

Lovibond® Tintometer® PFXi-995/P

The Lovibond® PFXi-995/P is a spectrophotometric colorimeter that is designed to meet the color analysis requirements of petroleum fuels, oils, waxes and petrochemicals. It provides objective, unbiased color data according to a full range of established industry scales, although the user can easily customize the PFXi-995/P to display only those scales of interest. Measurements can also be displayed in terms of spectral data and CIE values.

Remote Calibration & Maintenance Service via Internet (RCMSi)

Color measurement instruments need regular checking with calibration standards to ensure correct operation and compliance to established international standards. RCMSi is the process in which a number of tightly controlled calibration liquids are measured in a 50 mm cell* via the Calibration function of a PFXi. The data is communicated via the internet to a secure server and compared to Master Data. If the data passes within tolerance, then a Certificate of Calibration is e-mailed to the user. This allows The Tintometer Ltd to ensure a PFXi instrument is operating correctly and fully calibrated using ISO 17025 certified standards. So, users can be 100% confident that all PFXi readings are reliable. In addition, RCMSi eliminates the timely and costly need to return equipment to a service center unnecessarily.

Note: Please register before performing your first calibration. Certificates of Calibration are provided post process.

**(Please note 50mm cell must be used when performing RCMSi calibration.)*

Bringing Precision and Reliability to Color Measurement

The accuracy, repeatability and reproducibility of data provided by the Lovibond® PFXi-995/P allow for tighter color specifications and greater color consistency, giving companies the confidence needed to make important decisions regarding high value consignments and refining operations. When measuring Saybolt or Pt-Co color of clear, water-white products, the long sample path length enables the PFXi-995/P to obtain precise color measurements, without multiplying errors.

Color Analysis Made Simple

The Lovibond® PFXi-995/P is an easy to use, automatic instrument. There is no need to build up calibration curves as they are already established in the instrument. The menu system guides operators through the selection of operating parameters. Thereafter, measurements are initiated by just a single key press and take less than 25 seconds to complete. The PFXi-995/P is supplied with a Windows software program, allowing data sets to be automatically downloaded to a PC computer where they can be processed or stored. It also permits remote control of the instrument.

Confidence in Instrument Performance

The PFXi-995/P is a rugged colorimeter with a fabricated steel housing, which is designed to function equally as a QC instrument within the laboratory or on 24 hour operation in a

production environment. A diagnostic test routine and status report allows users to conduct periodic checks on the instrument or identify faults. For regular conformance testing the PFXi-995/P is also supplied with a certified glass filter of specified Saybolt value.

Tintometer—A Century of Excellence in Color Measurement

Tintometer is recognized around the world as a leading supplier of equipment for color analysis. Over the years the Lovibond name which appears on its instruments has become a hallmark for color measurement, acknowledged by the widespread use of Lovibond® systems in process industries. This unparalleled knowledge and experience are embodied in the Lovibond® PFXi-995/P, ensuring excellent correlation with visual grading instruments.

Optional Items for Individual Applications

- Integrated heater unit
- A factory fitted option for melting solid samples such as fats and waxes and maintaining them in a liquid state.
- Conformance filter sets
- Sets of graded glass filters, representing a spread of colors from each of the main scales, are available for quick and simple calibration checks.
- Certified color reference standards
- Ideal for routine calibration and verification of test data.

Color Scales *	Scope	Range	Resolution
Saybolt color (ASTM D6045, ASTM D156, JIS K 2580)	Light colored petroleum products including aviation fuels, kerosene, naphthas, white mineral oils, hydrocarbon solvents and petroleum waxes	-16 (darkest) to +30 (lightest)	1
ASTM color (ASTM D6045, ASTM D1500, JIS K 2580)	A wide range of petroleum products including lubricating oils, heating oils and diesel fuel oils	0.5 – 8 units	0.1
Pt-Co/Hazen/APHA (ASTM D1209)	Clear liquids such as petroleum spirits, solvents and alcohols	0 – 500 mg Pt/l	1
Lovibond® RYBN (IP 17 Method A up to 6" path length)	Petroleum products in terms of Lovibond Red, Yellow, Blue & Neutral units	0 – 70 Red, Yellow: 0 – 40 Blue; 0 – 3.9 Neutral	-
IP Units (IP 17 Method B)	Light colored products such as refined undyed motor fuel, white spirit or kerosene	Water White (0.25) to Standard White (4.0)	-
Gardner color (ASTM D1544, ASTM D6166)	Chemicals and oils ranging from pale yellow to red, including resins Varnishes, drying oils and fatty acids	1 – 18 units	0.1
CIE Values (ASTM E308)	X Y Z Tristimulus values, x y Y Chromaticity coordinates, L*C*h color space;	Defined by spectrum locus	-0.01% T,

	CIE L*a*b* color space; Hunter L a b color space; E color difference	
Spectral data (420 – 710 nm)	Transmittance, optical density (full spectrum & specified wavelengths)	0 – 100% T, 0.25 0.01% T, OD 0.0001OD

TECHNICAL SPECIFICATION

Measuring principle	16 interference filters
Spectral response	420 – 710 nm
Bandwidth	20 nm
Repeatability	
- chromaticity (x y)	± 0.0002
- transmittance	± 0.25 %
- Saybolt values	± 1
Measurement time	Less than 25 seconds
Calibration	Single key press; fully automated
Light source	5 Volt, 10 Watt tungsten halogen lamp (lens ended)
Illuminant	CIE Illuminant A, C, D65
Observer	2°, 10°
Path length	0.004" – 6" (0.1 – 153 mm)
Interface	Parallel printer port, RS 232 port
Input voltage	Universal, via external power supply
Approvals	CE
Display	2 x 40-character, back-lit LCD
Keypad	21-key membrane keypad; washable polyester with audible feedback
Instructions	7 languages: English, French, German, Spanish, Italian, Portuguese, Dutch
Heater unit	Factory fitted option, 95°C max
Instrument housing	Fabricated sheet steel with tough, textured paint finish
Dimensions	Width 515mm, depth 195mm, height 170mm
Weight	7.75 kg

The Lovibond® PFXi-995/P is supplied complete with Windows® software, optical glass cells for each of the color scales included, a calibrated glass conformance filter, a spare lamp and instructions. The addition of user specific scales to standard instruments will be considered.

Video link:

http://www.youtube.com/watch?v=AWp06Hjo4Gs&feature=player_embedded