

Lovibond® ICx

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Setting new standards in accurate, repeatable Platinum Cobalt, APHA, and Hazen colour measurement.

Precise - Intuitive - Reliable

ilac-MRA

UKAS CALIBRATION
0630

ISO 17025 ACCREDITED LABORATORY

QUALITY made in **United Kingdom**

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The Lovibond® ICx Colour Spectrophotometer reaches new levels of accuracy and repeatability in Platinum Cobalt, APHA and Hazen colour measurement for quality control laboratories requiring high precision at very low Pt-Co values in almost colorless liquids.

What is the Platinum Cobalt Scale?

The Platinum Cobalt (Pt-Co) scale, also known as the Hazen or APHA colour scale, is a standardised system for measuring the colour of clear liquids. It quantifies the yellow tint caused by dissolved substances, primarily in water and other transparent liquids.

This scale ranges from 0 (completely clear) to 500 (dark yellow), determined by comparing the sample's colour to dilutions of a platinum-cobalt standard solution.

The associated standards - ASTM D1209, ASTM D5386, and ISO 6271 - define methods for assessing colour, with ASTM D1209 based on visual comparison, while ASTM D5386 and ISO 6271 use spectrophotometry. These standards ensure the consistency and purity of chemicals across various industrial applications.





Accurate

The Lovibond® ICx delivers measurement accuracy at very low Pt-Co measurement levels, essential in chemical manufacturing applications where clarity and colourlessness indicate product quality. Recent industry trends show increasingly demanding requirements for greater precision at the low end of the Pt-Co colour scale, typically below Pt-Co 10 values. The Lovibond® ICx is able to achieve an accuracy value of +/- 0.5, a repeatability value of +/- 0.2 and reproducibility value of +/- 0.3 when measured against our Premium Pt-Co 5 liquid reference standard soluton that has been derived from ISO 17025-certified primary batch.

This precision is achieved through our uniquely designed high-precision spectrophotometric optics, combined with our extensive expertise in colorimetric data processing.

Accuracy and Repeatability Performance

Standard Value	Accuracy*	Reproducibility*	Repeatability*
Pt-Co 5	+/- 0.5	+/- 0.3	+/- 0.2
Pt-Co 10	+/- 0.75	+/- 0.7	+/- 0.5
Pt-Co 20	+/- 1.20	+/- 1.0	+/- 1.0

*Tolerance values when using Lovibond® Premium Pt-Co Liquid Reference Standards derived from an ISO 17025-certified primary batch. Values are achieved in a controlled test laboratory using strict adherence to our sample method procedure.

Simple

The Lovibond® ICx features a user friendly interface, allowing laboratories to install, commission, and begin routine testing straight out of the box. Sample measurements take just seconds, with data easily stored locally (at over 100,000 logs) or sent to a printer or PC for further processing. It's neat, compact design also minimises the instrument's footprint, conserving valuable bench space in the lab.

We have designed the instrument to be easy to use with method prompts, on-board help function and supporting tools to help you in your work. In addition, Lovibond has a global network of Authorised Service Centres offering application and technical support should you need further assistance.

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Robust

The Lovibond® ICx is specifically engineered for harsh laboratory environments where the risk of chemical spillage is high. Its **robust construction** stems from a chassis manufactured in chemically resistant aluminium rather than plastic.

Our glass optics and electronic components are fully shielded from the measurement chamber to prevent liquid ingress. Additionally, we offer an optional PTFE cell holder, providing exceptional resistance to chemical attack, even from the harshest substances.



PTFE cell holder

Reliable

The operational performance of the Lovibond® ICx can be easily verified and calibrated using our own Lovibond Premium Pt-Co liquid reference standard soluton.

Our Platinum Cobalt reference Standard Solutions are precision-formulated to achieve extremely low tolerances of ± 0.8 on the Pt-Co 10 Standard Solution.

Each Standard Solution is gravimetrically prepared on balances calibrated by our chemists with OIML-traceable weights. The concentration of each standard is verified using a top-of-the-range spectrophotometer that undergoes routine calibration and OQ/PQ verification.

With a long-standing foundation in colour science, Lovibond has led the field in colour measurement since 1885. The Lovibond® brand is synonymous with quality design and manufacturing. Proudly "made in the United Kingdom," we value our heritage, and our longevity reflects the trust we have built with customers worldwide. To ensure customer satisfaction, we offer a 2-year manufacturer's warranty on the Lovibond® ICx Colour Spectrophotometer giving you peace of mind.



Premium Pt-Co Liquid Reference Standards

Application Focus

The Platinum Cobalt (Pt-Co) colour scale is a critical quantitative tool for assessing the clarity, purity, and chemical stability of transparent solutions across a wide range of industrial sectors. Industries such as pharmaceuticals, fine chemicals, petrochemicals, solvents, acids, and resins often demand tight colour specifications to ensure product consistency, process control, and regulatory compliance.

