

**CARGO
INSPECTION &
ANALYTICAL
ASSESSMENT
SERVICES**





Helping producers, distributors and end users to optimise their quality control, loss control and financial risk reduction through a comprehensive range of services.

CARGO INSPECTION AND ANALYTICAL ASSESSMENT SERVICES.

WE WILL TREAT EACH CARGO AS IF IT WERE OUR OWN. CALEB BRETT, 1885

Through our network of more than 1,000 laboratories and offices and over 44,000 people in more than 100 countries, Intertek Caleb Brett provides Total Quality Assurance solutions for our customers' operations and supply chains.

For more than 130 years, companies around the world have depended on Intertek to help ensure the quality and safety of their products, processes and systems.

We go beyond testing, inspecting and certifying products; we are a Total Quality Assurance provider to industries worldwide. Through our global network of state-of-the-art facilities and industry-leading technical expertise we provide innovative and bespoke Assurance, Testing, Inspection and Certification services to customers. We provide a systematic approach to supporting our customers' Quality Assurance efforts in each of the areas of their operations including R&D, raw materials sourcing, components suppliers, manufacturing, transportation, distribution and retail channels, and consumer management.

Whether your business is local or global, we can ensure your products meet quality, health, environmental, safety, and social accountability standards for virtually any market around the world. We hold extensive global accreditations, recognitions, and agreements, and our knowledge of and expertise in overcoming regulatory, market, and supply chain hurdles is unrivalled.

44,000+

Intertek employees provide Total Quality Assurance expertise to customers around the world.



Cargo Inspection

We help our clients protect and manage their risk during custody transfer, storage, transportation and other activities related to their cargo assets. Our qualified personnel also provide technical expertise and additive treatment services, helping clients to protect and optimise the return on their cargo business activities.

Bulk commodity cargo inspection can help to reduce the risk of loss exposure among the trading parties involved. Intertek Caleb Brett offers cargo and inventory inspection services across the world, including major world ports, petroleum refining, production and petrochemical producing regions.

Analytical Assessment

We have one of the largest networks of analytical testing laboratories in the world. Using advanced analytical technologies, our experienced chemists, material scientists, technicians and laboratory managers provide clients with key purity and component testing, able to measure elements and compounds into the parts-per-trillion level. Our analytical assessment testing supports crucial quality control, troubleshooting, and research & development processes for clients on a global basis.

Analytical assessment provides in depth study of the quality of the raw product or commodity. Intertek Caleb Brett provides comprehensive analytical solutions in accordance with international methods such as ASTM, ISO, IP as well as other regulatory protocols. Additional expertise includes troubleshooting and for R&D purpose.

Expertise includes:

- Petroleum and Refined Products
- Fuels
- Lubricants and Greases
- Chemicals
- Biofuels
- LNG, LPG, Natural Gas
- UCO specification testing
- Aviation, SAF and C14 testing
- Materials
- Chemical Cargo Inspection
- Petroleum Cargo Inspection
- Cargo Additive Treatment Services
- Calibration and Metering



intertek

Our laboratories hold a range of accreditations including ISO 17025*, ISO14001 and ISO 45001.

*Please refer back to the laboratory involved for scope of accreditation

Industries We Serve

Intertek Caleb Brett's Cargo Inspection & Analytical Assessment services provides quality and quantity measurement, inspection, and laboratory testing services to a vast range of industries including:

- Oil, gas and petrochemical
- Natural gas and biofuels
- Aviation
- Marine
- Land transport
- Energy and renewables
- Chemical and pharmaceutical
- Military
- Infrastructure support
- Logistics and storage

Our team of experts can offer 24-hour turnaround where applicable



ANALYTICAL ASSESSMENT AND RELATED SERVICES

Intertek Caleb Brett provides comprehensive analytical solutions in accordance with international methods such as ASTM, ISO, IP as well as other regulatory protocols.

Fuel Testing

Caleb Brett fuel laboratories test diverse fuels for full quality specifications, and follow regulatory standards such as ASTM, ISO, and IP standards. In-house expertise and analytical resources make Intertek an ideal fuel testing provider for troubleshooting, trace contamination issues, and the most demanding fuel analysis.

Intertek Caleb Brett fuel laboratories operate at world-class standards on a global basis, supporting refinery, pipeline, terminal, and other operations.

Fuels tested include:

- Biofuels, biomass & biodiesel
- CNG, LNG, LPG
- Diesel fuel
- Ethanol, fuel grade
- Fuel oil, gas oil, bunker fuel
- Gas-to-liquids
- Gasoline
- Jet fuel, kerosene
- Petroleum and crude oil feed-stocks
- Solid Fuels

Lubricant Analysis

Caleb Brett lubricant quality testing helps clients minimize costly down-time and repairs by alerting the customer to early, developing problems before they become big, expensive, and costly failures. Intertek helps lubricant manufacturers with quality control, formulation, R&D, and qualification testing.

