

Calculate and set optimal pretension conditions for *in vitro* microvessels and other tubular tissues.

Utilize the DMT Normalization Module for LabChart to drastically ease and reduce the microvessel optimization time using a Danish Myo Technology (DMT) wire myograph.

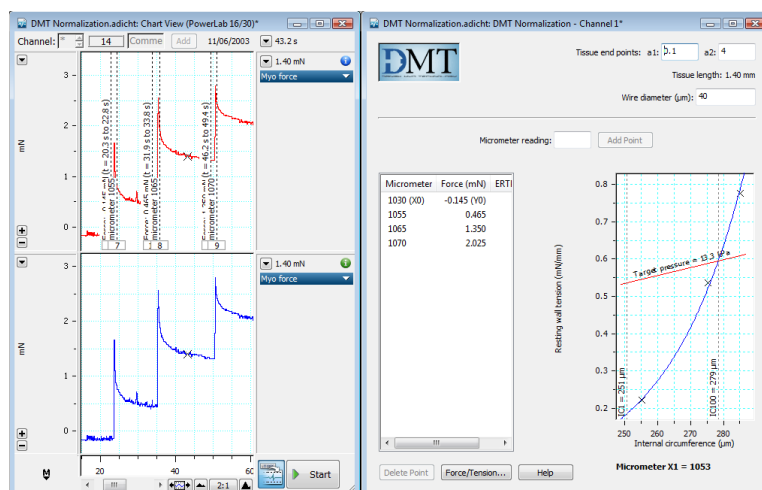
The optimum pretension of each mounted vessel on the wire myograph is set by setting your desired target transmural pressure, which is usually 100 mmHg or 13.3 kPa. Working with the myography to change the vessel's internal circumference, you can easily and quickly plot a tension versus internal circumference exponential curve, which is then used to automatically calculate when its internal circumference would correspond to your selected transmural pressure.

Instantly, you are then provided the micrometer setting that you should set to achieve your desired optimisation. You can quickly repeat the procedure for the rest of your mounted tissue that you wish to simultaneously study.

After optimizing all vessels, LabChart software easily records and displays the tissues tension changes in response to your introduced agonist and/or antagonist.

