# Lovibond® Colour Measurement

# Tintometer® Group



### PFXi-880/IP17 heated

### Colour Measurement for Fuels & Waxes



- Integrated RCMSi Technology for Remote Calibration
- Optional Heater Keeps Samples Above The "Cloud Point"
- Automatic and Non-subjective Colour Measurement
- Unique Long Path Length Chamber Accommodates up to 6"/153mm Cells

Part Number: 1378804H

### Integrated RCMSi Technology for Remote Calibration

The PFXi series of spectrophotometric colorimeters introduces a unique concept in liquid colour control: RCMSi technology (Remote Calibration & Maintenance Service via internet). You can now benefit from the capability for remote calibration and servicing via the internet - eliminating any costs and time delays associated with servicing and guaranteeing compliance with standards.

Watch the RCMSi video to see how easy the procedure is.

### 153mm (6") Sample Chamber

The long path length cell chamber enables you to measure extremely unsaturated, light samples and colour scales which are defined with long path lengths including the Lovibond® RYBN and AOCS Tintometer® colour, guaranteeing compliance with AOCS, ISO and ASTM standards.

### Optional Integrated Heater Unit

The PFXi-880, -950 & -995 series are available with an optional integrated heater unit. This is a critical feature when dealing with materials such as fats and waxes whose temperature needs to be maintained at a constant temperature +10°C above the "Cloud Point" of the material.

### 16 Wavelength Filters

Ensure high precision, accurate spectral data.

### Automatic and Non-subjective Colour Measurement

The PFXi range provides absolute results. Automatic instruments communicate in clear terms, accurately and reliably with no opportunity for human error or misjudgement.

# Consistent Data Compliant with International Standards

The PFXi range automatically measures colour and displays results directly, either according to the traditional grading scales that have been wideley adopted as industry standards for colour assessment and control, or in terms of internationally recognised CIE values and spectral data.

### Very Rugged, Chemically Resistant, Steel Construction

The robust steel construction enables you to use the PFXi even in the harshest of environments.

### Easy Maintenance with Removable Sample Chamber

The instruments include a robust steel sample chamber which is easily removed so you can clean it or replace it should spillage occur.

#### Extensive and Flexible Choice of Colour Scales

You can choose from a selection of over 20 different, internationally recognised scales in a variety of combinations.

### Remote Upgrade Facility

Uniquely, however, you do not need to make the choice of scales at point of purchase. The PFXi instruments are upgradeable in the field so you can add a scale at a later date.

### Calculation and Description of "Off-Hue" Status

This is a useful facility that enables you to reveal whether the sample colour is characteristic of the selected scale. Where appropriate, it includes a description of hue difference (eg. redder, greener), relative

saturation (stronger or weaker) and an off-hue factor (a relative measure of the distance away in colour space of the sample colour from the "true" colour scale).

# Supplied with Colour Control Software for Data Analysis

The software allows you to generate spectral and CIE diagrams as well as analyse spectral data. It also permits direct control of the instrument from the computer.

### Conformance Standard, Cells and Spare Bulb Included

For regular conformance checking, certified colour reference standards are also available for routine calibration and verification of test data. Conformance filters are supplied with a Certificate of Conformity - giving you the assurance of their colour values and confirmation that they were manufactured under the control of The Tintometer Ltd's ISO 9001 quality system.

### Output Conforming to GLP Including Date, Time, Sample & User ID

The adaptable software and design allow you to configure the PFXi to your requirements. You can set the display language, program the instrument to only display the scales of interest and restrict access to the menu system.

## Accommodates a Wide Range of Sample Cells and Tubes

As well as standard colorimetry cells, the PFXi-880/950/995 series can be used with a range of tubes and standards, flow-through and disposable spectrophotometer cells.

### Extensive range of accessories

A thermal printer, sample chamber, additional cells, replacement lamps and conformance filters represent some of the additional accessories you can obtain for the PFXi Series.

#### Industry

Chemical Industry | Food and Beverage Industry | Industries Others | Oil and Gas | Pharmaceutical Industry

### Application

Edible Oils and Fats

### PFXi-880/IP17 heated

The PFXi series of spectrophotometric colorimeters introduces a unique concept in liquid colour control: RCMSi technology. You can benefit from the capability for remote calibration and servicing via the internet - saving the cost and time associated with servicing and guaranteeing compliance with standards.

The PFXi-880/950/995 series ensure high precision results from the 16 filter wavelength technology. With an extended path length capacity of up to 6" (153 mm) and an optional heater to sustain the temperature of the sample to +10°C above its "cloud point", they meet the demand for consistent and reliable colour data for a wide range of samples.

