

The image features a dark blue diagonal shape in the top-left corner containing the 'ARO SCIENTIFIC' logo. The 'O' in 'ARO' is a white circle with a blue dotted pattern. Below the logo, the word 'SCIENTIFIC' is written in white. The background of the entire page is a photograph of a laboratory setting, showing a metal rack of test tubes containing a yellow liquid. A glass dropper is positioned above one of the tubes, with a drop of the liquid about to fall. The lighting is bright, highlighting the clarity of the glass and the vibrant yellow of the liquid.

ARO
SCIENTIFIC

**COLOUR
REFERENCE
STANDARDS
FOR THE ANALYSIS
OF COLOUR**

Precision. Accuracy. Measurement Certainty



ARO Scientific Ltd

ARO Scientific Ltd is an independent ISO 17034 accredited reference material producer with ISO/IEC 17025 accredited testing laboratories, providing high quality certified reference materials, reference materials, standards, and consumables for calibration of measuring equipment, verification of measuring equipment, method validation, method verification, or other quality control processes applicable for international test methods such as ASTM, IP, ISO, etc. Our management team has more than 35 years' experience in the manufacturing, characterisation and certification of certified reference materials, reference materials, standards, and consumables.

Accreditation

ARO Scientific Ltd holds dual accreditation status under The United Kingdom Accreditation Service (UKAS) to international standards ISO/IEC 17025 and ISO 17034, CAB No. 27393. The United Kingdom Accreditation Service (UKAS) is the sole national accreditation body recognised by the UK Government for certification and conformity to internationally agreed standards for testing, calibration and inspection. UKAS is a signatory to International Laboratory Accreditation Cooperation (ILAC) which is the international body for promoting cooperation between the various inspection body accreditation schemes that operate throughout the world. Other signatories include, but are not limited to, A2LA (USA), COFRAC (France), Dakks (Germany) and JAB (Japan). ISO 17025 / ISO 17034 accreditation denotes competence for customers to make an informed and confident choice in the procurement process.

The UKAS mark ensures buyers have peace of mind. ILAC also bridges international barriers, making trade easier, especially in new growth markets. Our Combined UKAS and ILAC-MRA Mark demonstrates that the accreditation we hold is recognised under the International Laboratory Accreditation Cooperation (ILAC) Mutual Recognition Arrangement, our certificates are accepted around the world.

Quality Commitment

ARO Scientific Ltd recognises that our customers should be always provided with products and services they can rely upon, trust and have confidence to use on a daily basis. Our commitment to quality and our accreditations demonstrates that we have rigorous quality systems in place that allow us to provide customers with the highest quality products possible, which are accepted globally.



COLOUR REFERENCE STANDARDS

These colour reference standards are ideal for routine calibration of colour measuring instruments, verification of test data and ensuring good inter-laboratory or inter-instrument correlation. The range of liquid standards includes AOCS-Tintometer, ASTM, Gardner, Lovibond RYBN, Pt-Co and Saybolt Colour, the key colour scales for many products. They are supplied with full traceability to the internationally recognised standards of ISO/IEC 17025 & ISO 17034, accredited by UKAS (ASTM, Gardner & Saybolt Colour) or the ISO 9001 quality system (AOCS-Tintometer, Lovibond RYBN & Pt-Co Colour) under the control of Tintometer's ISO 9001 Quality Management System.

AOCS Tintometer Colour Reference Standards

AOCS-Tintometer colour reference standards are manufactured and certified by The Tintometer Limited. These colour standards have been manufactured and tested under the control of Tintometer's ISO 9001 Quality Management System. AOCS-Tintometer colour scale used as a standard by oil and fats refineries, rendering plants, and companies trading or associated with the American edible oils and fats industry. These colour reference standards intended to be used for verification of measuring equipment, method validation, method verification, or other quality control processes used to determine colour, applicable for methods AOCS Cc 13b-45, AOCS Cc 8d-55, AOCS Cc 13j-97, or other applicable test methods.

Part No.	Certification	Matrix	Nominal Value	Pack Size
134240	ISO 9001	Aqueous Solution	0.4R 2.0Y (5¼")	500 mL
134250	ISO 9001	Aqueous Solution	1.6R 9.0Y (5¼")	500 mL
134260	ISO 9001	Aqueous Solution	1.9R 12Y (5¼")	500 mL
134270	ISO 9001	Aqueous Solution	2.5R 20Y (5¼")	500 mL
134280	ISO 9001	Aqueous Solution	3.0R 28Y (5¼")	500 mL

ASTM (ASTM D6045, D1500) Colour Reference Standards

ISO/IEC 17025 and ISO 17034 ASTM Colour Reference Standard intended to be used for calibration and / or verification of measuring equipment, method validation, method verification, or other quality control processes applicable for colour measuring instruments. Applicable for test method ASTM D6045, ASTM D1500, or other applicable test methods.



The manufacturing, testing and certification of ARO's ASTM Colour Reference Standards has been performed in accordance with ARO's accreditation to ISO 17034, UKAS CAB No. 27393 and Tintometer's accreditation to ISO/IEC 17025, UKAS CAB No. 0630.

Part No.	Certification	Matrix	Nominal Value	Pack Size
134290	ISO 17025 / ISO 17034	Mineral Oil	< 0.5	500 mL
134000	ISO 17025 / ISO 17034	Mineral Oil	1	500 mL
134010	ISO 17025 / ISO 17034	Mineral Oil	3	500 mL
134020	ISO 17025 / ISO 17034	Mineral Oil	5	500 mL
134030	ISO 17025 / ISO 17034	Mineral Oil	7	500 mL

Nominal values are for reference only. Please refer to our website, customer services or appointed distributors for certified values of current batches.



