SMART 6

MOISTURE/SOLIDS ANALYZER

One System, Limitless Testing

Height
14.5 inches
(36.8 cm)

Depth
23 inches
(58.5 cm)

Width
13 inches
(33 cm)

Weight: 55 lbs (25 kg)

Integrated
4-place Balance

Octawave™ Cavity

High Resolution Touchscreen

Use At-Line
An IP65 compliant option that provides protection from water and the elements

Intelli-Temp™
A patented technique that offers constant monitoring of weight and power regulation, while providing optimum repeatability

Statistical Analysis
Easily review data with options to perform statistical analyses, directly through the system

Octawave™ Cavity
A patented design created for uniform heating

iPower®
The patented technique that allows samples of any moisture content level to be dried rapidly

Interactive Touchscreen
High resolution touchscreen interface with menu-driven software

Intuitive and simple test process that clearly displays results and includes training videos

Data Output
0.01% resolution
0.01% to 99.99% range

Balance
25 g capacity
0.1 mg resolution

Data Storage
Unlimited data storage
Easy data export

Exhaust
Safely remove volatiles
free up hood space

Accessory Ports
4 x USB-a, 2 x USB-b, 1 x ethernet

Printer Options
Optional internal thermal printer (request list of compliant external printers)

Electrical requirements
115 VAC ±10%, 60 Hz, 15 Amps
220-240 VAC ±10%, 50 Hz, 10 Amps
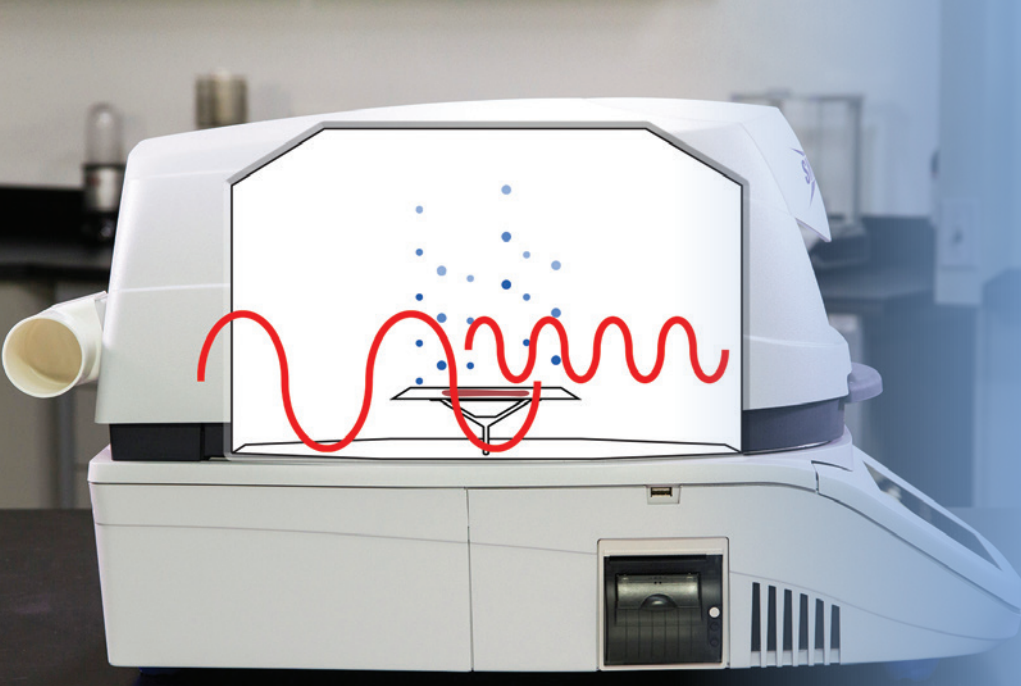100 - 200 VAC ±10%, 50/60 Hz, 15 Amps

SMART 6 Moisture/Solids Analyzer

One System, Limitless Testing.

Once again, CEM has revolutionized moisture/volatile analysis for every application and industry with the SMART 6™. The SMART 6 features two major innovations, compared to other moisture analyzers: the ability to accurately analyze both wet and dry samples, and a significant reduction in sample drying times. These benefits are possible through the development of iPower® technology, which features a patented multi-frequency energy source for sample drying. Drying time now up to 10x faster than IR drying systems, which have traditionally served some markets. Never before has a moisture analyzer been able to offer so much, with the ability to have **the fastest testing and most accurate data for any sample type**.