Lubricants testing and consulting:

- Gear engine & hydraulic
- Marine lubricants testing
- Automotive lubricants
- Aviation lubricants
- Lubricant qualification testing services
- Ferrography Testing

Crude Oil Assay

Intertek Caleb Brett operates the world's leading independent crude oil assay laboratory network, with the critical expertise and capabilities required for full crude oil assay assessments and detailed hydrocarbons analysis.

Crude oil assay testing includes crude oil characterization of whole crude oils and the boiling-range fractions produced from physical distillation by various procedures. Petroleum assay data is used by clients for detailed refinery engineering and crude oil marketing Feedstock assay data helps refineries optimise the refining process.

Oil Condition Monitoring

Oil condition monitoring by Intertek Caleb Brett laboratories protect our client's high-value machines, engines, and other systems, reducing expensive downtime. Caleb Brett OCM tests measure engine oils, lubricating oils, and other fluids for the detection of lubricant engine wear, lubricant quality degradation, and other problems.

Operating on a global basis, Intertek oil condition monitoring laboratories offer detailed oil and lube testing results, presented in easy-to-read and understandable reports.

The laboratories provide expert oil analysis, including:

- Spectrometry
- Viscosity
- Dilution
- Water detection
- Acid number
- Base number
- Particle counting
- Microscopy analysis

High levels of wear particles give advance warning of possible machinery malfunction, allowing early remedial action to be taken.

Where analytical results suggest no undue wearing is taking place, the operator may extend the interval between maintenance services, and the life of the oil change.

Wear Particle Analysis

Our laboratories can offer examination of engine filters, magnetic chip detectors and engine derived debris to detect potential concerns which may affect performance and reliability of hydraulics and oil wetted systems.

Grease Testing

Caleb Brett's grease testing facilities provide assurance that the grease our clients use is performing on specification.

Our laboratory can offer a wide range of grease testing methods to assess the physical, elemental and chemical properties of the grease and check the product is still fit for purpose. Intertek's grease testing laboratory can offer additional testing expertise in:

- Compatibility testing; to ensure our customers don't encounter problems when switching from one grease to another.
- Grease relife testing; in agreement with the manufacturer we can test a grease is still on specification and extend its use-by date, saving our customers valuable resources.

Compliance Testing

Intertek Caleb Brett can offer compliance and specification testing on a vast range of chemicals and end user products to ensure they conform to a range of specified standards.

From fuels to end products such as Ad-blue, Intertek can satisfy clients complete testing requirements. We can offer compliance and specification testing to both international standards such as ASTM, IP and ISO and bespoke and in-house methods.

Technical Consultancy

Caleb Brett's laboratories can provide a wide range of research development and technical consultancy services to our clients including:

- Contamination analysis
- Forensic investigation
- Method development
- Training courses/ Webinars

Trace Metals Analysis

Trace metal analysis provided by Intertek laboratories across the world detect and identify the types and amounts of trace metals in a wide range of materials and products.

Trace metal analysis supports quality control screening efforts, identification of unknowns and contamination detection, process improvement, troubleshooting efforts, formulation investigations, materials sourcing evaluation, regulatory compliance, molecular species identification, wear metals testing, and other applications.

Products analysed for trace metals include:

- Chemicals
- Crude oil, petroleum, fuels and other refined petroleum products
- LPG and gasses
- Consumer products
- Waters
- Soils, unknown deposits and precipitations,
- Food
- Pharmaceuticals

Trace metals analysis detection levels can go down to parts per trillion (ppt).



“ We are extremely satisfied with the services provided. Intertek exceeded all expectations and were proficient and professional in conducting the work.”

-Fuel testing customer

UCO and SAF Analysis

Due to the ever-growing demand for sustainable fuels, the Caleb Brett fuels and aviation laboratory has expanded its capability and can now perform full UCO and SAF specification testing.

Specifications and examples of testing covered:

- SAF – Full ASTM D7566 table 1, parts 1 & 2, including C14 testing by ASTM D6866.
- SAF – Annex A1 to A7 in ASTM D7566, except ASTM D7974 required in A3.2.
- SAF – ASTM D4052 Tier 1 & 2 testing
- UCO – Organic Chloride by UOP 991 and ASTM D7359.
- UCO – Organic Solvents by ISO 15303
- UCO – Total Sterols & Oligomers by ISO 16931
- UCO – standard properties to ISO and AOCS methods.

Outsourced Services

Intertek is the world leader in providing laboratory outsourcing services and solutions, from submitted samples testing projects, analytical projects to full laboratory outsourcing and acquisition. Intertek works with clients to successfully outsource analytical testing services and laboratories.

The global Intertek laboratory network provides technical testing expertise and capabilities to meet the research, quality control and analytical testing needs for a wide range of industries.

