Model **ACL-2** was designed for automatic measurement of **Saybolt/ASTM color** of petroleum products utilizing the Tri-Stimulus method as prescribed in ASTM D6045, which correlates with the conventional D156 and D1500 respectively. Just set up a sample and press the START key; the test result will be displayed on the fluorescent display module in just a few seconds, and since all the subjective judgment is eliminated, a perfect traceability is attained.

**TRACEABILITY:** No subjective judgment plus a full capability of easy and precise calibration assure high level of traceability that is required by modern quality assurance programs such as ISO-9000 series.

**ACCURACY:** Combination of a high-speed 16 bit A/D converter and low drift/high precision amplifier assures an extremely high accuracy. No more guess work, especially for the tricky Saybolt color measurement.

**QUICKER THAN SPECTROPHOTOMETER:** A typical measurement takes a mere 9 seconds, which is considerably shorter than the time a spectrophotometer would require. (typically 25 seconds)

**USER FRIENDLY DESIGN:**
- A dialogue type operation plus dedicated design for color measurement of petroleum products assure the easy operation. Just select the desired color scale from the menu, pour a sample in the sample cell, set it in cell compartment, and press START key; accurate test result will be ready in 7-10 seconds.
- The new design sample cell takes a smaller sample volume (1/3 of the conventional rectangular cell’s) because of its cylindrical design. Also featured is plastic caps, which prevents sample spill when the sample cell is set in the instrument.
- Capabilities of Platinum-Cobalt color scale for solvents and Gardner color scale for varnish have been added.

**WIDE SELECTION OF OPTIONS:**
- Flow-through cells for easy connection to automated sample handling systems.
- Calibration Fluid Samples made to the Appendix of ASTM D6045 for easy/accurate calibration.
- Rectangular sample cells for easy pouring of wax samples.
SPECIFICATIONS:

TYPE:
Transmittance colorimeter for petroleum products by tri-stimulus method

CONFORMING STANDARDS:
ASTM D6045, JIS K2580

COLOR SERIES:
Saybolt color (ASTM D6045/D156),
ASTM color (ISO 6271, ASTM D6045/D1500),
Platinum-Cobalt color (ISO 6271, ASTM D1209)
Gardner color (ISO 4630, ASTM D1544)

LIGHT SOURCE:
Halogen bulb (12V 20W)

LIGHT RECEIVER:
Fast response silicon photo cells

TRI-STIMULUS FILTERS:
Colored glass filters, Wavelength range: 380-780nm

DISPLAYED PARAMETERS:
Saybolt color, L*a*b*, ΔL*, Δa*, Δb*, ΔE*,
ASTM color, X, Y, Z, DX, DY, DZ, ΔD*,
Pt-Co color, YI, Gardner color

AUTOMATIC CALIBRATION:
Single point or multi point calibration using calibration samples.

SAMPLE CELLS:
Cylindrical glass cell with caps
100mm pass length for Saybolt color
33mm pass length for ASTM, Pt-Co, Gardner color

DISPLAY MODULE:
Fluorescent display module, 256 x 64 dots

PRINTER:
Thermal printer with 80mm paper width

DATA OUTPUT:
1 set of RS-232C port (standard)

SIZE AND WEIGHT:
400W(mm) x 400D(mm) x 190H(mm), 12.2Kg

Specifications are subject to change without prior notice.

POWER CONSUMPTION:
AC 100-240V, 130VA

ORDERING INFORMATION:

STANDARD ACCESSORIES:
2x Glass sample cells with caps for Saybolt color
2x Glass sample cells with cap for ASTM, Pt-Co and Gardner colors
2x Printer paper rolls
1x Spare halogen bulb
1x Spare fuse

OPTIONS:
1. Calibration Fluid Samples (set of 11 samples)
2. Cylindrical Glass Cells (set of 11)

NOTE:
*To attain a high degree of traceability, it is highly recommended that ACL-2 be verified/calibrated on a regular basis.
*To avoid contamination and for convenience, it is highly recommended that each Calibration Fluid Sample be kept in a dedicated sample cell.
*The Calibration Fluid Samples are manufactured in accordance with ASTM D6045, Appendix X1.
*Each Calibration Fluid Sample comes with a certificate.

3. Flow-through cell for Saybolt color (factory option)
4. Flow-through cell for ASTM, Pt-Co, Gardner color (factory option)
5. Square glass cell with open top for wax samples

Optional flow-through cell installed in the sample Compartment (factory option)

TANAKA SCIENTIFIC LIMITED
7-10-3, Ayase, Adachi-ku, Tokyo
120-0005, Japan URL: www.tanaka-sci.com
Phone: +81-3-3620-1711 Fax: +81-3-3620-1713, e-mail: overseas@tanaka-sci.com Printed in Japan 1411