

# Lovibond® Colour Measurement Tintometer® Group



## TRA 500 Handheld & Benchtop Reflectance 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

Code: 403220

### Handheld and Benchtop

With the ability of being both a handheld and a benchtop unit, the TRA 500 offers the best of both worlds. The compact, ergonomic and lightweight design of the handheld unit along with the precision-engineered benchtop stand makes the TRA 500 ideal for users on the go or in the laboratory.

### Applications

The TRA 500 allows the user to measure most applications including powders, liquids, gels, pastes, granules and solid materials. To ensure consistent measurement optical glass cells of 10mm, 20mm and 30mm are included with the unit. The optical cells make it possible for the user to measure a wide range of problematic samples and still maintain a constant measurement.

### Accuracy

Giving accurate and repeatable results is what the TRA 500 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 metamorphism.

### Calibration

The calibration board supplied with every TRA 500 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 TRA 500 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 TRA 500 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, F2, F7 & F11 illuminants. In addition, the TRA 500 can report a wide selection of other Colorimetric Indexes: 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.N6

## Industrie

Autres industries | Industrie agroalimentaire et boissons | Industrie chimique | Industrie pharmaceutique | Pétrole et gaz

## Applications

Matières plastiques | Produits ménagers | Revêtements | Textiles

## TRA 500 Handheld & Benchtop Reflectance Spectrophotometer

The TRA 500 is a cost effective quality control solution, which can be used as either a handheld or a benchtop spectrophotometer. The lightweight and ergonomic design along with the portable benchtop stand makes it ideal for quality control in the lab, field or in the manufacturing plant.16

## Fiche technique

<b>Applicable Standard</b>	ASTM 313 ASTM D1925 ASTM E308
<b>Type de Couleur</b>	Opaque
<b>Géométrie Optique</b>	Reflect: di: 8°, de: 8° (diffused illumination, 8 degree viewing angle)
<b>Intégration de la taille de la sphère</b>	48 mm
<b>Mode Spectrophotométrique</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>Intervalle spectral</b>	10 nm
<b>Mode de Mesure</b>	Single Measurement, Average Measurement
<b>Stockage externe</b>	2000 Standards : 20000 Samples
<b>Méthode de Location</b>	Camera View Finder Locating
<b>Plage de Réflectance Mesurée</b>	0 - 200 %
<b>Heure de la mesure</b>	2.6 s
<b>Ouverture de Mesure</b>	Dual Aperture: 10mm/8mm & 5mm/4mm
<b>Composant Spéculaire</b>	SCI & SCE
<b>Formulaire de Différence de Couleur</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>Durée de vie batterie</b>	5000 measurements with 8 hours
<b>Autre Indice Colorimétrique</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>Données Affichées</b>	Spectrogram/Values, Samples Chromaticity Values, Colour Difference Values/Graph, PASS/FAIL Result, Colour Offset
<b>Corrélation inter-instrument</b>	MAV/SCI: $\Delta E^* \leq 0.15$
<b>Domaines spectraux</b>	400 - 700 nm
<b>Largeur de bande</b>	10 nm
<b>Illuminants</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>Portabilité</b>	Portable
<b>Durée de Vie de l'Illuminant</b>	5 years, more than 3 million measurements
<b>Observateur</b>	2° / 10°
<b>Langues interface d'utilisateur</b>	Anglais, Allemand, Français, Espagnol, Portugais, Chinois
<b>Dimensions</b>	184 x 105 x 77 mm

## Contenu de livraison

- TR 500 Sphere Spectrophotometer
- TRA Portable benchtop Stand
- OnShade PC Software
- White and Black Calibration Board
- White background plate
- Dust Cover
- USB Cable External DC Power Supply
- USB Stick with User Manuals in English, French, German, Spanish, Portuguese and Chinese
- Sturdy Carrying Case
- 10 mm, 20 mm and 30 mm Optical Glass cells
- Cell Cover

Titre	Code
W586/OG/10 verre optique	605890
W586/OG/10 verre optique, 5 pc	605895
W586/OG/20 verre optique	605900
W586/OG/20 verre optique, 5 pc	605905
W586/OG/30 verre optique	605910
W586/OG/30 verre optique, 5 pc	605915

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**Tintometer GmbH**

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

**The Tintometer Limited**

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

**Tintometer China**

Room 1001, China Life Tower  
16 Chaoyangmenwai Avenue,  
Beijing, 100020  
Customer Care China Tel.: 4009021628  
Tel.: +86 10 85251111 App. 330  
Fax: +86 10 85251001  
chinaoffice@tintometer.com  
www.lovibond.com  
Chine

**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  
Malaisie

**Tintometer Brazil**

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

**Tintometer Inc.**

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

**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  
Inde

**Tintometer Spain**

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