



Lovibond® Colour Measurement For the Food and Drink Industry



Accurate colour measurement in seconds

Colour accuracy matters in the food and drink industry. Consumers expect the colour of their products to be consistent. A difference in colour triggers a subconscious signal that the product is 'not as good'. Accurate colour measurement of ingredients and product is also crucial prior to final processing and shipment to avoid costly production reruns and product recalls.



www.lovibondfoodanddrink.com

Delivering faster and more accurate colour measurement for the Food and Drink Industry



Advanced spectrophotometers and colorimeters

The Lovibond® team has developed a wide range of advanced spectrophotometers and colorimeters that measure in seconds the colour of finished food products, drinks, oils, powders, cereals, pastes, granules and gels. In short, every liquid and substance in the food and drink sector. Handheld or bench mounted, these products are designed to be very quick and easy to operate and robust enough for daily use in both production facilities and laboratories.

Take the guesswork out of colour monitoring

Measuring colour by eye is subjective and unlikely to deliver consistent standards that are verifiable and certifiable. Measurement by spectrophotometers and colorimeters gives a precise numeric value that can be used over and over again as a benchmark for subsequent food and drink batches. This provides the ultimate reassurance that manufacturers and their customers are assessing product colour in the same way, so there are no misunderstandings or complaints. You can't put too high a value on that.

The Lovibond® colour measurement and analysis systems are used worldwide to help manufacturers produce edible oils and fats, beers wines and spirits, soft drinks, baking and milling flour, sugars, biscuits and confectionery.



Same or different?

It takes just seconds to find out. If different we can tell you by how much and set parameters by which any difference will not be visible by the naked eye.

Colour in the supply chain

Colour measurement is important at every stage of the supply chain and production process to ensure the consistency of your product. Having a clear value and description for each assessment that can be checked very quickly, makes life much easier for everyone and ensures all ingredients are in tolerance. These stages include:

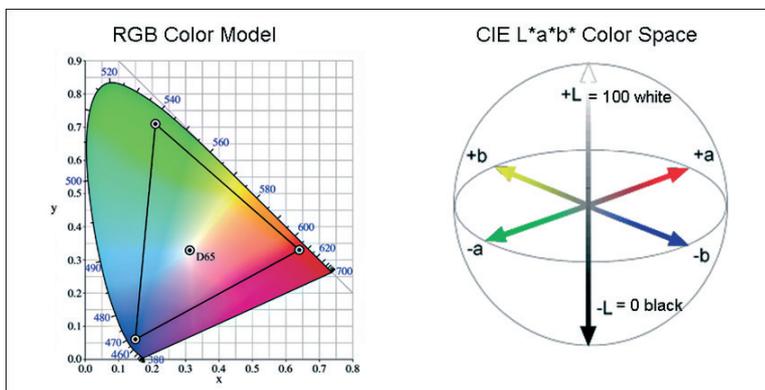
- Specifying materials when sourcing
- Communicating colour within the wider supply chain
- Inspecting incoming materials
- Conducting continual production quality control
- Inspecting final/outgoing products
- Guaranteeing compliance with national & international standards

Meeting international standards

The Lovibond® colour measurement instruments are recognised internationally for their accuracy in the analysis of edible oils, beverages and foodstuffs. The instruments and ISO 17025 certified reference materials comply with international Test Methods and Standards, Scales and Colour Values such as EBC, ICUMSA, Pfund, IMSI, Series 52, Lovibond® RYBN, AOCS and CIE.

A history of innovation and success

The Lovibond® team has been measuring colour in the drinks industry since 1885 – nobody has been doing it longer. Our history, combined with ongoing technological innovation, puts us in the perfect position to talk everything colour. The science of colour is getting ever more sophisticated yet our products make measurement child's play. If you want to know more about the technology (and understand the diagram below), why not request a copy of our 'Colour Communications Guide' - just email sales@tintometer.com.



Put us to the test

Send us a sample of your food and drink product, we'll test it and send you a report specifying its exact colour. Alternatively we are happy to come to your premises and demonstrate the products in action in your lab or production area.
Email sales@tintometer.com



Lovibond® TR 500 / TR 520

The TR 500 & TR 520 are handheld spectrophotometers that are equally at home in the laboratory or production area. They measure the precise colour of flat, curved, cloudy and opaque surfaces in just seconds and are very easy to use. The TR 500's unique docking station accessory incorporates a light controlled environment and sample optical cells for liquids, gels, powders, granules and pastes. Perfect for a wide range of foodstuffs and drinks/ingredients.

