



# Chocolate Analyzer

EQUIPMENT SERIES



- Cocoa and Chocolate Ingredients
- Fat, Moisture, Sugar, Fatty Acids and Other Parameters in Under 30 Seconds
- Ready to go Pre-Calibrated with Custom Calibrations for Chocolate Industry



## Process and Quality Control

Fast, accurate analysis is critical for both cocoa processors and chocolate manufacturers to optimize their process and insure quality. Optimizing the process will save the plant time and money and provide very rapid payback.

Near Infrared (NIR) analysis is a proven technique designed to provide fast, accurate, and reliable results for the cocoa industry.

## BENEFITS:

- Rapid payback
- At-line ready
- Simple to use
- Flexible sample handling
- Easy data integration
- Low maintenance
- ISO 12099 Compliant
- Guaranteed calibrations

**Monitoring incoming cocoa beans and other ingredients for quality**

**Analyze nibs, cocoa liquor and cocoa powder in process for quality and consistency**

**Verify fat, cocoa and sugar content of final chocolate products**



**SpectraStar™**

The Unity Chocolate Analyzer is based on the SpectraStar XL, a state of the art stand-alone NIR analyzer optimized for the analysis of all of the important steps in the chocolate manufacturing processes. The SpectraStar XL is calibrated to NIST traceable reference standard materials and utilizes TRUE NIR™ components for outstanding performance and reliability, providing high uptime, complete confidence and quick payback to the operators.

The Unity Scientific SpectraStar™ RTW (Rotating Top Window) system gives the ultimate in sampling flexibility and allows the customer to make rapid measurements of all important processing steps.

## Plug and Go Calibrations

The Unity Chocolate Analyzer has ready to use calibrations for every step of the chocolate manufacturing process, from incoming cocoa beans and other raw ingredients through the chocolate making process and including the final chocolate product.

The Unity Chocolate Analyzer contains calibrations for milk chocolate, dark chocolate, cocoa liquor, cocoa powder, cake, cocoa beans, nibs, and cocoa butter. Constituents predicted include fat, moisture, sugar, fatty acids and other constituents. Calibrations for ingredients such as milk powder are also available. All calibrations include 1 year of free calibration support.

# Chocolate Analyzer

## Robust and Ready to Use for At-Line or Lab Use

The Unity Chocolate Analyzer is robust enough to be used both at-line or in the lab. The system features a long life lamp and no air filter or fan, providing for very low cost of ownership. The built in computer is fully networkable and LIMS compatible, allowing for plant management to immediately access results. The Chocolate Analyzer is a valuable tool to control every step in the chocolate manufacturing process, from incoming ingredients to final product verification.

### The Chocolate Analyzer package includes the following:

- SpectraStar 1400 XL (1400 nm - 2500 nm) with built in 17" touch screen, prediction software, multi-cup adapter, US-RTIR-0016 adapter ring, Unity check cell, Unity R99 standard.
- 5 Ring cups US-ISIH-0007 for the analysis of powders
- Large cup US-LGOP-0001 for analysis of cocoa beans
- Small cup US-SRCP-0025 for analysis of powders and cocoa butter
- Gold Reflector US-TSTD-0005 for analysis of cocoa butter and liquor
- Unity Chocolate Calibration package for cocoa, chocolate and ingredients



## HOW TO ORDER

The Chocolate Analyzer package includes everything you need to start analyzing cocoa and chocolate right out of the box.

### CHOCOLATE ANALYZER

US-1400-CHOC

SpectraStar 1400 XL

(1400 nm – 2500 nm)



## Specifications Table

Technology	Pre-dispersive scanning monochromator with nominal bandwidth of 10 nm (FWHM)
Wavelength Range	1400 - 2500 nm
Light Source	Tungsten halogen lamp with MTBF rating of 10,000 hours (User changeable)
Detector	Custom dual cooled, extended InGaAs detectors (2)
Analysis Time	10 - 30 seconds
Data Interval	1.0 nm
Photometric Noise	< 0.02 mAu 1400 - 2500 nm

## User Interface

Built-in Computer	Windows® 7 Professional, Solid State HDD, 17" high resolution touch screen monitor
Software	InfoStar™ prediction and data management package
Network Capabilities	OPC Compliant; LIMS Compatible; 5 USB ports, 2 Ethernet (RJ45)

## Dimensions and Power Requirements

Size	330 x 381 x 508 mm (with display) 330 x 381 x 270 mm (without display)
Weight	18 kg, 40 lbs.; 22 kg, 48 lbs. with monitor
Voltage	100-240 V AC *, frequency 50-60 Hz, Class 1, protective earth

### Unity Scientific

117 Old State Road | Brookfield, CT 06804 USA  
Phone: 203-740-2999 | Fax: 203-740-2955  
www.unityscientific.com | email: info@unityscientific.com

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