

# Lovibond® Tintometer® PFXi-880/IP17

The Institute of Petroleum's standard method IP 17 specifies that the color of petroleum products is determined in terms of either Lovibond® values (Method A), or a restricted range of 14 color standards IP Units (Method B). The Lovibond® PFXi-880/IP17 is a limited-scale, automatic colorimeter for color measurement according to both Lovibond® RYBN Color and IP Units. Results can also be displayed in terms of CIE values and spectral data.

## 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.)*

Color Scales *	Scope	Range	Resolution
IP Units	Light colored products such as refined, undyed motor fuel, white spirit or kerosene.	Water White (0.25) to 6” standard White (4.0)	
Lovibond® RYBN Color	Petroleum products in terms of Lovibond Red, Yellow and Blue units	0 – 70 Red, Yellow; 0 1 / 16 ” – 5 1 – 40; Blue; 0 – 3.9 / 4 ” Neutral	
CIE Values (ASTM E308)	X Y Z tristimulus values; x y Y chromaticity coordinates; CIE L*a*b* color space; E color difference	Defined by spectrum locus	
Spectral data (420 – 710 nm)	Transmittance	0 – 100%	0.01%

## Color Analysis made Simple

The PFXi-880/IP17 colorimeter is an easy to use, automatic 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. When measuring IP Units of clear, water-white products, the long sample path length ensures precise color measurements, without multiplying errors.

## Confidence in Instrument Performance

The PFXi-880/IP17 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 allows users to conduct periodic checks on the instrument or identify faults. For regular conformance testing the colorimeters are also supplied with a colored glass filter from the appropriate color scale.

## Optional Items for Individual Applications

### Integrated heater unit

A factory fitted option to prevent heated samples such as waxes from solidifying in the cell.

### Windows software for data capture on PC

Allows data sets to be automatically downloaded to a PC computer where they can be processed or stored.

### Conformance filter sets

For quick and simple conformance checks, sets of graded glass filters, representing a spread of colors from the Lovibond® RYBN Color scale or IP Units, are available.

### Certified color reference standards

Ideal for routine calibration and verification of test data.

## 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 C
Observer	2°
Path length	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-880/IP17 is supplied complete with 3 optical glass cells (1", 5 1/4" and 6"), a calibrated glass conformance filter, a spare lamp and instructions