


Gunpowder ■ Sands ■
Casings ■ Crackers ■ Hog Fuel
Kaolin ■ Soda Ash ■ Cereals
Meal ■ Ceramic ■ Clays ■
Bar Beet ■ Corn Starch ■ Paper
Crumb Rubber ■ Particle Board
nts ■ Photo Coatings
Coatings
C Powders
Hardboard ■ Sausage
uel ■ Soaps ■ Citrus Pul
als ■ Milk Powder ■ Soy
■ Nitrocellulose ■ Sugar
■ Synthetic Fibers ■ Crun
Tobacco ■ Detergents ■
Fertilizers ■ Photo Coating
xite ■ Fish Meal ■ PVC F
■ Sands ■ Coffee ■ Har
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■ Fertilizers ■ Photo Co
Bauxite ■ Fish Meal ■ PVC Pow
der ■ Sands ■ Coffee
Crackers ■ Hog Fuel ■ Soaps
a Ash ■ Cereals ■ Milk Pow

Rugged Bench Top
Near Infrared Technology for
Precision Composition Analysis

MCT600

Bench Top Near Infrared Tester



PROCESS SENSORS CORP. 

The MCT600 offers Proven Accuracy across a wide range of Applications

Used for quality control in a wide variety of industrial processes, the MCT600 bench top NIR Tester provides fast accurate results every time.

Typical constituents include:

O-H for Moisture and Alcohol

C-H for Oils, Fats, Adhesives and Plastics

N-H or Proteins, Ammonia and Amines

Typical applications include:

Wood Products

- Particle board ■ Fiberboard
- Medium Density Fiberboard
- Orientated Strand Board
- Hardboard ■ Hog Fuels

Food Products

- Snack Foods ■ Pet Foods
- Cookies & Crackers
- Coffee ■ Starches
- Soy Bean & Corn Meals
- Cereals ■ Milk powders

Tobacco Products

- Whole Leaf ■ Lamina Strips
- Stems ■ Cut Tobacco
- Reconstituted ■ Expanded
- Chewing Tobacco

Chemicals and Minerals

- Crumb Rubber ■ PVC Powders
- Ceramics ■ Fertilizers
- PVB Films ■ Plastic Chips
- Detergents ■ Soaps ■ Ores

Features:

- User Friendly Operation
- Varied Applications
- No Sample preparation
- Simple Calibration
- Rotating Sample Tray
- Non Destructive Testing

Options:

- Printer with cable
- RS232 cable
- Sample Grinder
- Data Collection and Storage Software
- Calibration Check Standards
- Plastic Sample Trays with Lids

Product Overview

The MCT600 Bench Top NIR Tester is designed for rapid and accurate analysis of up to two constituents in virtually all types of powders, flakes and leaves.

The MCT600 is operator friendly and simple to use. Easy to follow software guides users through calibration and sample testing. Samples, straight from the production line are placed in the sample dish and a simple touch of a button initiates the test. In less than 10 seconds, the constituent contents are displayed and the unit becomes ready for additional samples.

Operating Principle

In the near infrared principle, several molecular bonds absorb near infrared light at well defined wavelengths. The common bonds are O-H in water, C-H in organics & oils and N-H in proteins. Absorbance at these wavelengths is proportional to the quantity of that constituent in the sampled material.

Infrared filters within the sensor generate a sequence of light pulses. One of these pulses is selected to be at the specific absorbance wavelength for the constituent to be measured, while others are selected so as to gauge the reflectance properties of the material. The pulses illuminate the sample being measured with reflected light collected and focused on a detector. The sensor's signals are processed in a ratio to provide a value proportional to the constituent concentration.

Microprocessor electronics transform this raw value to provide a direct readout in % or other engineering units.

Specifications

Measured Constituents: 1 or 2 simultaneously
Moisture Range: Min. 0-0.1%, Max. 0-95%
Coatings Range: Min. 0.1-1 gr./m, Max. 0.1-200 gr./m
Fats / Oils Range: Min. 0-1%, Max. 0-50%

Accuracy: (subject to application and product type)

Moisture: +/- 0.1%
Coatings: +/- 0.1 gr./m
Fats / Oils: +/- 0.2%

Repeatability: +/- 0.2 of calibrated range

Operating Wavelengths: Up to 6

Operating Temp: 10-40° C (50-100° F)

Calibration Codes: 20 standard

Sampling Area: 2 in. (50mm) light beam averaging across a 6 in. (400mm) dish

Test Duration: 1-99 seconds, selectable

Power: 90-260 VAC 50/60 HZ. 85 watts
Automatically selected

Outputs: RS232 and RS485

Dimensions: (LxWxH), 12.5x11.5x20 inches
(317x292x508mm)

Weight: 25 lbs (11.5kg)

Construction: Painted sheet aluminum (standard)

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