

The image features a dark blue and light blue geometric design on the left side. The background on the right is a photograph of an oil pumpjack silhouetted against a bright orange sunset sky with a low sun.

ARO
SCIENTIFIC

**SULFUR
STANDARDS**

**HEAVY MINERAL OIL
STANDARDS AND KITS**

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.



SULFUR STANDARDS

These ISO/IEC 17025 and ISO 17034 Sulfur standards intended to be used for calibration or verification of measuring equipment, method validation, method verification, or other quality control processes applicable for analysing sulfur content in various petroleum products using X-ray fluorescence spectrometry (XRF) or other applicable techniques. These standards have been characterised by primary Gravimetric preparation. Manufacture and characterisation have been performed in accordance with ARO's accreditation to ISO/IEC 17025 and ISO 17034, UKAS CAB No. 27393. They are supplied with full traceability to National Physical Laboratory (NPL), National Institute of Standards and Technology (NIST) and other recognised National Metrology Institutes (NMIs).

Heavy Mineral Oil Sulfur Standards

ISO/IEC 17025 and ISO 17034 Sulfur Certified Reference Material (CRM) intended to be used for verification of measuring equipment, method validation, method verification, or other quality control processes applicable for analysing sulfur content in petroleum products, typically used in, but not limited to test methods ASTM D2622, ASTM D4294, ASTM D7039, ASTM D7212, ASTM D7220, IP 336, IP 496, IP 497, ISO 8754, or other applicable test methods.



Part No.	Certification	Matrix	Nominal Value	Pack Size
SUHMBLANK	ISO 17025 / ISO 17034	Heavy Mineral Oil	0 mg/kg	100 mL
SUHM00005	ISO 17025 / ISO 17034	Heavy Mineral Oil	5 mg/kg	100 mL
SUHM00010	ISO 17025 / ISO 17034	Heavy Mineral Oil	10 mg/kg	100 mL
SUHM00025	ISO 17025 / ISO 17034	Heavy Mineral Oil	25 mg/kg	100 mL
SUHM00050	ISO 17025 / ISO 17034	Heavy Mineral Oil	50 mg/kg	100 mL
SUHM00100	ISO 17025 / ISO 17034	Heavy Mineral Oil	100 mg/kg	100 mL
SUHM00250	ISO 17025 / ISO 17034	Heavy Mineral Oil	250 mg/kg	100 mL
SUHM00300	ISO 17025 / ISO 17034	Heavy Mineral Oil	300 mg/kg	100 mL
SUHM00500	ISO 17025 / ISO 17034	Heavy Mineral Oil	500 mg/kg	100 mL
SUHM00700	ISO 17025 / ISO 17034	Heavy Mineral Oil	700 mg/kg	100 mL
SUHM00750	ISO 17025 / ISO 17034	Heavy Mineral Oil	750 mg/kg	100 mL
SUHM01000	ISO 17025 / ISO 17034	Heavy Mineral Oil	1000 mg/kg	100 mL
SUHM02500	ISO 17025 / ISO 17034	Heavy Mineral Oil	2500 mg/kg	100 mL
SUHM03000	ISO 17025 / ISO 17034	Heavy Mineral Oil	3000 mg/kg	100 mL
SUHM05000	ISO 17025 / ISO 17034	Heavy Mineral Oil	5000 mg/kg	100 mL
SUHMI0000	ISO 17025 / ISO 17034	Heavy Mineral Oil	10000 mg/kg	100 mL
SUHMI5000	ISO 17025 / ISO 17034	Heavy Mineral Oil	15000 mg/kg	100 mL
SUHM20000	ISO 17025 / ISO 17034	Heavy Mineral Oil	20000 mg/kg	100 mL
SUHM30000	ISO 17025 / ISO 17034	Heavy Mineral Oil	30000 mg/kg	100 mL
SUHM40000	ISO 17025 / ISO 17034	Heavy Mineral Oil	40000 mg/kg	100 mL
SUHM50000	ISO 17025 / ISO 17034	Heavy Mineral Oil	50000 mg/kg	100 mL

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



HEAVY MINERAL OIL SULFUR STANDARDS KITS

ISO/IEC 17025 and ISO 17034 Heavy Mineral Oil Sulfur Certified Reference Materials (CRM) Kits intended to be used for calibration or verification of measuring equipment, method validation, method verification, or other quality control processes applicable for analysing sulfur content in petroleum products, typically used in, but not limited to test methods ASTM D2622, ASTM D4294, ASTM D7039, ASTM D7212, ASTM D7220, IP 336, IP 496, IP 497, ISO 8754, or other applicable methods.



