



# CI7 SPECTROPHOTOMETER

## FOR MPC VARNISH POTENTIAL TESTING (ASTM D7843)

### Overview

The Ci7 is a lightweight, portable, palm-sized spectrophotometer used to measure MPC varnish potential. This unit replaces the I-LAB spectrophotometer that is no longer offered. MPC varnish potential readings are obtained by using the Ci7 to scan 47 mm (0.45  $\mu\text{m}$ ) nitrocellulose patches, which have been prepared according to ASTM D7843. The materials and filtration apparatus required to produce the membrane patch are sold separately. See MPC Test Kit Product Sheet for an overview of the test including the apparatus and consumables required.

### Key Features of the Ci7 Spectrophotometer

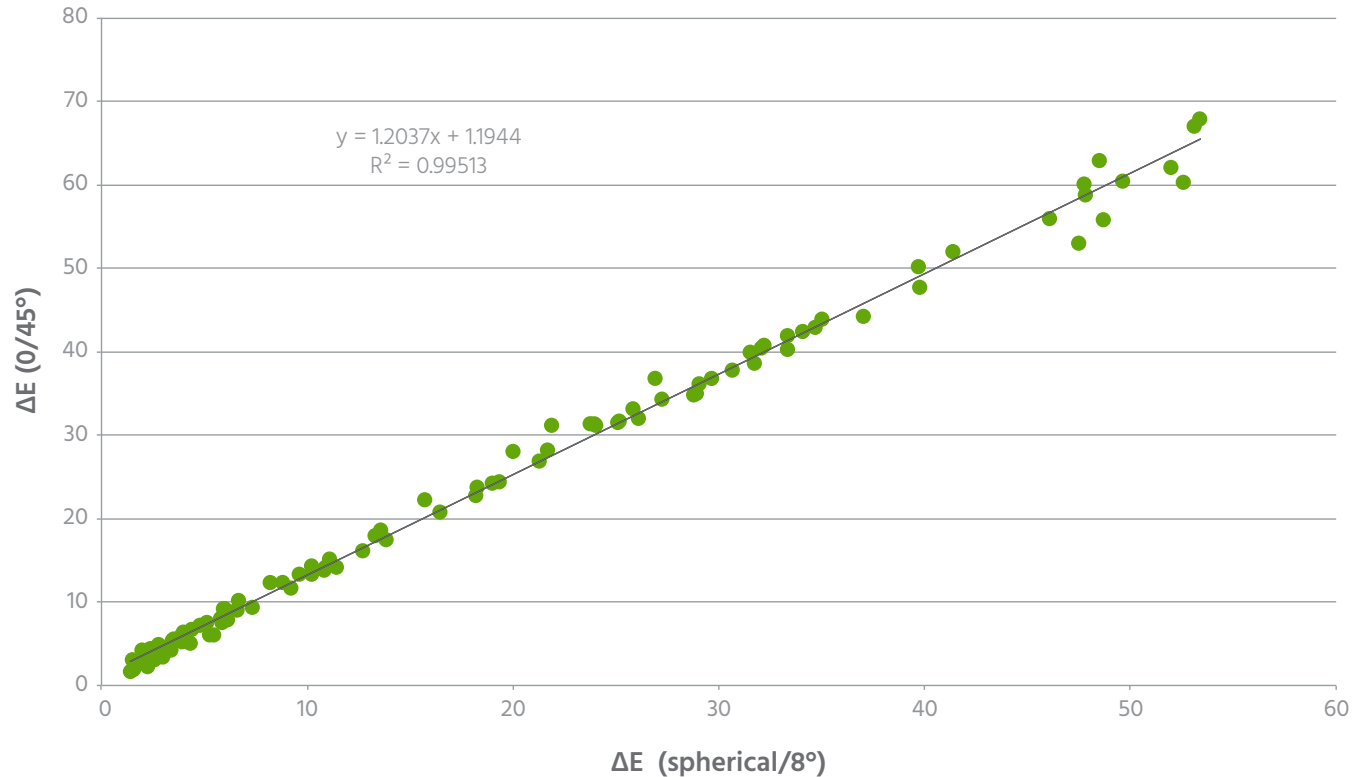
- Excellent correlation with I-LAB predecessor,  $R^2$  value of 0.9951.
- Repeatable MPC varnish potential results in less than 1 second.
- This durable instrument is a significant upgrade in terms of reliability and precision from other instruments (including I-LAB).
- The high quality Ci7 spectrophotometer comes ready-to-use right out of the box without the need for additional programming or calibration between samples.
- Includes certification document verifying that the instrument is producing accurate MPC value readings.
- Includes expert technical support.

## Instrument Accuracy and Reliability

The graph below summarizes 300 MPC value ( $\Delta E$ ) test results from the Ci7 which employs a spherical/ $8^\circ$  geometry as compared to the  $0/45^\circ$  geometry noted in the ASTM D7843 method and employed by previous spectro-

photometers. These results demonstrate an  $R^2$  value of 0.9951 indicating that the spherical/ $8^\circ$  geometry readings correlate extremely well with those taken using the previously employed  $0/45^\circ$  spectrophotometers.

## Measuring Geometry Correlation



## Expert Support

Included with the purchase of our MPC varnish potential testing products is access to our expert chemistry team, who have completed 1000s of MPC varnish potential tests. From answering a quick question to in-depth technical support, you will have invaluable access to experts

that will make your MPC testing program successful. Each Ci7 comes with an inspection certificate verifying that the spectrophotometer is producing results that lie within the target standard deviation. Annual certification is recommended.

## Ordering Information

Item	Part Number	Specifications
Ci7 Spectrophotometer	601831	Detailed below.
Certification	601505	Annual certification testing.

TECHNICAL SPECIFICATIONS	
Model	Ci7
Illuminating/Viewing geometry	8/d (8° illumination angle/diffuse viewing)
Measuring area	Approximately Ø8 mm
Light source	Gas-filled tungsten lamp
Detector	6 silicon photocells
Display modes	$(L^*a^*b^*)/\Delta E^*ab$ ; $\Delta(L^*C^*H^*)/\Delta E^*ab$
Target color memory	1 channel, set by measurement
Measuring range	L*: 10 to 100
Measurement conditions	Observer: CIE 10° Standard Observer
Illuminant: CIE Standard Illuminant D65	Approx. 1 sec
Repeatability	Standard deviation within $\Delta E^*ab$ 0.1 (Measurement conditions: Average measurements of standard white plate)
Minimum interval between measurements	Approx. 1 sec
Power source	Four AA-size batteries or optional AC Adapter
Battery life	Alkaline-manganese: Approx. 2000 measurements at 10-sec intervals
Display	16-character x 2-row dot-matrix LCD
Dimensions WxHxD (mm/in.)	59 x 158 x 85 / 2 <sup>5</sup> / <sub>16</sub> x 6 <sup>1</sup> / <sub>4</sub> x 3 <sup>3</sup> / <sub>8</sub>
Weight	360 g (12.7 oz.) not including batteries
Operating environment conditions	Temperature: 0-40°C (32-104°F) Relative humidity: <85%, no condensation Maximum altitude: 2000 m Installation category: I Pollution degree: II
Standard accessories	Soft Case CR-A68, Protective Cap, Wrist Strap, AA-size batteries (4)
Optional accessories	AC Adapter

## Warranty

1 year.

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