Intertek has a proven international track record of successful laboratory outsourcing projects for companies and governments in a wide range of industries, providing diverse laboratory services. Financial and performance benefits are gained from these laboratory outsource projects and Quality Control, Research and Product Development services are improved.

REACH Analysis

Intertek provides a single-source solution for complying with the registration, testing, and documentation requirements of the European Union’s complex REACH Regulation (Registration, Evaluation, and Authorization of Chemical Substances - EC1907/2006), working directly with the European Chemical Agency (ECHA) and individual EU governments. Supported by our locations in over 100 countries worldwide, Intertek enables companies to achieve REACH regulatory compliance.

Mercury Analysis

Intertek’s trace analytical capabilities help clients better detect, control, manage, and mitigate the presence of mercury.

Trace Mercury Analysis capabilities include:

- Oil & Gas Hydrocarbon Streams - from the Reservoir to the Refinery
- Seafood Exports and Imports
- Consumer Electronic Products (RoHS)
- Products and Materials (REACH)
- Coal



CARGO INSPECTION AND RELATED SERVICES

Petroleum Cargo Inspection

Intertek Caleb Brett professional petroleum inspectors help clients protect their financial interests during bulk cargo custody transfer, storage, transport and other business activities. Cargoes surveyed and tested include:

- Crude oil
- Refined fuels
- Other petroleum refined products.

We provide cargo and inventory inspection services across the world including:

- Major world ports
- Petroleum refining and production
- Petrochemical producing regions

Intertek Caleb Brett has offered international 24/7/365 service and coordination coverage, ever since 1885.

Chemical Cargo Inspection

Caleb Brett has extensive experience and knowledge of chemical cargoes and offers its clients professional inspection and testing services for chemical cargo shipments on a global basis.

The services that Intertek can provide on bulk chemical cargoes include;

- Bulk chemical and petrochemical inventory and custody transfer inspection.
- Ship to ship transfer
- Cargo measurements and sampling on ship and shore tanks
- Tank Cleanliness and Tank Wall Wash Inspection
- Chemical and Petrochemical Testing
- Inspection and Testing of Road/Rail/ISO tank cars
- Investigation of Cargo Discrepancy
- Trace Analysis
- Shore Tank Calibration Services

ShipCare Services

Intertek ShipCare services help protect ship owners and operators from equipment failure, downtime, and repairs, and other risks. Intertek is a global marine industry services leader, with the expertise and resources which can help reduce and avoid costly delays, repairs, losses and other risks to your offshore and shipping business and operations.

Intertek ShipCare global marine services:

- Maritime and ship lubricant tests
- Oil Condition Monitoring Testing
- Bunker fuel testing
- Bunker quantity survey (BQS)
- Cargo inspection
- Marine Potable Water Quality Testing
- Fire Fighting Foam Testing

Intertek ShipCare is the shipping community's gateway to Intertek's global state-of-the-art laboratory facilities and industry-leading technical expertise.



“The service provided by Intertek Caleb Brett from inquiry to providing strapping tables was excellent. The overall package provided throughout the process was very good.”

-Tank calibration customer

Tank Calibration

Intertek Caleb Brett offers a sophisticated tank calibration service, formulating highly accurate calibration data for our customers across Europe.

The service combines years of tank calibration experience with the latest software to enable Intertek to provide highly accurate, cost effective tank and sphere calibrations, using the latest laser theodolites and laser scanners.

Customers face a need for accurate volumetric tables and quantity measurement, to control stock held in storage vessels. The use of EODR (Electro Optical Distance Ranging) laser scanning offers a quicker, safer, low impact solution for strapping storage vessels. Tank settlement, tilt check and tank shell out-of-roundness surveys are also available.

Intertek can provide volumetric capacity tables in litres per mm for:

- Vertical tanks
- Horizontal tanks
- Spheres

We also have the capabilities to provide surveys on:

- Tank settlement for vertical storage tanks
- Tilt check
- Tank shell out of roundness (Seal surveys) for vessels with a floating roof

These services are available for tanks storing a variety of substances including:

- Oil storage and refineries
- Breweries, Distilleries, soft drinks (bulk liquids)
- Food and animal feed storage

Bitumen Inspection and Analysis

Intertek Caleb Brett can offer state of the art bitumen inspection and testing facilities.

Covering bitumen, polymer modified bitumen and emulsion inspection and testing.

The capabilities cover the testing of bitumen to BS EN 58, BS EN 13924-2, BS EN 12591 and BS EN 13808 specifications. This fully covers the testing requirements for standard bitumen. Intertek's bitumen testing capabilities are complemented by bitumen inspection capabilities.

Inspection capabilities and expertise

- International Safety Guide for Oil Tankers and Terminals (ISGOTT)
- Petroleum liquids- manual sampling (ISO 3170)
- API Manual of Petroleum Measurement Standards (Chapter 17)
- Sampling bituminous binders (EN 58)



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