

# SpecMetrix<sup>®</sup> ACS Can Coating Thickness and Film Weight Measurement Systems

- ✓ Internal and exterior coatings   ✓ Coating distribution   ✓ Nanometric precision   ✓ Cost and time savings

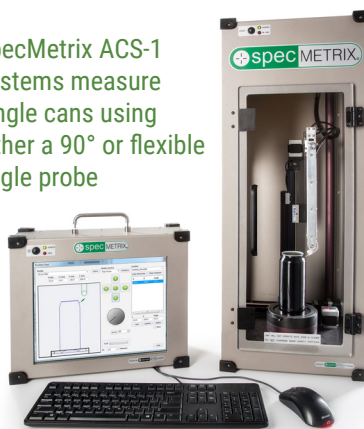
## Features

- **Non-Contact** – Measurements are taken with no contact to coatings or substrates, preserving part integrity
- **Absolute Thickness Measurement** – Ultra precise real-time measurement of coating thickness and film weight mapping without need to calibrate for individual coating types
- **Substrate Independent** – Measures wet or dry coatings over aluminum, steel, tinplate; and over any printed surface, print or base color, including black
- **Broad Range of Use** – Real-time measurement and mapping of single or dual coatings, over-varnish, inside spray, rim coats, UV hardcoats, base coats, wash coat and other container coatings
- **Non-Hazardous** – Incorporates exclusive non-radioactive and non-invasive ROI optical measurement technologies
- **Environmentally Friendly** – Non-destructive testing method helps reduce HFI, scrap and spoilage costs
- **Flexible and Scalable** – Modular system designs can be configured for use with multiple automation, scanning and process control tools
- **Powerful SensorMetric Software** – User-friendly software package stores all data to Excel<sup>®</sup> or interfaces to plant networks for SPC analysis during or after production runs



SpecMetrix ACS-10 Systems provide plant teams with the flexibility to measure from 1-10 containers in batches in lab or production floor environments

SpecMetrix ACS-1 Systems measure single cans using either a 90° or flexible angle probe



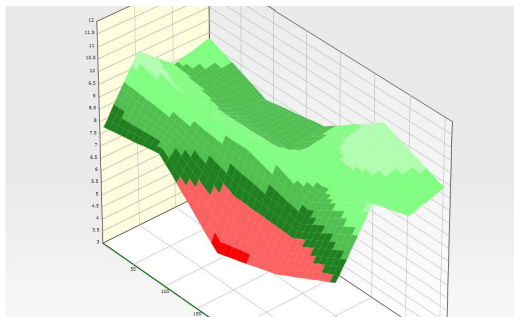
Broad applicability for coated metal products

## More Accurate Coating and Film Weight Measurement Data for Metal Packaging Manufacturers

The SpecMetrix ACS-1 and ACS-10 Systems deliver a higher standard of precision for non-contact, non-destructive and real-time measurement of all applied container coatings, wet or dry.

The highly-accurate and instant measurement capabilities of SpecMetrix ACS systems improve coating process control by streamlining plant set-up, changeover and inspection times, while reducing coating costs. Single can, 10-12 can and automated configurations are available to suit plant needs.

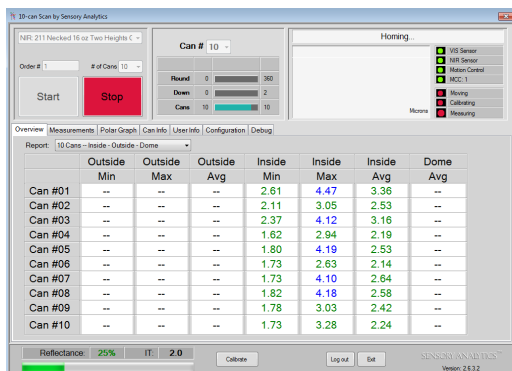
## Reliable and Repeatable Systems for Real-Time Coating QA and Analysis



2D and 3D topographical color-coded contour maps for visual analysis of film weight distribution



Ability to verify supplier container quality or diagnose potential coating thickness or film weight issues



| Can #   | Outside |     |     | Inside |      |      | Dome |
|---------|---------|-----|-----|--------|------|------|------|
|         | Min     | Max | Avg | Min    | Max  | Avg  | Avg  |
| Can #01 | --      | --  | --  | 2.61   | 4.47 | 3.36 | --   |
| Can #02 | --      | --  | --  | 2.11   | 3.05 | 2.53 | --   |
| Can #03 | --      | --  | --  | 2.37   | 4.12 | 3.16 | --   |
| Can #04 | --      | --  | --  | 1.62   | 2.94 | 2.19 | --   |
| Can #05 | --      | --  | --  | 1.80   | 4.19 | 2.53 | --   |
| Can #06 | --      | --  | --  | 1.73   | 2.63 | 2.14 | --   |
| Can #07 | --      | --  | --  | 1.73   | 4.10 | 2.64 | --   |
| Can #08 | --      | --  | --  | 1.82   | 4.18 | 2.58 | --   |
| Can #09 | --      | --  | --  | 1.78   | 3.03 | 2.42 | --   |
| Can #10 | --      | --  | --  | 1.73   | 3.28 | 2.24 | --   |

Coating measurement data for inside dome on 10 beverage cans

## Technical Specifications

|                              |   |
|------------------------------|---|
| <b>Measurement Range:</b>    | 0.3 to 250 microns<br>(coating thickness)   |
| <b>Accuracy:</b>             | +/-1% of coating thickness<br>(nominal)   |
| <b>System Speed:</b>         | 1-2 minute per container based<br>upon plant selected measurement<br>parameters   |
| <b>Measurement Speed:</b>    | Up to 50 per second   |
| <b>Temperature Range:</b>    | 0° to 55° C   |
| <b>Container Size Range:</b> | Up to 3.5 in (8.5 cm) diameter and<br>up to 9.5 in (24 cm) height                 |
| <b>Output Metrics:</b>       | microns<br>mils<br>mg/4in <sup>2</sup><br>g/m <sup>2</sup><br>mg /in <sup>2</sup> |
| <b>Operating System:</b>     | Windows® platform   |
| <b>Manufactured:</b>         | Made in USA   |
| <b>Certifications:</b>       | CE approved<br>SP approved<br>UL approved   |

## Optional System Configurations

- Fully automated ACS-T34 System with conveyor and exit systems to measure container coatings without stopping or changeover

**Note:** This device and the methods to use same are covered by U.S. Patent Numbers 6,674,533; 7,128,985; 7,274,463; 7,365,865 and 7,537,681 with additional U.S. and foreign patents pending. All trademarks are acknowledged as the properties of their owners. SpecMetrix® is a trademark of Sensory Analytics. All rights reserved. Windows® and Excel® are trademarks of the Microsoft Corporation.