

# Lovibond® Colour Measurement Tintometer® Group



## TR 520 Spectrophotometer



- Compact, Lightweight and Easy to use Sphere Spectrophotometer
- Designed for Fast, Accurate and Precise Colour Measurement
- On Screen Target Display Allows Positioning to be Perfect Every Time
- OnShade Software Included for FREE – Perfect for Detailed Data Analysis

Artigo No: 403035

### Handheld and Portable

Weighing only 600 grams, the TR 520 is the perfect lightweight portable spectrophotometer. It's compact and ergonomic design offers easy one-handed operation, helping to prevent operator fatigue and enabling more measurements per hour. Offering the possibility of 5000 measurements with 8 hours battery life enables the TR 520 to be used anywhere on site for a prolonged period of time.

### Accuracy

Giving accurate and repeatable results is what the TR 520 does best. The on board camera based locator, enables the user to position the instrument accurately on the chosen sample with minimal contact. This feature dramatically minimize the chances of geometric metamerism.

### Aperture Options

Choosing the correct aperture size for your surface is extremely important for accurate measurement. The TR 520 gives you the flexibility to adjust aperture size from 10mm/8mm to 5mm/4mm with the switch of a button. This adjustability of aperture helps to ensure the instrument is perfect for your measurement needs.

### Calibration

The calibration board supplied with every TR 520 incorporates a white tile and black calibration plate. This allows minimum and maximum readings to be checked every 24 hours.

### FREE Software

As standard, the TR 520 comes with a FREE PC software package. The OnShade software allows for a detailed data analysis which can then be shared or printed via the optional micro printer accessory.

### Suitable for Multiple Applications

The versatility of the TR 520 means its suitable for multiple applications and has the ability to report CIE Lab, XYZ, Yxy, LCh, CIE LUV, Hunter Lab colour spaces,  $\Delta E^*L^*a^*b^*$ ,  $\Delta E^*C^*h^\circ$ ,  $\Delta E^*uv$ ,  $\Delta E^*94$ ,  $\Delta E^*cmc(2:1)$ ,  $\Delta E^*cmc(1:1)$ ,  $\Delta E^*00$ ,  $\Delta E$  Hunter Colour Difference Formulas; and can be set to D65, A, C, D50, D55, D75, F1, F2, F3, F4, F5, F6, F7, F8, F9, F10, F11, F12 illuminants. In addition, the TR 520 can report a wide selection of other Colorimetric Index's: WI (ASTM E313, CIE/ISO, AATCC, Hunter), YI (ASTM D1925, ASTM 313), TI (ASTM, E313, CIE/ISO), Metamerism Index (MI), Colour stain, Colour Fastness, Colour Strength and Opacity. This data can be seen as either Spectral Value/ Graph, Colorimetric Value, Colour Difference Value/ Graph, PASS/FAIL Result, Colour Offset or Samples Chromaticity values

## Indústria

Indústria de Alimentos e Bebidas | Indústria Farmacêutica |  
Indústria Química | Óleo e Gás | Outras Indústrias

## Aplicação

Plásticos | Produtos Domésticos | Revestimentos | Têxteis

## TR 520 Spectrophotometer

The Lovibond TR Series of spectrophotometers and reflectance meters allow you to measure a variety of unique surfaces. Offering a consistent and accurate colour measurement, the TR series will reduce rejection rate and help improve your production speed. The ergonomic design and flexibility of the devices make them perfect for a variety of different industries including paints, coatings, plastics, textiles, printing, food, cosmetics and creams. Select from our product range below and find your colour measurement solution within the Lovibond TR Series.

## Dados Técnicos

<b>Applicable Standard</b>	ASTM 313 ASTM D1925 ASTM E308
<b>Tipo de Cor</b>	Opaque
<b>Geometria Óptica</b>	Reflect: di: 8°, de: 8° (diffused illumination, 8 degree viewing angle)
<b>Tamanho da Esfera de Integração</b>	48 mm
<b>Modo Espectrofotométrico</b>	Concave Grating
<b>Sensor</b>	256 image Element Double Array CMOS Image Sensor
<b>Display</b>	3.5 inch TFT colour LCD, Capacitive Touch Screen
<b>Interfaces</b>	USB
<b>Intervalo Espectral</b>	10 nm
<b>Modo de Medição</b>	Single Measurement, Average Measurement
<b>Armazenamento Externo</b>	2000 Standards : 20000 Samples
<b>Método de Localização</b>	Camera View Finder Locating
<b>Faixa de Reflectância Medida</b>	0 - 200 %
<b>Tempo de Medição</b>	2.6 s
<b>Abertura de Medição</b>	Dual Aperture: 10mm/8mm & 5mm/4mm
<b>Componente Especular</b>	SCI & SCE
<b>Fórmula de Diferença de Cor</b>	$\Delta E^*ab$ , $\Delta E^*uv$ , $\Delta E^*94$ , $\Delta E^*cmc$ (2:1), $\Delta E^*cmc$ (1:1), $\Delta E^*00v$ , $\Delta E$ (Hunter)
<b>Tempo de Vida da Bateria</b>	5000 measurements with 8 hours
<b>Outro Índice Colorimétrico</b>	WI (ASTM E313, CIE/ISO, AATCC, Hunter) YI (ASTM D1925, ASTM 313, TI (ASTM E313, CIE/ISO) Metamerism Index MI, Staining Fastness, Colour Fastness, Colour Strength, Opacity
<b>Dados Exibidos</b>	Spectrogram/Values, Samples Chromaticity Values, Colour Difference Values/Graph, PASS/FAIL Result, Colour Offset
<b>Acordo Entre Instrumentos</b>	MAV/SCI: $\Delta E^* \leq 0.15$
<b>Faixa Espectral</b>	400 - 700 nm
<b>Largura de Banda</b>	10 nm
<b>Iluminantes</b>	CIE Illuminant D65 CIE Illuminant A CIE Illuminant C CIE Illuminant D50 CIE Illuminant D55 CIE Illuminant D75 CIE Illuminant F1 CIE Illuminant F2 CIE Illuminant F3 CIE Illuminant F4 CIE Illuminant F5 CIE Illuminant F6

CIE Illuminant F7  
CIE Illuminant F8  
CIE Illuminant F9  
CIE Illuminant F10  
CIE Illuminant F11  
CIE Illuminant F12

<b>Portabilidade</b>	Portátil
<b>Vida Útil do Iluminante</b>	5 years, more than 3 million measurements
<b>Observador</b>	2° / 10°
<b>Idiomas da Interface do Usuário</b>	Inglês, Alemão, Francês, Espanhol, Português, Chinês
<b>Dimensões</b>	184 x 105 x 77 mm

## Texto do Escopo de Entrega

- TR 520 Sphere Spectrophotometer
- OnShade PC Software
- White and Black Calibration Board
- Dust Cover
- USB Cable
- External DC Power Supply
- USB Stick with User Manuals in English, French, German, Spanish, Portuguese and Chinese
- Sturdy Carrying Case

---

**Tintometer GmbH**

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

**The Tintometer Limited**

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

**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 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  
Malásia

**Tintometer Brazil**

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

**Tintometer Inc.**

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

**Tintometer India Pvt. Ltd.**

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  
Índia

**Tintometer Spain**

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