



Reflectance Data for Colour Control

Opaque samples, semi solids
& translucent liquids

Lovibond® RT100
& RT200 range



Low cost systems based on enhanced microspectrometer technology

- **Low cost spectral system**
- **Certified calibration standard included**
- **Compact and lightweight measuring head**
- **Storage of reference and measured values**
- **Rapid reflectance data at the click of a button**

The Lovibond® RT100 and RT200 are compact, lightweight colorimeters, giving spectral reflectance data for batch-to-batch colour control and detection of colour inconsistencies. The RT100 consists of a hand-held spectrophotometer unit with an integrated measuring head (0°/45° measuring geometry) for precision colour measurement and control of regular solids, semi solids and liquids. The RT200 consists of a similar spectrophotometer unit but with a flexible, fibre-optic measuring head (0°/0° measuring geometry) for colour measurement of small areas, challenging shapes or relatively inaccessible places such as tablets. Both instruments combine advanced microspectrometer technology with the computing power of a PC. The spectrophotometer unit links to a standard PC computer with software installed for instrument operation and for presentation, analysis and logging of reflectance data. Results can be expressed in the following choice of colour values and colour difference measurements:

Colour Measurement
CIE XYZ tristimulus values
CIE L*a*b* colour space
CIE x y Y chromaticity coordinates
CIE L'u'v colour space
CIE L*C*h colour space
ΔE^* , ΔL^* , Δa^* , Δb^* , ΔC^* , Δh^* colour differences
Whiteness Index
Yellowness Index
Reflectance
Metameric index

Lovibond® RT100 & RT200 Colour Software

- **Works under Microsoft® Windows® 95/98/NT/2000/XP**
- **Displays a choice of colour spaces or reflectance curves**
- **Input and selection of reference values**
- **Averaging of multiple measurements**
- **Includes a verbal indication of colour differences**
- **Data export to ASCII files**
- **Direct data export into MS Excel**

The Lovibond® RT100 and RT200 are supplied with colour software for instrument operation and for presentation and analysis of reflectance data.



Technical Specification

Measuring principle	Spectral
Spectral response	RT100: 400 - 700 nm; RT200: 400 - 800 nm
Spectral resolution	7.5 nm
Measuring geometry	RT100: 0°/45°; RT200: 0°/0°
Measuring area	RT100: 3 mm; RT200: 1 - 3 mm
Repeatability	$\Delta E^*_{ab} \leq 0.1$ on white reference
Illuminants	CIE Illuminant A, C, D65
Observers	2°, 10°
Interface	USB
Approvals	CE
Instrument housing	Anodised steel
Dimensions	104 x 54 x 36 mm

The Lovibond® RT100 and RT200 colorimeters include a spectrophotometer unit with the appropriate measuring head, RT colour measurement software for instrument operation and for presentation and analysis of reflectance data on a PC computer, a white calibration standard, low voltage power pack, PC interface cable, user instructions and a carrying case.

Lovibond® RT100 Sample Holders for Liquids, Semi Solids & Powders

The following adapters allow the RT100 to be used for colour control of liquids, semi solids and powders by establishing a constant sample environment, which ensures that sample comparisons are of significance. In particular they exclude ambient light, which can affect measurements, and fix the sample path length, which may influence readings especially if samples are translucent. For colour control of standard opaque samples, the spectrometer unit can be removed from the adapter.

Lovibond® RT100 Cell Adaptor (supplied with 10 & 20 mm cells and a white reference)



Suitable for translucent and opaque liquids, semi-solids and powders. The RT100 measuring head is mounted in a light-excluding compartment that houses the sample in a 10 or 20 mm cell backed by a white reference.

Lovibond® RT100 Tube Adaptor (supplied with 2 sample tubes & white tubular calibration standard)



Suitable for opaque liquids, semi-solids and powders. The RT100 measuring head is mounted in a light-excluding funnel that houses the samples in tubes.

Order Codes

401000	RT100 (0°/45°), UK
401010	RT100 (0°/45°), Euro
401020	RT100 (0°/45°), USA
402000	RT200 (0°/0°), UK
402010	RT200 (0°/0°), Euro
402020	RT200 (0°/0°), USA
400100	RT100 Tube Adapter
400200	RT100 Cell Adapter