GARDNER (ASTM D1544, D6166) COLOUR REFERENCE STANDARDS

Gardner (ASTM D1544, D6166) Colour Reference Standards are for routine calibration of colour measuring instruments and verification of test data. These colour standards are dual UKAS certified to the International Standards ISO/IEC 17025 and ISO 17034. Gardner (ASTM D1544, D6166) Colour Reference Standards are typically used in, but not limited to, the analysis of drying oils, varnishes, fatty acids, polymerized fatty acids, and resin solutions.



The manufacturing, testing and certification of ARO's ASTM Colour Reference Standards has been performed in accordance with ARO's accreditation to ISO 17034, UKAS CAB No. 27393 and Tintometer's accreditation to ISO/IEC 17025, UKAS CAB No. 0630.

Part No.	Certification	Matrix	Nominal Value	Pack Size
134200	ISO 17025 / ISO 17034	Mineral Oil	2	500 mL
134210	ISO 17025 / ISO 17034	Mineral Oil	5	500 mL
134220	ISO 17025 / ISO 17034	Mineral Oil	8	500 mL

Lovibond RYBN Colour Reference Standards

Lovibond RYBN colour reference standards are manufactured and certified by The Tintometer Limited. These colour standards have been manufactured and tested under the control of Tintometer's ISO 9001 Quality Management System.

The Lovibond® Scale is based on 84 calibrated glass colour standards of different densities of magenta (red), yellow, blue and neutral, graduating from desaturated to fully saturated. Sample colours are matched by a suitable combination of the three primary colours together with neutral filters, resulting in a set of Lovibond® RYBN units that define the colour.

Since several million combinations are available, it is possible to match the colour of almost any sample; it is particularly popular for measuring the colour of oils and fats, chemicals, pharmaceuticals and syrups. Typically used in, but not limited to, AOCS Cc 13e, AOCS Cc 13j-97, ISO 15305, ISO 27608, MS 252 : Part 16, MS 817 : Part 12, IP17 Method A.

Part No.	Certification	Matrix	Nominal Value	Pack Size
134080	ISO 9001	Aqueous Solution	0.8R 2.0Y 0.1N (5¼")	500 mL
134090	ISO 9001	Aqueous Solution	1.4R 4.0Y 0.5N (5¼")	500 mL
134100	ISO 9001	Aqueous Solution	2.0R 7.0Y 0.5N (5¼")	500 mL
134110	ISO 9001	Aqueous Solution	2.1R 11.0Y 0.5N (5¼")	500 mL
134120	ISO 9001	Aqueous Solution	2.5R 14.0Y 0.7N (5¼")	500 mL
134130	ISO 9001	Aqueous Solution	3.1R 22.0Y 0.85N (5¼")	500 mL
134230	ISO 9001	Aqueous Solution	3.4R 30.0Y 0.9N (5¼")	500 mL

Nominal values are for reference only. Please refer to our website, customer services or appointed distributors for certified values of current batches.



Pt-Co/Hazen/APHA Colour (ASTM D1209) Colour Reference Standards

Pt-Co/Hazen/APHA Colour (ASTM D1209) colour reference standards are manufactured and certified by The Tintometer Limited. These colour standards have been manufactured and tested under the control of Tintometer's ISO 9001 Quality Management System. Often referred to as Pt-Co, Platinum-Cobalt, Hazen or APHA Colour. All terms are interchangeable and equally valid. Typically used to measure clear to dark amber liquids.

Originally defined by specified dilutions of a platinum-cobalt stock solution, ranging from 0 at the light end of the scale to 500 at the darkest. Used extensively in the water industry but also for clear oils, chemicals and petrochemicals such as glycerine, plasticisers, solvents, carbon tetrachloride and petroleum spirits. Typically used in, but not limited to, ASTM D1209, ASTM D5386, ISO 6271.

Part No.	Certification	Matrix	Nominal Value	Pack Size
133991	ISO 9001	Aqueous Solution	0	500 mL
134140	ISO 9001	Aqueous Solution	5	500 mL
134150	ISO 9001	Aqueous Solution	10	500 mL
134160	ISO 9001	Aqueous Solution	15	500 mL
134170	ISO 9001	Aqueous Solution	30	500 mL
134180	ISO 9001	Aqueous Solution	50	500 mL
134190	ISO 9001	Aqueous Solution	100	500 mL
462803	ISO 9001	Aqueous Solution	500	500 mL

Saybolt (ASTM D6045, D156) Colour Reference Standards

Saybolt (ASTM D6045, D156) Colour Reference Standards are for routine calibration of colour measuring instruments and verification of test data. These colour standards are dual UKAS certified to the International Standards ISO/IEC 17025 and ISO 17034.



Saybolt (ASTM D6045, D156) Colour Reference Standards are typically used in, but not limited to, the analysis of a wide variety of petroleum products such as undyed motor and aviation gasoline, aviation turbine fuels, naphtha's, kerosine, pharmaceutical white oils, diesel fuel oils, heating oils, and lubricating oils by the automatic tristimulus method.

The manufacturing, testing and certification of ARO's Saybolt Colour Reference Standards has been performed in accordance with ARO's accreditation to ISO 17034, UKAS CAB No. 27393 and Tintometer's accreditation to ISO/IEC 17025, UKAS CAB No. 0630.

Part No.	Certification	Matrix	Nominal Value	Pack Size
134040	ISO 17025 / ISO 17034	Mineral Oil	-10	500 mL
134050	ISO 17025 / ISO 17034	Mineral Oil	0	500 mL
134060	ISO 17025 / ISO 17034	Mineral Oil	+12	500 mL
134070	ISO 17025 / ISO 17034	Mineral Oil	+25	500 mL

Nominal values are for reference only. Please refer to our website, customer services or appointed distributors for certified values of current batches.

