


Schedule of Accreditation

issued by

United Kingdom Accreditation Service

2 Pine Trees, Chertsey Lane, Staines-upon-Thames, TW18 3HR, UK

 <p>UKAS TESTING</p> <p>1158</p> <p>Accredited to ISO/IEC 17025:2017</p>	<p>ITS Testing Services (UK) Ltd</p> <p>Issue No: 047 Issue date: 14 August 2024</p>	
	<p>Intertek Caleb Brett Thornton Laboratory</p> <p>B301 Thornton Science Park Pool Lane Chester CH2 4NU</p>	<p>Contact: Anthony Grant Tel: +44 (0)151 350 5176 E-Mail: Anthony.Grant@Intertek.com</p>
<p>Testing performed at the above address only</p>		

DETAIL OF ACCREDITATION

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used
<p>PETROLEUM and PETROLEUM PRODUCTS</p> <p>Refinery Gases: Fuel Gas Main (V4808/9) Dry Gas (EBU) Flare Gas (K3)</p> <p>Liquefied Petroleum Gas</p>	<p><u>Chemical and Physical Tests</u></p> <p>Composition (%v/v): Methane 0.01 to 100 Ethane 0.01 to 100 Ethylene 0.01 to 100 Propane 0.01 to 100 Propylene 0.01 to 100 Propadiene 0.01 to 100 Isobutane 0.01 to 100 n-Butane 0.01 to 100 But-1-ene 0.01 to 100 Isobutylene 0.01 to 100 Trans-2-butene 0.01 to 100 Cis-2-butene 0.01 to 100 1:3-Butadiene 0.01 to 100 Isopentane 0.01 to 100 n-Pentane 0.01 to 100 Hydrogen 0.01 to 100 Carbon dioxide 0.01 to 100 Hydrogen sulphide 0.01 to 35 Oxygen 0.01 to 100 Nitrogen 0.01 to 100 Carbon monoxide 0.01 to 100</p> <p>Composition</p>	<p>Methods highlighted in italics are documented in-house methods</p> <p>Flexible scope enabling new versions of existing accredited standard test methods to be introduced in accordance with documented in-house policies and procedures</p> <p><i>UK 3725 based on ASTM D2163 and BS EN 15984:2011-07</i></p> <p><i>UK 3725 based on ASTM D2163 IP 264 (GC)</i></p>



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PETROLEUM and PETROLEUM PRODUCTS (cont'd)	<u>Chemical and Physical Tests</u> (cont'd)	Methods highlighted in italics are documented in-house methods
	Corrosion, copper strip	IP 411, ISO 6251
	Mercaptan sulphur	IP 272 modified (Titrimetry)
	Residual matter - O number Residual matter - R number	IP 317
	Total sulphur	ASTM D6667 mod
	Vapour pressure - calculated	IP 432 modified ISO 8973 modified
Motor Gasolines	Appearance	ASTM D4176 (<i>Visual Assessment</i>)
	Aromatics/Olefins	IP 156, EN 15553 ISO 22854 (GC)
	Copper corrosion	IP 154, EN ISO 2160 (Tarnish)
	Density	IP 365, EN ISO 12185 (Densitometer)
	Distillation	IP 123, EN ISO 3405 (Distillation)
	Existent gum	IP 131, EN ISO 6246 (Gravimetry)
	Induction period	IP 40, EN ISO 7536 (Oxygen Consumption)
	Mercaptan sulphur	IP 342, ISO 3012 (Titration)



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PETROLEUM and PETROLEUM PRODUCTS (cont'd)	<u>Chemical and Physical Tests</u> (cont'd)	Methods highlighted in italics are documented in-house methods
Motor Gasolines (cont'd)	Motor octane number	Flexible scope enabling new versions of existing accredited standard test methods to be introduced in accordance with documented in-house policies and procedures ASTM D2700 (CFR Engine) ASTM D2700-01a IP 236/05 ISO 5163-05
	Oxygenates and paraffin, olefine, naphthene, aromatic hydrocarbon types	ISO 22854 (GC)
	Properties by NIR	<i>TMS 540 (NIR)</i>
	Research octane number	ASTM D2699 (CFR Engine) ASTM D2699-01a IP 237/06 ISO 5164-05
	Silver Corrosion	ASTM D7671
	Sulphur	ISO 20846 (Pyrolysis UVF)
	Vapour pressure – Air Saturated	IP 394, EN 13016
General Kerosenes Aviation Kerosenes	Appearance	ASTM D4176 (<i>Visual Assessment</i>)
	Aromatics/Olefins	IP 156, EN 15553 (FIA)
	Char value	IP 10
	Colour – Saybolt	ASTM D156 mod (Colorimetric)
	ASTM Colour	IP 196 mod (Colorimetric)
	Copper corrosion	IP 154, EN ISO 2160 (Visual Tarnish)
	Coumarin content	IP 374 (HPLC)



