MOHR™ MDT-2 Series
Computerized Penetrometer and Texture Analyzer
Sophisticated materials testing in a rugged portable package

Key Features
- *Constant rate, Crispness, and Creep testing*
- *Eliminates operator and transcription errors*
- *Tension and compression modes*
- *5 mg (1x10^{-5} lb.) force sensitivity (24-bit ADC)*
- *±30 kg (±65 lb.) standard load cell range*
- *0.001 mm (1x10^{-5} in.) distance precision*
- *Precision external scale / automated calibrator*
- *2+ GB storage, enough for thousands of tests*
- *USB host/client, 10/100 Ethernet*
- *Lightweight with bright color touchscreen*

MOHR MDT-2 Series instruments are the industry's most capable portable agricultural firmness testers, featuring unmatched precision, unique texture analysis capabilities, intuitive data visualization tools, and rugged portability.

Optimized for Fruit and Vegetable Testing
Specialized probes and test routines for:

- *Apples*
- *Pears*
- *Grapes*
- *Cherries*
- *Kiwi*
- *Tomatoes*
- *Potatoes*
- *Watermelon*
- *Many more*

Unique, Meaningful Test Data
- Repeatable, accurate results every time
- Complete fruit maturity data:
  - *Constant rate* penetrometer testing
  - *Internal and external* fruit pressure
  - *Crispness* textural characteristics
  - *Creep* viscoelastic properties
  - *Quality Factor (QF)*: Variety-specific statistical measure helps guide picking, packing, and retail handling decisions
- Real-time graphics and **instant statistics** as you test

Major Cost and Efficiency Savings
- Save 50% or more of the time you spend testing and managing data
- Fast testing — 25+ tests/minute
- Automated reports with network integration
- Barcode scanning
- Automatic diameter and weight measurements
- Store titrable acidity, soluble solids, color data

MDT-2 Penetrometer and Texture Analyzer

Standard external precision scale

Variety of interchangeable probe types

Specifications

Force System Characteristics
Standard internal and external load cells:
    Type: Stainless-steel S-beam with overstress guards
    Range: ±30 kg (±65 lbs.)
    Sensitivity: 5 mg (1×10^{-5} lbs.) at default gain settings
Instrumentation amplifiers (internal, external channels):
    Type: Differential input, zero drift, programmable gain
    Default gain: 176x
Analog-to-digital conversion (internal, external channels):
    Sample resolution: 24 bits
    Sample rate: up to 14 kHz

Distance System Characteristics
Type: Brushless DC servo with optical quadrature feedback
Range: 7.3 cm (2.9 in.)
Precision: 0.001 mm
Sampling resolution: 32 bits
Velocity: 0 - ~100 mm/s
Velocity resolution: 32 bits
Acceleration resolution: 32 bits

Test Capabilities
Multi-region testing
Thousands of samples per test
Simple and/or complex test parameters:
    Constant velocity
    Creep: Deformation under constant force
    Crispness: Time-dependent fracture characteristics

Software Features
Real-time graphical display
User-configurable fruit types
Powerful easy-to-use relational database
Instant comparative statistics

Data Storage
2+ GB flash memory, thousands of tests
USB thumbdrive ready
Remote data storage over Ethernet

Connectivity
4x USB host for keyboard, barcode, and/or external instrumentation
USB client and 10/100/1000 Mb Ethernet for PC connection
Remote testing with real-time data using Winapples™ software

Display
Color LED-BL 14.5 cm (5.7 in.) VGA TFT-LCD, > 600 cd/m^2

Power System
AC Power: 110/220 VAC (±10%), 50/60 Hz 1-phase, using AC adapter
Battery Power: Internal NiMH DC battery
Battery Life: >1000 tests (typical use)
Battery Charging: <1 h low-battery, <4 h fully-discharged

Environmental and Mechanical
Operating / Non-Operating Temp.: +0ºC to +50ºC / -20ºC to +60ºC
Dimensions: 42.0(H) x 17.8(W) x 20.3(L) cm (16.5 x 7.0 x 8.0 in.)
Weight: ~ 4.5 kg (10 lbs.)

Regulatory
Complies with all applicable EU directives, as specified by the Declaration of Conformity supplied with the instrument.

Ordering Information

General Options
MDT-2 Base Unit

Standard Accessories
Test probe
Winapples™ software
Calibration kit
Quick-load Teflon® base
Precision external scale
AC power adapter and cable
USB and Ethernet cables
Operator's manual
12-month limited warranty

Optional Accessories
USB Add-Ons
Small Form-Factor Keyboard MDT2-AC-KBD
Barcode Reader Kit MDT2-AC-BCD

Test Probes
Probe 4 mm MDT2-AC-P4M
Probe 8 mm MDT2-AC-P8M
Probe 11 mm MDT2-AC-P11M
Probe Cherry MDT2-AC-PCH
Probe Compress MDT2-AC-PCM
Probe Rheology MDT2-AC-PRH

This product or use of this product covered by U.S. Patent #6643599; other patents pending.

MOHR™
Test and Measurement Solutions for Industry ™