Even subtle colour deviations can indicate issues such as contamination, oxidation, degradation, or incomplete processing each of which may compromise product performance, safety, shelf life, or compatibility with downstream applications.

The Lovibond® ICx delivers repeatable Pt-Co measurements, even at values below 10, which is essential for quality assurance in applications where colour differences may be imperceptible to the human eye but chemically significant.



By integrating the ICx into routine quality control workflows, manufacturers can:

- Detect impurities or colour shifts early in the process
- Validate the effectiveness of filtration, purification, or stabilization steps
- Ensure consistency across production batches
- Support continuous improvement efforts and minimise costly rework or product recalls

In doing so, the ICx helps laboratories and production teams maintain tight process control, improve operational efficiency, and uphold brand and regulatory standards making it a vital asset for any organisation committed to high-purity product manufacturing.

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Lovibond ICx Specification

Feature	Specification	Feature	Specification
Model	Lovibond® ICx	**Applicable standards**	ASTM D1209, ASTM D5386, ISO 6271, ASTM E313
Warranty Period	2 Years (excluding lamps)	**Scales Measured**	Pt-Co/Hazen/APHA, CIEL*a*b*, Yellowness
Country of Origin	United Kingdom	**Physical Dimensions (WxHxD)**	301 x 152 x 331 mm
Measuring Principle	Benchtop Transmission Spectrophotometer	**Weight (unpacked)**	5.2Kg
Accuracy	Pt-Co 5: ±0.5, Pt-Co 10: ±0.75, Pt-Co 20: ±1.20	**Measurement time**	Less than 10 seconds
Repeatability (Instrument)*	Pt-Co 5: ±0.2, Pt-Co 10: ±0.5, Pt-Co >20: ±1.0	**Light source**	12 Volt 20 Watt tungsten halogen lamp
Reproducibility (Instrument)*	Pt-Co 5: ±0.3, Pt-Co 10: ±0.7, Pt-Co 20: ±1.0	**Lamp replaceable by user**	Yes
Chemical resistance & robustness	Chemical resistance supported by materials and sealed design	**Screen**	Colour LCD (4.3")
Standard sample chamber construction	Black Power Coated. Aluminium and plastic polyacetal sample holder	**Interface**	6 key tactile membrane keypad; washable polyester with audible feedback
Optional Accessories	PTFE chemically resistant sample chamber, direct serial printer	**Languages supported**	English, French, German, Italian, Portuguese, Russian, Spanish, Chinese, Japanese.
Instrument housing	Extruded Aluminium with tough, chemically resistant, textured paint finish	**Memory**	100,000+ measurements
Sample chamber marked	Yes (laser etched)	**Interfaces**	USB, RS232
Sealed bulkhead	Yes	**Data outputs**	Serial printer, USB direct to PC
Secondary bulkhead	Yes	**Baseline calibration**	Single key press; fully automated
Optics (material)	Glass	**Input voltage**	Universal (110 – 250 V ac) 60W, 24V, via external
Flexible cell path lengths	Length 0.1 – 152.4mm (6")	**Power supply**	24V external powerpack (UK, EU and USA plugs as standard)
Cell types	Duel Lovibond W600 and (low volume) W100. Optical glass or borosilicate	**Compliance**	CE, RoHS, WEEE
Standard accessories (delivered)	W600/B/100 Cell, conformance filter, power pack, manual (*.pdf)	**Service support**	Global network of Lovibond Authorised Service Centres
Conformance standard options	Lovibond certified liquid & glass references	**Training and support**	Onboard help, manual (*.pdf), quick start guide, online, telephone and email support
Colorimetry	2° or 10°, Illuminant A, C and D65		

Part Numbers

Name	Description	Part Number
Lovibond® ICx	Lovibond® ICx instrument and core accessories	**169300**
ICx PTFE sample chamber	Optional PTFE adaptor and ICx sample chamber	**169305**
Liquid Reference Standards		
Premium Pt-Co 0 Liquid Reference Standard	500ml bottle, Pt-Co 0	**169440**
Premium Pt-Co 5 Liquid Reference Standard	500ml bottle, Pt-Co 5	**169445**
Premium Pt-Co 10 Liquid Reference Standard	500ml bottle, Pt-Co 10	**169450**
Premium Pt-Co 15 Liquid Reference Standard	500ml bottle, Pt-Co 15	**169455**
Premium Pt-Co Liquid Reference Standard Set	500ml bottles, Pt-Co 0 (x2),5,10,15	**169400**
W600 Glass Borosilicate Cells		
W600.B.100mm Cell	W600, Borosilicate, 100 mm cell	**656030**
W600.B.100mm Cell Pk 5	W600, Borosilicate, 100 mm cell	**656034**
W600.B.100mm Cell Pk 10	W600, Borosilicate, 100 mm cell	**656035**
Cell Lid		
W600 Cell Lid PTFE 100mm Pk 5	W600, PTFE Cell Lid, 100 mm cell	**690514**

Lovibond ICx Video

2 YEARS WARRANTY

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