

SMART Turbo

ProFat

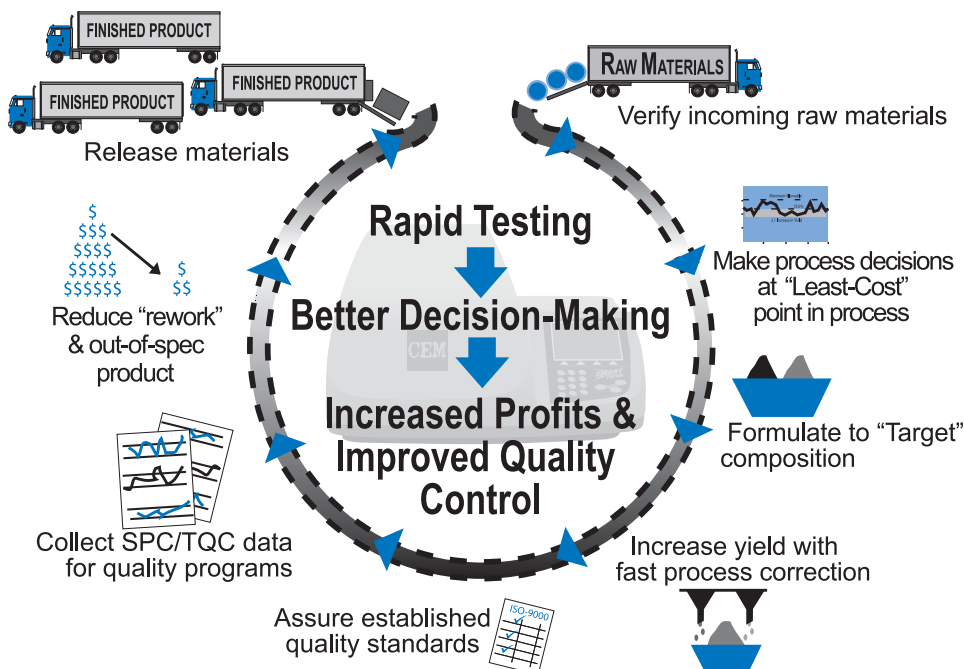
Moisture, Fat & Protein in 3 Minutes!

The CEM SMART Turbo™ ProFat™ is a process and quality control tool designed to analyze meat and poultry raw materials and preblends for moisture, fat and protein content in less than 3 minutes. The system combines microwave moisture measurement with data analysis to rapidly evaluate beef, pork, chicken and turkey meat with superior accuracy and precision. The rapid analysis can be used for process control to make blend corrections, release materials, and ensure least cost formulation. The SMART Turbo ProFat can also be used to verify and maintain performance of NIR or X-ray devices.



The system uses an AOAC Official Method to rapidly measure the moisture content and determine fat and protein content. The performance of the system is comparable to the standard oven drying and fat extraction analysis methods.

Process and Quality Control Benefits



- Complete meat analysis in 3 minutes
- Performance comparable to standard methods
- No Solvents
- Provides rapid analysis to control the production process
- Transmit data to printer or computer for statistical control and documentation
- Durable design for use at-line
- Uses Official AOAC Method 2008.06
- Simple to operate with no calibration required

Performance Results

Product	Fat			Protein			Moisture		
	AOAC	ProFat	Std. Dev.	AOAC	ProFat	Std. Dev.	AOAC	ProFat	Std. Dev.
Beef	43.4	43.5	-0.1	12.5	12.3	0.2	43.8	43.9	-0.1
Pork	26.3	26.2	0.1	15.3	15.5	-0.2	57.7	57.6	0.1
Chicken (MSP)	20.9	20.7	0.2	12.5	12.6	-0.1	63.5	63.7	-0.2
Turkey (MSP)	19.6	19.5	0.1	13.5	13.6	-0.1	63.1	63.2	-0.1

CEM Sample Pads



CEM sample pads were specifically developed for use in our microwave moisture and fat analyzers to assure the accuracy demanded for process and quality control. The pads are manufactured to meet our strict requirements for absorbance, moisture content, and strength for consistent results. They are approved for use with AOAC Official Methods and are manufactured at our ISO-approved facility.

System Specifications

Instrument Dimensions:

22.0 in (w) x 23.3 in (d) x 14.5 in (h)
55.9 cm (w) x 59.1 cm (d) x 36.8 cm (h)

Weight:

55 lbs, 25 kg

Moisture/Solids Range:

0.01% to 99.99% in liquids, solids and slurries
0.01% resolution

Balance Capacity:

50 grams, 0.1 mg readability

Program/Data Storage:

100 methods & 300 results

Standard Software:

Constant weight & time, fat, moisture, TS, TSS,
TVSS, Dilutions, Syringe Weighing

Data Entry:

Keypad with menu-driven software

Display:

Black & white VGA (320 x 240)

Accessory Ports:

Two serial, RS232 nine-pin ports for external
balance, computer or barcode reader, one parallel
port, 25 pin, for external printer

Standard Printer:

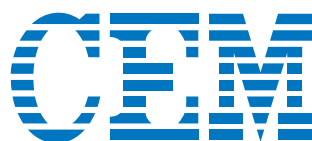
Internal impact printer

Electrical Requirements:

110-127 VAC, 60Hz, 10 Amps; 220-240 VAC,
50/60 Hz, 5 Amps
100 VAC, 50/60hz, 10 Amps; 200-208 VAC,
50/60 Hz, 5 Amps

Patents:

4,438,500 4,457,632 4,554,132 4,129,775
4,753,889. Additional patents pending.



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