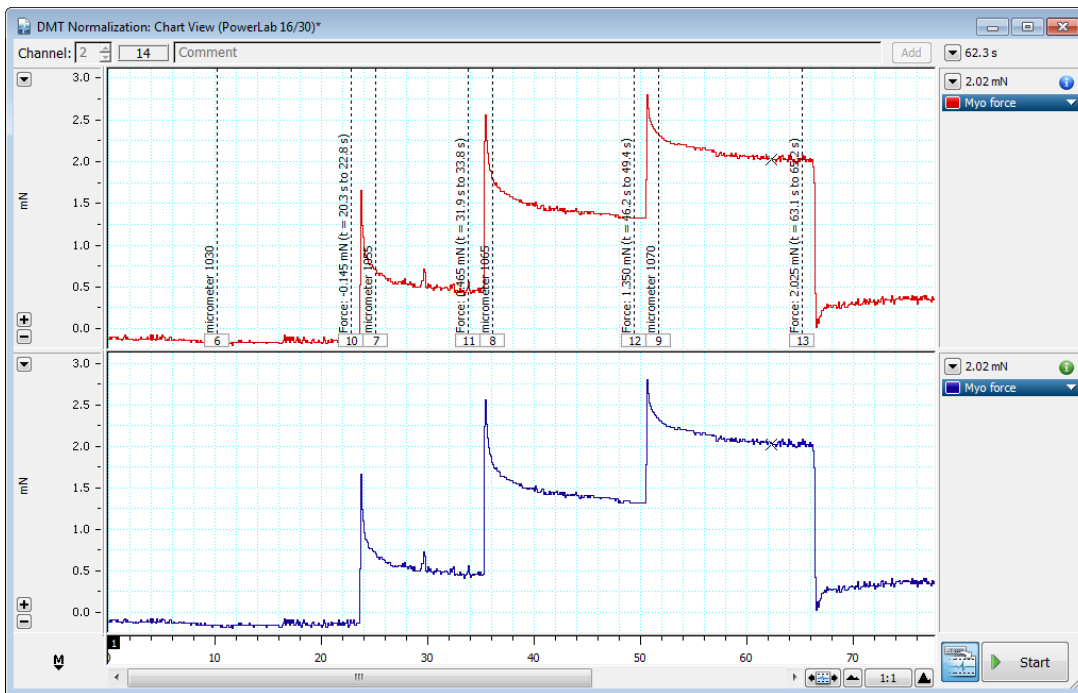
Applications

- Isometric tension
- Isotonic contraction
- Wire myography
- Organ bath experiments
- Muscle tissue contraction
- Microvascular tension
- Dose-response experiments



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





Left: Chart View displays the stepwise distension and force measurement for each tissue. Add comments directly to Chart View.

Below: Chart View of the DMT Normalization Module.

Settings Dialog

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

Calculated Parameters

This module automatically calculates tissue length, wall tension, IC100 (internal circumference at 100 mmHg target pressure), IC1, internal vessel circumferences, and the final micrometer reading for standardizing each piece of tissue.

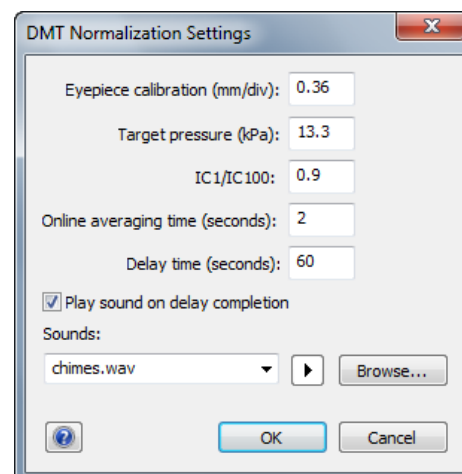
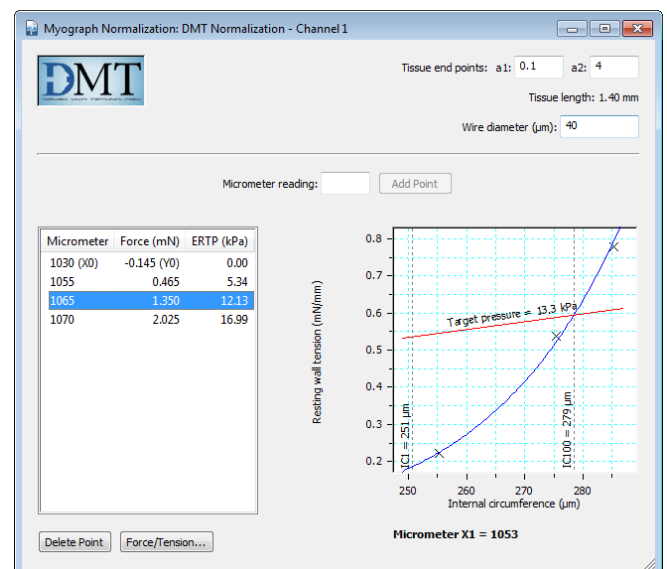
Data Export

Generate a printable report containing the contents of the Normalization Window, including the final micrometer reading for standardizing each piece of tissue. This includes the normalized internal circumference value and the settings used to achieve the readings.

Ordering Information

The DMT Normalization Module for LabChart can be purchased individually as an Add-On for LabChart 8 (MLS065/8, Windows or Mac), or as part of LabChart Pro (MLS260/8).

LabChart Pro includes LabChart software and all LabChart Modules, providing powerful data acquisition and analysis capabilities (available for Windows or Mac).



Left: DMT Normalization settings window

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