

# Lovibond<sup>®</sup> Colour Measurement Tintometer<sup>®</sup> Group



## TRA 500 Spectrophotometer

Measure Liquids, Gels and Powders with the TRA (Adaptor) Series



- Not Everything is Flat, Not Everything is Solid
- Awkward Objects Can Be Difficult to Measure
- The TRA (Accessory) is a Precision Engineered Portable Docking Station for the TR Range of Handheld, Sphere, Versatile Spectrophotometers
- Provides a Light Controlled Environment for the Measurement of Liquids, Gels and Powders

Artigo No: 403220

### Precision Engineering

Designed specifically for the Lovibond<sup>®</sup> Spectrophotometers, the instruments fit tightly into the housing to avoid any ambient lighting entering the sample.

### Accurate Measurements Every Time

Each TRA kit is supplied with a white background plate to ensure consistency of readings. Background colour is critical when measuring translucent or transparent samples.

### Flexibility of Application

Supplied with 3 different optical glass cells (10mm, 20 and 30 mm path length), the TRAs support a wide variety of samples. Thicker and more viscous materials are easier to handle if the largest 30 mm cell is used. In other cases, a smaller volume of sample may only be available, hence the 10 mm cell.

### TRA 500 Spectrophotometer

The TRA series have been designed according to precision engineering as the ideal adaptor for the Lovibond<sup>®</sup> range of spectrophotometers. The robust shape makes them ideal for use in any laboratory. The angled viewing panel makes measurements easy-to-read. The integral lid blocks any ambient light since no external light interferes with the measurements.

### Dados Técnicos

<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>Armazenamento Externo</b>	2000 Standards : 20000 Samples
<b>Modo de Medição</b>	Single Measurement, Average Measurement
<b>Fonte de Alimentação</b>	Li-ion Battery
<b>Tempo de Vida da Bateria</b>	5000 measurements with 8 hours
<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 Espectral</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>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, Chines
<b>Dimensões</b>	184 x 105 x 77 mm
<b>Peso</b>	600 g

## Texto do Escopo de Entrega

- Complete TR 520 or 500 kit (including power supply and calibration foot).
- TR Accessory (including sample cover).
- White background plate.
- 10, 20 and 30mm Optical Glass cells.

## Acessórios

Título	Artigo No
W586/OG/10 vidro ótico	605890
W586/OG/10 vidro ótico, 5 pçs.	605895
W586/OG/20 vidro ótico	605900
W586/OG/20 vidro ótico, 5 pçs.	605905
W586/OG/30 vidro ótico	605910
W586/OG/30 vidro ótico, 5 pçs.	605915

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