

# Lico Spectral Colorimeter

## Applications

- Chemical
- Food and beverage
- Petrochemical industry
- Pharmaceutical



## Competence in Colour

The spectral colour measurement of clear liquids is indispensable in many fields and serves as a quality assurance method for solvents, paints and pharmaceuticals. The highest measuring reliability is essential. Hach® ensures simple, fast measurements for the user. More than 25 years of expertise in the development of colorimeters have gone into the Lico line of instruments.

### All important colour scales included in one instrument

The Lico 620 with up to 5 colour scales is designed for fast routine measurements in the laboratory and in production facilities. It is already in use in a wide variety of areas in the chemical industries for quality and production control, e.g. to assess surfactants, oils, fats, resins and synthetic resins.

The Lico 690 Spectral Colorimeter is flexible to use and works with many applications, such as chemical, pharmaceuticals, oil industries and the food and beverage industry. 26 colour scales are directly integrated in the instrument: conventional scales like iodine, Hazen (Pt Co), Gardner, Pharmacopoeia as well as specific scales like Saybolt or ASTM.

### Simple integration into the laboratory network through Ethernet connection

Lico instruments can be easily integrated to existing laboratory networks through an Ethernet interface.

### High level of measurement reliability through a comprehensive set of test aids

Certified test filters, reproducible standard colour solutions and an integrated implementation of AQA (Analytical Quality Assurance) ensure optimum measurement reliability. Measured values can be evaluated in all scales, even post-measurement with archived spectral data.

### Easy handling

The measurement process starts automatically when the sample cell is inserted, and the measurement vial is identified by the instrument. The easy-to-change cell compartment facilitates cleaning and/or replacement.

The operation of the Lico colorimeters requires only minimum training effort thanks to clear instructions on the colour touch-screen.

## Technical Data\*

Model	Lico 620	Lico 690
<b>Colour Scales</b>	DIN 6162 iodine; ISO 6271 Hazen (Pt/Co, APHA, ASTM D1209, D5386); ISO 4630 Gardner (ASTM D1544, D6045); ASTM D 156 Saybolt; ASTM D 1500 mineral oil	European, US and Chinese Pharmacopoeia (EP, USP, CP); DIN 6162 Iodine; ISO 6271 Hazen (Pt/Co, APHA, ASTM D1209, D5386); ISO 4630 Gardner (ASTM D1544, D6045, D6166); ISO 27608 Animal and Vegetable Fats and Oils; ISO 11664 Colorimetry; ASTM E308 CIE Color; ASTM D156 Saybolt; ASTM D1500 Mineral Oil (ISO 2049); ASTM D848 Acid Wash Test; ASTM D1925 Yellowness Index (ASTM D5386); AOCS Cc13e, BS 684 Ly/Lr; ADMI, ICUMSA, EBC, ASBC, Hess-Ives
<b>Memory</b>	400 colour readings	100 colour references; 1000 photometric values; 20 wavelength scans; 20 time scans; 3000 colour readings
<b>Spectral scan</b>	No	Yes (320 nm - 1100 nm)
<b>Sipper (optional)</b>	No	Yes
<b>Display</b>	TFT WVGA colour graphic touch-screen	
<b>Display size</b>	17.8 cm (7 in.)	
<b>Optical system</b>	0° / 180° rectilinear	
<b>Source lamp</b>	Tungsten halogen lamp	
<b>Wavelength range</b>	380 nm - 720 nm used for colorimetric calculations	
<b>Dimensions (H x W x D)</b>	151 mm x 350 mm x 255 mm	
<b>Power requirements (Voltage)</b>	100 - 240 V AC	
<b>Includes</b>	Cell adapter, dust cover, power supply, user manual	

\*Subject to change without notice.

## Order Information

### Instruments

<b>LMV187.99.20001</b>	Lico 620 Colorimeter for up to five colour scales
<b>LMV187.99.40001</b>	Lico 690 Professional Spectral Colorimeter with more than 25 colour scales included

### Accessories & Replacement Parts

<b>LZM282</b>	Set of 6 certified standard colour solutions
<b>LZM339</b>	Lico test filter set
<b>LZM354</b>	Lico starter set (includes LZM282, 10 sample cells of each 11 mm and 50 mm)
<b>LZM369</b>	Adapter for cuvettes Z (Lico 6xx)
<b>LYY214</b>	Disposable sample cells, 10 x 10 mm, plastic, pk/1000
<b>LYY621</b>	Disposable sample cells, round, 11 mm, pk/560
<b>LZM130</b>	Sample cells, rectangular, 50 x 10 mm, plastic, pk/50
<b>LZP045</b>	Sample cells, 10 x 10 mm, glass, pk/3
<b>LQV157.99.30001</b>	SIP10 Sipper set, 1 cm, Quartz
<b>LZM368</b>	Replacement cell compartment, 50 mm rectangular, Lico 6xx
<b>LZV565</b>	Replacement halogen bulb