#### **Technical Data**

Applicable Standard	AOCS Cc 13e-92 AOCS Cc 13j-97 ASTM E308 BS684 IS 548 (part 1)-2010 ISO 15305 ISO 27608 MS 252 : Part 16 MS 817 : Part 12
Colour Type	Transparent
Measuring Principle	16 interference filters
Repeatability	±0.0002 CIE xy Chromaticity on measurements of deionised water
Detector	blue enhanced photodiode
Display	240 x 128, back-lit graphic display, (white on blue)
Interfaces	USB RS 232 Ethernet
Path Length	0.1 - 153 mm (0.004" - 6")
Measuring Geomet- rics	0° - 180° transmission
Internal Storage	100,000+ Measurement
Measurement Time	less than 30 seconds
Power Supply	Universal (90 - 240 VAC), via external power supply
Sample Chamber	max 6" (153mm) cells
Keypad	23 key tactile membrane keypad; washable polyester with audible feedback
Instrument Housing	Fabricated steel with tough, textured paint finish
Spectral Range	420 - 710 nm
Bandwidth	10 nm
Baseline Calibration	Single key press; fully automated
Illuminants	CIE Illuminant A
Portability	Benchtop
Observer	2°, 10°
Compliance	CE RoHS WEEE
Languages User In- terface	English, French, German, Italian, Portuguese, Russian, Spanish, Chinese, Japanese
Dimensions	515 x 170 x 196 mm

### **Delivery Scope**

- PFXi Series Instrument
- External Power Supply
- Set of 3 Power Leads (UK, European and United States)
- USB and LAN Cable
- Quick Start Guide
- USB Memory Stick (Containing Manuals)
- RCMSi Starter Pack
- Certificate of Conformity
- Accessory Box with 5 Volt Halogen
   Lamp, Conformance Filter, 1 x W600/
   B/1" Cell, 1 x W600/B/6" Cell

#### Accessories

Title	Part Num- ber
PFXi external power supply pack	131219
Acid Wash tube	131840
Holder for standard spectrophotometer cells (12.5 mm width)	131907
Adapter for 10.65 mm tubes	132800
Adapter for 33 mm tubes	132810
Dark sample cell for CIE values, 1 mm path length	132820
Replacement Sample Chamber for PFXi 880/950/995	133840
RCMSi Certified Calibration Pack - Full	134410
RCMSi Certified Calibration Pack - Conformance	134420
RCMSi Certified Calibration Pack - Starter	134430
PFXi Instruction CD including Windows Software	137460
PFXi IQ/OQ Documentation	137680
Flow through control software	137690
PFXi heater upgrade pack	137880
PFXi Thermal Printer	137891
PFXi Lamp 5V	138180
Tube, 10.65 mm diameter	352290
Tube, 33 mm diameter for ASTM Color	352300
Flow through cell, 10 mm path length	658020

### Tintometer GmbH

Lovibond® Water Testing Schleefstraße 8-12 44287 Dortmund Tel.: +49 (0)231/94510-0 sales@lovibond.com www.lovibond.com Germany

#### **Tintometer Brazil**

Caixa Postal: 271 CEP: 13201-970 Jundiaí – SP Tel.: +55 (11) 3230-6410 sales@lovibond.us

www.lovibond.com.br

Brazil

### The Tintometer Limited

Lovibond House
Sun Rise Way
Amesbury, SP4 7GR
Tel.: +44 (0)1980 664800
Fax: +44 (0)1980 625412
sales@lovibond.uk
www.lovibond.com
UK

#### Tintometer Inc.

6456 Parkland Drive Sarasota, FL 34243 Tel: 941.756.6410 Fax: 941.727.9654 sales@lovibond.us www.lovibond.us USA

# **Tintometer China** 9F, SOHO II C. No.9 Guanghualu,

Chaoyang District,
Beijing, 100020
Customer Care China Tel.: 4009021628
Tel.: +86 10 85251111 Ext. 330
Fax: +86 10 85251001
chinaoffice@tintometer.com
www.lovibond.com
China

#### Tintometer India Pvt. Ltd.

India

Door No: 7-2-C-14, 2<sup>nd</sup>, 3<sup>rd</sup> & 4<sup>th</sup> Floor Sanathnagar Industrial Estate, Hyderabad, 500018 Telangana Tel: +91 (0) 40 23883300 Toll Free: 1 800 599 3891/ 3892 indiaoffice@lovibond.in www.lovibondwater.in

### Tintometer South East Asia

Unit B-3-12, BBT One Boulevard, Lebuh Nilam 2, Bandar Bukit Tinggi, Klang, 41200, Selangor D.E Tel.: +60 (0)3 3325 2285/6 Fax: +60 (0)3 3325 2287 lovibond.asia@tintometer.com www.lovibond.com Malaysia

#### **Tintometer Spain**

Postbox: 24047 08080 Barcelona Tel.: +34 661 606 770 sales@tintometer.es www.lovibond.com Spain