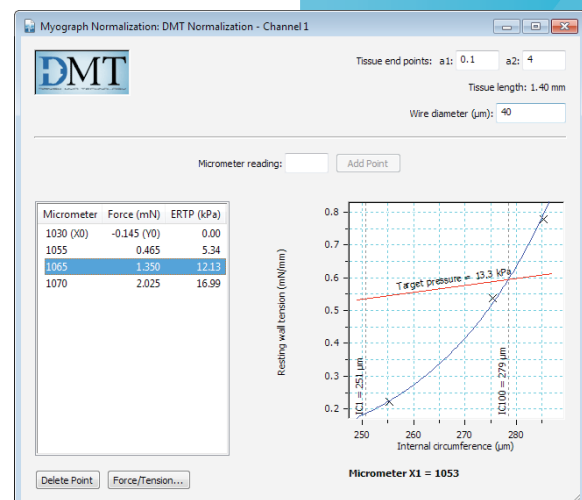
The normalization procedure determines the internal circumference at which the vessel would be under an optimum pre-tension and a transmural pressure of 100 mmHg. This index is denoted as IC100 and is calculated for each vessel mounted on the wire myograph. Using the DMT Normalization Module, the user can enter different micrometer settings that involve sequential stretching of the tissue. The resultant force exerted by the vessel walls can be recorded in LabChart. More information on the normalization of elastic tissues such as microvessels can be found in studies by Professor Michael Mulvany, Circulation Research 1977, 41: 19-26.

Applications that require tissue normalization include isometric tension, isotonic contraction, wire myography, organ bath experiments, muscle tissue contraction, microvascular tension and dose response experiments.

Features & Benefits

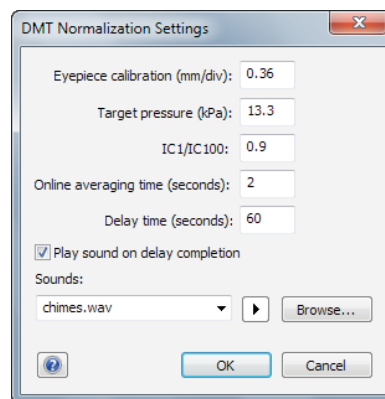
- Calculate and set optimal pretension conditions for tubular tissues before experimentation
- Automatically generate standard curve for individual tissue pieces
- Generate printable reports with a graph and micrometer settings for each piece of tissue
- Quick and easy normalization procedure drastically reduces optimization time.

Chart View of the DMT Normalization Module.



DMT Normalization Module

The DMT Normalization module provides the micrometer settings required to achieve desired pre-tension conditions for individual tissues for a variety of experiments by standardizing the internal circumference of each piece of tissue. The module allows you to enter different micrometer settings that sequentially stretch the tissue and record the force on the vessel wall. It then automatically displays an exponential curve of the tissue's internal circumference versus resting wall tension. There is a separate Normalization Window for different channels, so individual tissue length and wire diameter can be entered to generate an individual curve. The module automatically stops and provides the final micrometer reading when the transmural pressure exceeds 100 mmHg.



DMT Normalization settings window.

Settings Dialog

The settings dialog allows you to set microscope eyepiece calibration, target pressure (effective pressure), IC1/IC100 ratio, online averaging time and force reading delay (when automated feature is used). There is also the option to play an alert sound when the time delay expires.

Calculated Parameters

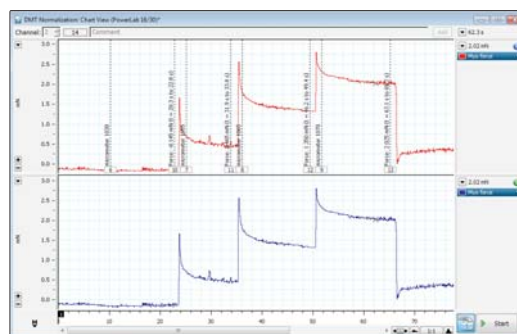
This module automatically calculates tissue length, wall tension, vessel internal circumferences, and the final micrometer reading for standardizing each piece of tissue.

Data Export

You can generate a printable report containing contents of the Normalization Window and the final micrometer reading for standardizing each piece of tissue.

LabChart Pro

LabChart Pro provides researchers with more acquisition and analysis power at a great price. It comprises LabChart software, LabChart Modules (including the DMT Normalization Module) and 5 years of free upgrades. You can obtain any new LabChart Modules released during the 5 year period at no extra cost. All software is conveniently available for download. An evaluation version is available.



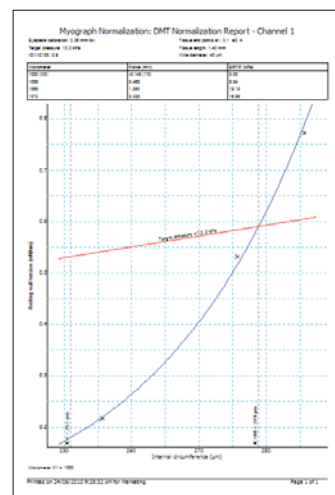
LabChart file showing stepwise distension and force measurement of the tissue.

Ordering Information

DMT Normalization Module	LabChart Pro* (sold separately)
MLS065/7 DMT Normalization (Win)	MLS260/7 LabChart Pro (Win & Mac)

* LabChart Pro includes LabChart software and all LabChart Modules, providing powerful data acquisition and analysis capabilities.

 Share your data with colleagues. Free LabChart Reader – download to view and analyze LabChart data.



DMT Normalization Report.

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PowerLab systems and signal conditioners meet the European EMC directive. ADInstruments signal conditioners for human use are approved to the IEC60601-1 patient safety standard and meet the CSA C22.2 No. 601.1-M90 and UL Std No. 2601-1 safety of medical electrical equipment standards.



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