Part No.	Kit Contents
SUHM-ASTMD2622A	Sulfur in heavy mineral oil, ASTM D2622, Calibration Set A: Blank, 0.0005 % (5 mg/kg), 0.0010 % (10 mg/kg), 0.0100 % (100 mg/kg), 0.0250 % (250 mg/kg), 0.0500 % (500 mg/kg), 0.0750 % (750 mg/kg), 0.1000 % (1000 mg/kg). 8 x 100 mL.
SUHM-ASTMD2622B	Sulfur in heavy mineral oil, ASTM D2622, Calibration Set B: 0.1000 % (1000 mg/kg), 0.2500 % (2500 mg/kg), 0.5000 % (5000 mg/kg), 1.0000 % (10000 mg/kg). 4 x 100 mL.
SUHM-ASTMD2622C	Sulfur in heavy mineral oil, ASTM D2622, Calibration Set C: 1.0000 % (10000 mg/kg), 2.0000 % (20000 mg/kg), 3.0000 % (30000 mg/kg), 4.0000 % (40000 mg/kg), 5.0000 % (50000 mg/kg). 5 x 100 mL ea.
SUHM-ASTMD4294A	Sulfur in heavy mineral oil, ASTM D4294, Calibration Set A: Blank, 0.0005 % (5 mg/kg), 0.0010 % (10 mg/kg), 0.0100 % (100 mg/kg), 0.0250 % (250 mg/kg), 0.0500 % (500 mg/kg), 0.0750 % (750 mg/kg), 0.1000 % (1000 mg/kg). 8 x 100 mL.
SUHM-ASTMD4294B	Sulfur in heavy mineral oil, ASTM D4294, Calibration Set B: 0.1000 % (1000 mg/kg), 0.2500 % (2500 mg/kg), 0.5000 % (5000 mg/kg), 1.0000 % (10000 mg/kg). 4 x 100 mL.
SUHM-ASTMD4294C	Sulfur in heavy mineral oil, ASTM D4294, Calibration Set C: 1.0000 % (10000 mg/kg), 2.0000 % (20000 mg/kg), 3.0000 % (30000 mg/kg), 4.0000 % (40000 mg/kg), 5.0000 % (50000 mg/kg). 5 x 100 mL.
SUHM-ASTMD7039A	Sulfur in heavy mineral oil, ASTM D7039, Calibration Set A: Blank, 0.0005 % (5 mg/kg), 0.0050 % (50 mg/kg), 0.0250 % (250 mg/kg), 0.0500 % (500 mg/kg). 5 x 100 mL.
SUHM-ASTMD7039B	Sulfur in heavy mineral oil, ASTM D7039, Calibration Set B: Blank, 0.0025 % (25 mg/kg), 0.0100 % (100 mg/kg), 0.0500 % (500 mg/kg), 0.1000 % (1000 mg/kg), 0.3000 % (3000 mg/kg). 6 x 100 mL.
SUHM-ASTMD7220A	Sulfur in heavy mineral oil, ASTM D7220, Calibration Set A: Blank, 0.0005 % (5 mg/kg), 0.0010 % (10 mg/kg), 0.0025 % (25 mg/kg), 0.0050 % (50 mg/kg). 5 x 100 mL.
SUHM-ASTMD7220B	Sulfur in heavy mineral oil, ASTM D7220, Calibration Set B: 0.0050 % (50 mg/kg), 0.0100 % (100 mg/kg), 0.0250 % (250 mg/kg), 0.0500 % (500 mg/kg), 0.0750 % (750 mg/kg), 0.1000 % (1000 mg/kg). 6 x 100 mL.
SUHM-IP336A	Sulfur in heavy mineral oil, IP 336, Calibration Set A: Blank, 0.0300 % (300 mg/kg), 0.0500 % (500 mg/kg), 0.0700 % (700 mg/kg), 0.1000 % (1000 mg/kg). 5 x 100 mL.
SUHM-IP336B	Sulfur in heavy mineral oil, IP 336, Calibration Set B: Blank, 0.1000 % (1000 mg/kg), 0.3000 % (3000 mg/kg), 0.5000 % (5000 mg/kg). 4 x 100 mL.
SUHM-IP336C	Sulfur in heavy mineral oil, IP 336, Calibration Set C: 0.5000 % (5000 mg/kg), 1.0000 % (10000 mg/kg), 1.5000 % (15000 mg/kg), 2.0000 % (20000 mg/kg). 4 x 100 mL.

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Part No.	Kit Contents
SUHM-IP336D	Sulfur in heavy mineral oil, IP 336, Calibration Set D: 2.0000 % (20000 mg/kg), 3.0000 % (30000 mg/kg), 4.0000 % (40000 mg/kg), 5.0000 % (50000 mg/kg) . 4 x 100 mL.
SUHM-IP336E	Sulfur in heavy mineral oil, IP 336, Calibration Set E: Blank, 0.0300 % (300 mg/kg), 0.0500 % (500 mg/kg), 0.0700 % (700 mg/kg), 0.1000 % (1000 mg/kg), 0.3000 % (3000 mg/kg), 0.5000 % (5000 mg/kg). 7 x 100 mL.
SUHM-IP336F	Sulfur in heavy mineral oil, IP 336, Calibration Set F: 0.5000 % (5000 mg/kg), 1.0000 % (10000 mg/kg), 1.5000 % (15000 mg/kg), 2.0000 % (20000 mg/kg), 3.0000 % (30000 mg/kg), 4.0000 % (40000 mg/kg), 5.0000 % (50000 mg/kg). 7 x 100 mL.
SUHM-IP496A	Sulfur in heavy mineral oil, IP 496, Calibration Set A: Blank, 0.0100 % (100 mg/kg), 0.0300 % (300 mg/kg), 0.0500 % (500 mg/kg), 0.0700 % (700 mg/kg), 0.1000 % (1000 mg/kg). 6 x 100 mL.
SUHM-IP497A	Sulfur in heavy mineral oil, IP 497, Calibration Set A: Blank, 0.0050 % (50 mg/kg), 0.0100 % (100 mg/kg), 0.0250 % (250 mg/kg), 0.0300 % (300 mg/kg), 0.0500 % (500 mg/kg). 6 x 100 mL.

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