

# Lovibond® Colour Measurement Tintometer® Group



## TR 515 Spectrophotometer



- Identify colour variations, enabling corrective measures to be taken and ensure products meet required standards
- Reduce waste, rework, and the need for multiple iterations, leading to cost savings
- Ensure the colour of your product is consistent to meet high customer expectations
- Perfect for a variety of different industries including paints, coatings, plastics, textiles, printing, food, cosmetics, and creams

货号: 403032

How can the TR 515 help you?

### Consistency

Colour is often a critical factor in determining the quality of a product. Manufacturers need to ensure that the colours of their products are consistent to meet customers' expectations. By using the TR 515, you can ensure your products meet these standards.

### Accuracy

The TR 515 can identify any variations in colour, enabling manufacturers to take corrective measures and ensure that the products meet the required standards.

### Efficiency

Manufacturing processes often involve the use of colourants or dyes. By measuring the colour of these materials, manufacturers can ensure that they are using the correct amount of colourant and avoid waste. The TR 515 can help reduce costs and improve efficiency in the manufacturing process.

### Cost-effectiveness

Accurate colour measurement helps in reducing waste, rework, and the need for multiple iterations, leading to cost savings for the manufacturers.

### Branding

A product's colour is often a key part of its branding and marketing. Customers may associate a particular colour with a brand, and manufacturers need to ensure that their products are consistent. By using the TR 515, you can ensure products match the desired brand colour and help maintain a strong brand image.

### Compliance

Some industries, such as food and pharmaceuticals, have strict regulations regarding the colour of their products. By using the TR

515, you can ensure that products comply with these regulations and avoid potential legal issues.

## 行业

其他行业 | 化工行业 | 医药行业 | 油气 | 食品和饮料行业

## 应用

塑料 | 日用品 | 涂料 | 纺织品

光源寿命 5 years, more than 3 million measurements

观测者 2° / 10°

多语言操作界面 英文, 德文, 法文, 西班牙, 葡萄牙, 中文

尺寸 184 x 105 x 77 mm

## TR 515 Spectrophotometer

The TR 515 offers accurate and reliable colour management that fits in the palm of your hand. The 45°/0° geometry and ergonomic design makes the unit perfect for the whole manufacturing process from use on the plant floor, production line, warehouse, or laboratory.

## Technical Data

<b>Applicable Standard</b>	ASTM 313 ASTM D1925 ASTM D7843 ASTM E308
<b>颜色类型</b>	Opaque
<b>光学测量结构</b>	45°/0° (45° ring-shaped illumination, vertical viewing)
<b>积分球尺寸</b>	48 mm
<b>分光模式</b>	Concave Grating
<b>Sensor</b>	256 image Element Double Array CMOS Image Sensor
<b>显示</b>	3.5 inch TFT colour LCD, Capacitive Touch Screen
<b>数据接口</b>	USB Bluetooth 4.0
<b>光谱间隔</b>	10 nm
<b>测量模式</b>	Single Measurement, Average Measurement
<b>外部存储器</b>	1000 Standards : 30000 Samples
<b>定位方式</b>	Camera View Finder Locating
<b>反射率量程</b>	0 - 200 %
<b>测量时间</b>	1.5 s
<b>测量孔径</b>	MAV: ø 8mm / ø 10 mm ; SAV: ø 4 mm / ø 5 mm
<b>电源</b>	Li-ion Battery
<b>色差测量</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>电池寿命</b>	5000 measurements with 8 hours
<b>其他颜色指数</b>	WI (ASTM E313, CIE/ISO, AATCC, Hunter) YI (ASTM D1925, ASTM 313) MI (Metamerism Index) Staining Fastness, Colour Fastness, Colour Strength, Opacity
<b>显示数据</b>	Spectrogram/Values, Samples Chromaticity Values, Colour Difference Values/Graph, PASS/FAIL Result, Colour Offset
<b>仪器台间差</b>	Within $\Delta E^*ab$ 0.15 (Average for 12 BCRA Series II colour tiles)
<b>光谱范围</b>	400 - 700 nm
<b>带宽</b>	10 nm
<b>照明体</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>便携性</b>	手提

## 标准配置文本

- TR 515, 45°/0°, Spectrophotometer
- OnShade PC Software
- White and Black Calibration Board
- Dust Cover
- USB Cable
- External DC Power Supply
- USB Stick with User Manuals in English 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  
德国

**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  
英国

**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  
中国

**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  
马来西亚

**Tintometer Brazil**

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

**Tintometer Inc.**

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

**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  
印度

**Tintometer Spain**

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