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PETROLEUM and PETROLEUM PRODUCTS (cont'd)	<u>Chemical and Physical Tests</u> (cont'd)	Methods highlighted in italics are documented in-house methods
General Kerosenes Aviation Kerosenes (cont'd)	Density	IP 365, EN ISO 12185 (Densitometer)
	Distillation	IP 123, EN ISO 3405 (Distillation)
	Simulated Distillation	IP 406 (Gas Chromatography)
	Electrical conductivity	IP 274
	Existent gum	IP 540 (Gravimetry)
	Flash point	IP 170, EN ISO 13736
	Freezing point	ASTM D5972
	Heat of Combustion	ASTM D3338 (Calculation)
	Mercaptan sulphur	IP 342, ISO 3012 (Titration)
	Naphthalenes	ASTM D1840
	Smoke point	ASTM D1322
	Sulphur	IP 336, EN ISO 8754 (XRF)
	Thermal stability, JFTOT	IP 323
	Total acid number	IP 354
	Viscosity	IP 71, EN ISO 3104
	Water	<i>UK.3367 (Coulometric Titrimetry)</i>
	Water separation index	ASTM D3948



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PETROLEUM and PETROLEUM PRODUCTS (cont'd)	<u>Chemical and Physical Tests</u> (cont'd)	Methods highlighted in italics are documented in-house methods
Gas Oils	Appearance	<i>ASTM D4176 (Visual Assessment)</i>
	Aromatics	IP 391, EN 12916 (HPLC)
	Ash	IP 4, EN ISO 6245
	Cetane index	IP 380, EN ISO 4264
	Cloud point	IP 219, EN 23015, ISO 3015 (modified)
	Cloud Point (Phase Technology)	ASTM D5773
	Cold filter plugging point	IP 309, EN 116
	Colour ASTM	ASTM D1500 mod IP 196 mod (Colorimetric)
	Copper corrosion	IP 154, EN ISO 2160
	Density	IP 365, EN ISO 12185 (Densitometer)
	Distillation	IP 123, EN ISO 3405 (Distillation)
	Electrical conductivity	IP 274
	Flash point	IP 34, EN ISO 2719
	Lubricity	IP 450, ISO 12156:2006
	MCRT on 10% residue	IP 398, EN ISO 10370
	Oxidation stability	IP 388, EN ISO 12205
	Particulates	IP 440, EN 12662 (Filtration)



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PETROLEUM and PETROLEUM PRODUCTS (cont'd)	<u>Chemical and Physical Tests</u> (cont'd)	Methods highlighted in italics are documented in-house methods
Gas Oils (cont'd)	Properties by NIR	<i>TMS 541 (NIR)</i>
	Quinizarin	IP298 (Spectrophotometric)
	Sulphur	ISO 20846
	Sulphur	IP 336, EN ISO 8754 (ED XRF)
	Viscosity	IP 71, EN ISO 3104
	Water	<i>UK.3367 (Coulometric Titrimetry)</i>
	Strong acid number	IP 139, ISO 6618
	Total Acid Number	IP 177
Aromatics	Acid Wash Colour	ASTM D848 mod
	Appearance	<i>UK.1636 (Visual Assessment)</i>
	Colour Pt Co	ASTM D1209 mod
	Density	IP 365, EN ISO 12185 (Densitometer)
	Residue on Evaporation	ASTM D1353
	Sulphur	ASTM D5453 (modified to extend range down to 0.1mg/kg)
	Toluene Composition	<i>UK.2731 (GC)</i>
	Water content	<i>UK.3367 (Coulometric Titrimetry)</i>



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ENVIRONMENTAL	<u>Chemical and Physical Tests</u>	Methods highlighted in italics are documented in-house methods
		Flexible scope enabling new versions of existing accredited standard test methods to be introduced in accordance with documented in-house policies and procedures
Trade Effluents	Chemical Oxygen Demand (COD)	<i>BS ISO 15705: 2002 (Hach Cuvette Technique)</i>
	Chloride	<i>TMS 528 (Ion Chromatography)</i>
	Oils	IP 426 (IR)
	pH	ASTM E-70 (pH electrode)
	Phenol	<i>UK.497 (Colorimetric determination)</i>
	Sulphate	<i>TMS 528 (Ion Chromatography)</i>
	Dissolved Sulphide Content	ISO 10530 (Sealed tube methylene blue colourimetry and UV/Vis spectrophotometer)
	Dissolved Combined Carbon	<i>UK.695 (Pyrolysis and IR (CO₂) finish)</i>
	Total Suspended Solids	EN872:2005 (<i>Gravimetry</i>)

END