

MyotonPRO

Technical Specification

rev. November 2020

DEVICE TYPE AND MEASUREMENT METHOD

Classification Category	<ul style="list-style-type: none"> For Research Use Only Monitoring device for non-vital physiological parameters
Type of Device	<ul style="list-style-type: none"> Myometer for <i>in vivo</i> non-invasive measurement of superficial soft biological tissues
Measurement method	<ul style="list-style-type: none"> Based on exerting a damped mechanical oscillation of soft biological tissue by using an exterior, light, quick-release mechanical impulse under constant pre-load.
Measurable parameters	<ul style="list-style-type: none"> State of tension: <ul style="list-style-type: none"> Tissue oscillation frequency [Hz] - characterizing Tone or Sate of Tension Biomechanical properties: <ul style="list-style-type: none"> Dynamic Stiffness [N/m] Logarithmic Decrement of the oscillation – characterizing Elasticity and dissipation of mechanical energy Viscoelastic properties: <ul style="list-style-type: none"> Mechanical Stress Relaxation time [ms] Ratio of Deformation and Mechanical Stress Relaxation time - characterizing Creep (Deborah number)
Range of measurement Min - Max	<ul style="list-style-type: none"> Natural oscillation frequency - 10 – 55Hz Logarithmic Decrement - 0,3 – 2,5 Dynamic Stiffness - 100 – 1500N/m Mechanical Stress Relaxation time - 5 – 40ms Ratio of Deformation - 0,3 – 2,5
Coefficient of Variation	<ul style="list-style-type: none"> Natural oscillation frequency - 0,6% Logarithmic Decrement - 1.8% Dynamic Stiffness - 1.7% Mechanical Stress Relaxation time - 1.2% Ratio of Deformation - 1.5%

MEASUREMENT SYSTEM

Measurement sensor	<ul style="list-style-type: none"> 3-axis Digital Acceleration Sensor,
Measurement probe	Flat end, diameter 3mm, user replaceable, made of PMMA

Pre-load force	<ul style="list-style-type: none">• 0,18[N] - automatic, measurement direction independent
Impulse force	<ul style="list-style-type: none">• 0,40[N] - automatic, measurement direction independent
Impulse time	<ul style="list-style-type: none">• Default impulse time 15ms• User configurable from 5 to 30ms, step 1ms
Tissue oscillation recording time	<ul style="list-style-type: none">• 400ms
Calibration	<ul style="list-style-type: none">• Calibrated by the manufacturer

POWER AND BATTERY

Battery	<ul style="list-style-type: none">• Lithium Polymer Battery, 2260mAh, 3.7V, 8.4Wh
Charger	<ul style="list-style-type: none">• Medical grade USB charger, AC-DC Adapter, Input AC 100-240V 50/60Hz, Output DC 5V, 1A, 5.0V, 500mA
Charge time, cycles	<ul style="list-style-type: none">• Up to 5 hours, battery life-time min. 500 full charge cycles
Operation time	<ul style="list-style-type: none">• 6 to 8 hours in continuous operation

DISPLAY AND DATA TRANSFER

Display	<ul style="list-style-type: none">• OLED Display 2.83" resistive touchscreen
Data storage	<ul style="list-style-type: none">• Internal MicroSD 4GB
Data transfer cable	<ul style="list-style-type: none">• USB type A plug to Micro USB type B plug

ENVIRONMENTAL CONDITIONS

Operating conditions	<ul style="list-style-type: none">• in-door use, -5 to +50°C (23 to 122°F)
Relative air humidity	<ul style="list-style-type: none">• 0 - 95%RH not condensed

DEVICE HOUSING

Colour	<ul style="list-style-type: none">• White, green, grey
Material	<ul style="list-style-type: none">• Polycarbonate & thermoplastic
Weight, dimensions	<ul style="list-style-type: none">• 230g, 162 x 67 x 28mm

END OF THE SPECIFICATION