- Ergonomic design for fast two touch colour analysis
- Large easy to read and operate interactive display
- Handheld or fits into docking station for measurement of liquids, gels, powders
- No interference from ambient light
- Free software to enable the production of graphs, statistical process control and shade searching (PC not included)
- Reports colour in all the common colour spaces, colour differences and indices used in industry

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Lovibond® LC 100/SV 100 Integrated Package

This entry-level, handheld LC 100 spectrophotometer is designed to measure the colour of flat, solid and opaque surfaces and is ideal for food, powder and pastes. When combined with its housing stand (SV 100), it will measure awkward substances in optical cells that are protected from ambient light.

- Portable, lightweight and very easy to use
- Users can set their own colour standards and acceptable deviation limits
- Single, simple, reliable integrated tool – no need to connect to a PC
- Takes accurate readings and produces comparison charts in seconds
- Information on colour and surface texture effects

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In China, the LC 100 is being utilized to verify the quality of dairy products. One of the country's major milk suppliers trialed the product. Based on the speed of results, its ease of use and the price-performance, they qualified it as the perfect solution for their needs. The LC100/SV100 Integrated Package is also being deployed in applications as diverse as chocolate manufacturing and beverages (Singapore and The Philippines) and the production of milk powder (Thailand).



Lovibond® TLC 60 / 120

Artificial light found in retail environments around the world varies according to the technology being used. A different light source means a different perception of colour. The TLC 60 / 120 light boxes provide a wide range of controlled lighting environments to view a product as others see it. At the touch of a button you can move from Tungsten to cool white or warm white fluorescent and achieve consistent visual colour assessment.

- Support a wide range of illuminants:
 - F - Tungsten (Illuminant A)
 - D65 – International Standard artificial light
 - TL84 – Retail lighting standard across Europe, Japan and China
 - UV – For evaluating optical brighteners or fluorescent pigments
 - CWF – Cool White Fluorescent (American standard)
 - TL83/U30 – Warm White Fluorescent
 - Render colour consistently – every time
- Meet international standards for visual colour measurement
- Ensure colour consistency irrespective of lighting conditions (detect potential illuminant metameric failure)

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Lovibond® PFXi range

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The PFXi series of benchtop spectrophotometric colorimeters is supplied with specific colour scales for the measurement of colour in the edible oils, honey, fats and drinks industries. Scales can be easily upgraded at any time and there is an optional heater for materials such as fats which need a constant temperature. Full range of colour scales for the food and beverage industry including:

- Chlorophyll & b-Carotene
- CIE L*a*b
- EBC (European Brewing Convention)
- Hunter Lab
- ICUMSA
- IFU (International Fruit Union)
- Lovibond® RYBN Colour
- Maple Syrup
- Save cost, time and the environment with RCMSi technology for Remote Calibration and Maintenance via internet
- Supplied with colour control software for data analysis (LAN & USB cable provided)
- Optional integrated heater unit (not available on PFXi-195) enables materials such as fats and waxes whose temperature need to be maintained at a constant temperature +10°C above the "Cloud Point"



Lovibond® Model Fx

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Benchtop transmission spectrophotometer for measuring the colour of edible oils at the optimum temperature for accuracy and precise site-to-site agreement.

- Automatic colour measurement for the edible oils market
- Measures Lovibond® RYBN, Lovibond RY10:1, AOCS RY, Chlorophyll & b-Carotene
- Ensures compliance with standards
- Allows the measurement of hot samples (integrated heater)
- Reports oil's sample temperature to avoid a misreading from crystallisation
- Sealed unit & removable sample chamber (oil spillages will not impact accuracy)



Good Laboratory Practice (GLP)

In colour measurement, it is important to ensure that everything you use is as clean as possible and correct for the measurement you are taking.

- Cell material – plastic cells might be vulnerable to scratching, discolouration and thermal damage. If materials need to be heated, borosilicate cells should be considered
- Cell cleaning – any mess on the cell or instrument may affect the measurement
- Path Length – a vital aspect of correct practice is to ensure the right cell is used
- Service and calibration – always ensure your instrument is calibrated regularly
- Certified Glass and Liquid Reference Standards are available on request; Calibration plates are provided for reflectance instruments

Contact sales@tintometer.com for a White Paper on 'Good Laboratory Practice – A Guide to Conformance'.

For more information about the Lovibond® range of advanced spectrophotometers and colorimeters, contact us today:

Call: **+44 (0)2980 664800**

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