Test Any Sample, Faster - The iPower Advantage

iPower is an innovative development in moisture analysis for the SMART 6 that utilizes dual electromagnetic wavelengths, controlled by an intelligent processing system. iPower is able to apply the correct level of energy to the sample at the optimum time, using low frequencies to quickly evaporate free moisture and higher frequencies to carefully remove any water molecules bound to the sample structure, resulting in **unparalleled precision and speed**.

	iPower	NIR	IR	MW
Direct Analysis	✓		✓	✓
Rapid Analysis	✓	✓		
Low Moisture	✓	✓	✓	
High Moisture	✓	✓		✓
No Costly Calibrations	✓		✓	✓

Speed

up to 10x faster than IR and Halogen analyzers

iDri™ analysis for results in as little as 90 seconds

Library of methods available for less time spent on method development and validation

Accuracy

AOAC approved technology

Certified as more accurate than IR, Halogen, or NIR by numerous accredited and unbiased third parties

New method controls improve accuracy across a range of products when coupled with iPower

Versatility

iPower now gives the SMART 6 the ability to test any product, wet or dry, polar or nonpolar

Now only 1 analyzer is needed for any lab

Multiple data management options fit your exact laboratory needs

	SMART 6		SMART 5		IR		Reference Oven	
	Time (sec)	St. Dev	Time (sec)	St. Dev	Time (sec)	St. Dev	Time (hrs)	St. Dev
Cream	135	0.05	210	0.05	600	0.1	3.5	0.03
Sweet Condensed Milk	150	0.11	270	0.18	720	0.25	4	0.06
Cheese	120	0.12	240	0.15	1200	0.20	5	0.09
Raw Meat	120	0.1	180	0.15	900	0.2	18	0.06
Deli Meat	130	0.08	210	0.12	840	0.18	18	0.05
Milk Powder	75	0.04	300	0.15	560	0.10	5	0.02
Salad Dressing	110	0.02	200	0.03	900	0.03	5	0.01
Latex	60	0.05	180	0.07	720	0.07	2.5	0.03
Solvent Adhesive	180	0.12	N/A	N/A	480	0.22	2	0.1
Coating	160	0.08	225	0.12	480	0.18	1	0.06

THE SMART 6 CAN ANALYZE THESE AND MANY MORE...

Cod (Raw)
Salmon (Raw)
Heavy Cream
Milk (Past. Homog.)
Yogurt
Hot Dogs
Raw Pork
Chicken (Raw)
Deli Chicken (Cooked)

Turkey
Deli Ham
Ground Beef
Sausage
Bacon
Processed Cheese
Natural Cheese
Butter
Ice Cream Mix

Dressings
Mayonnaise
Condensed Skim Milk
Cream Cheese
Crackers
Chips
Noodles
Whey Powder

Dry Dog Food
Whole Milk Powder
Powdered Infant
Formula
Cream Powder
Non-Fat Milk Powder

Wheat Flour
Poultry Feed
Processed Meat
Egg Whites
Duck
Lamb
Mixed Foods

Resin
Adhesives
Cosmetics
Detergents
Wastewater
Black Liquor
TiO_2

Ease of Use

Individual User Logins
Password protected and CFR 21 Part 11 compliant

3 Simple Steps To Run Any Sample
1. Tare pads
2. Add Sample
3. Press Start

Built-in Training Videos
Ensure your technicians run the SMART 6 correctly

Method Import
Import from other users or CEM's Method Library from anywhere in the world

Data Export
For easy data review and storage

Safety

Method Controls
- More controls over sample heating
- Ramps and stages to prevent any overheating or burning

iPower Heating
- More efficient at heating samples than outdated technologies
- Chooses the best heating process for each specific sample

Adjustable Fan Speeds
- Remove hazardous volatiles more quickly to create a safer heating environment
- Exhaust hose to safely move volatiles to an approved exhaust area

Flame Detection
- Built-in IR sensor will detect sudden heat increases and immediately stop all heating if temperature gets too high
- Stops the fire before it even happens

Upgrades/Options

ORACLE™ Fat Analyzer
Adds AOAC approved methodology for fat analysis to the SMART 6. Get results in under 1 minute with no solvents or costly calibration maintenance.

ProFat™ Meat Analyzer
Rapidly analyze raw meats and pre-blends for moisture, fat, and protein content in a single at-line system without the need for calibrations.

Communicator Data Management
Automatically collect data, sort and analyze statistics based on dates, methods, and results, or chart results to easily view out-of-spec data.

Bar Code Reader
Easy data tracking and sample identification with the optional barcode reader.

Integrated Printer
Print results, method information, and system information with the optional thermal printer.

In the box

- ✓ 200 glass fiber sample pads
- ✓ 2 Balance Pans
- ✓ 2 Balance Stems
- ✓ 1 Sample Press
- ✓ Monitor Kit
- ✓ 5 Pipettes
- ✓ 10 g Calibration Weight
- ✓ The Importance of Line Voltage booklet
- ✓ Setup Guide
- ✓ Power Cord (not pictured)

CEM

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EXPECT THE BEST

CEM will strive to meet or exceed our customers expectations through continuous improvement in pursuit of world class excellence. We will nurture the commitment to quality improvement in all aspects of our operations.

M.J. Collins
President/CEO

SMART 6

Over 50,000 systems sold worldwide

CEM has been an ISO-certified facility since 1994

All systems serviced & supported by experts with an average of 15 years of experience

CEM invests 11% of annual revenue into R&D, the result... 11 R&D 100 awards

IQ/OQ/PQ Validation by certified CEM Technicians

> "
> *Our commitment to you doesn't end when your system is shipped;* **it begins.**
> "

~Michael J. Collins
President & CEO, CEM

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