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ALS is the **global** benchmark for **service** and **integrity**

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**Core Values**

As a company we can trace our history back to 1863, our core values drive the decisions we make today in building on this legacy.

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**Company Overview**

As a global leader in the testing, inspection and certification industry, ALS is focused on delivering high quality client solutions.

We provide services to government, multi-national companies, manufacturers, retailers, consultants, and mining companies across the world. ALS processes more than 20 million samples per year and is one of the largest TIC companies in the world.

At ALS we are committed to assuring our community by providing high quality, innovative, professional testing services to help our client make informed decisions. We support clients to ensure their businesses operate in the most efficient, environmentally and socially responsible, market competitive way possible.

Our global scale benefits clients through technical leadership, access to emerging technology and regulatory trends, and a large pool of technical experts. This is balanced with a local focus to provide ease of use and market specific knowledge and services.

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**ALS Capability Statement - Hong Kong**
Benefits of using ALS for testing and analysis

“ALS staff are always helpful, and I’m able to quickly reach technical experts who can answer my questions.”

CONSULTING FIRM

At ALS we strive to provide clients with a service that meets and exceeds their expectations. Our commitment to good science and personal service is backed by a thorough and constantly improving quality management system. We are evolving our services to improve your ALS experience. When working with ALS, clients can expect:

- Service delivery and laboratory result turnaround to meet your project requirements. This includes rapid turnaround on projects which are time sensitive and critical.
- Dedicated client and project management to provide ease of use.
- Technical resources to help solve problems.
- Extensive experience and deep industry knowledge through working with a wide range of clients and programs.
- World class laboratory facilities to provide an environment that supports quality and accuracy, and with a scale to run large client projects.
- Technology solutions to help manage your projects and laboratory data. This includes Webtrieve™, electronic data deliverables, and applications to support you in the field.
- Access to the latest analytical technology to achieve required limits of reporting.
- A global network that provides knowledge of emerging regulatory trends, and is supported by the release of regular technical bulletins and social media posts.
- A commitment to safety as a priority
Celebrating more than 24 years of experience in the Hong Kong Market

FOOD • PHARMACEUTICAL • TRADITIONAL
ALS CHINESE MEDICINE • ENVIRONMENTAL

Overview of ALS Hong Kong

ALS Hong Kong has been operating as an independent testing service provider for 24 years. More than 120 staff use the latest technology to service the Food, Pharmaceutical, Traditional Chinese Medicine (pCM) and Environmental sectors. ALS can provide a wide range of high quality solutions to clients in Hong Kong and South East Asia. With state-of-the-art facilities (3,200m²), the latest technologies and expert technical staff, ALS delivers high quality and timely sampling, analytical, and consulting services to clients in South East Asia.

Our staff consists of chemists, biologists, environmental scientists and support personnel. The diverse educational backgrounds and experience of our employees provide ALS the comprehensive skills required by a modern analytical laboratory. We take pride in our experience and professional dedication and are committed to providing the necessary resources to maintain and further develop our expertise to meet and exceed customer expectations.

Regional Footprint in the Asia Pacific Region

ALS is the leading provider of testing and inspection services to the Environmental, Water, Food, Hydrographics, Pharmaceutical, and Consumer Products life science market segments across APAC. Our team of 2,000 client focused staff have the experience to provide clients with a rich understanding of the markets in which we operate. The depth of technical and management expertise allows ALS to deliver constantly high levels of service to our clients.

In the APAC region ALS has an in-country presence in; Australia, Singapore, Hong Kong, China, Malaysia, Thailand, and Indonesia. We also have extensive experience with logistics and project management in alternate countries.

The personal and comprehensive service delivered by ALS provides clients with the assurity to make informed decisions and deliver successful commercial outcomes for their projects.
Comprehensive **Range of Capabilities and Services**

**Food Testing**

ALS took excellent and prompt care of my requirements with cheerful and professional service.”

**FOOD MANUFACTURER**

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**Service Categories**

- Pesticides and Agrochemicals
- Microbiological & Polymerase Chain Reaction (PCR)
- Chemical and Nutritional
- Contaminants
- Additives and Minerals

**Industries**

- Dairy producers
- Exporters/Importers
- Distributors
- Independent food producers
- Food & Drinks manufacturers
- Hotel and Catering
- Retailers
- Wholesalers

**Product Categories**

- Ready to eat food
- Chilled/ Frozen food
- Dried food
- Confectionery products
- Pre-packaged food
- Drinks and Beverages
- Health Supplements
- Fruit and Vegetables
- Seafood
- Chinese Proprietary Medicines
At ALS Hong Kong we are active in servicing the Food industry in Hong Kong and neighbouring Asian countries. We provide a range of food analyses, including nutritional labelling, microbiological, contamination testing, and emergency contaminant testing such as melamine, malachite green, sudan red, nitrofurans and antibiotics.

Our laboratory was incorporated in 1994 and operates according to ISO 17025 standards, we have been HOKLAS (Hong Kong Laboratory Accreditation Scheme) accredited since 1995. Detail of our accreditation information can be found at the back of this Capability Statement.

Tested Services

Pesticides and agrochemicals

The Hong Kong government has introduced new subsidiary legislation to govern the pesticide residue levels allowed in food, to facilitate effective regulatory control and ultimately to protect public health. At ALS Hong Kong we are equipped with the latest technologies and staffed with qualified and experienced professionals to provide a comprehensive Pesticide Residues Testing Service.

ALS Hong Kong is able to provide HOKLAS-accredited Organochlorine (OC), Organophosphorus (OP), Pyrethroid and Carbamate Pesticide testing services, comprising around 370 pesticide residues in the HOKLAS accredited list.

We have the knowledge and experience to provide screening tests as well as targeted analyte monitoring by using GCMS and LC-MSMS. We will provide a reliable and fast turnaround time testing services to client.

Pesticide residue analysis is available to the below food items but not the least:

- Fruit and Vegetables
- Dried Fruit
- Cereals & grains
- Tea Leaves
- Health supplements
- Plant-related products

A detailed compound list will be provided upon request.

Microbiological

At ALS Hong Kong we provide a comprehensive list of food microbiological testing services for food manufacturers, traders, distributors, food and beverage caterers, and central kitchens. ALS can provide a packaged solution to meet the requirements defined in the "Microbiological Guidelines for Ready-to-eat Food" (May 2007). We are also capable of offering technical advice on the design of your microbiological monitoring program to meet the specific needs of different food establishments.

Microbiological quality determination

- Aerobic Plate Count
- E. coli
- Coliform
- Enterobacteriaceae

Pathogen detection

- Yeast & Molds
- Salmonella
- Staphylococcus aureus
- Vibrio cholera
- Vibrio parahaemolyticus
- Listeria monocytogenes
- Bacillus cereus
- Clostridium perfringens
- Shigella
- Campylobacter

Other microbial packages are offered for the products including Ice, Drinking water and Bottled water.

Polymerase Chain Reaction (PCR)

ALS Hong Kong has been providing testing services of PCR tests as follows:

1. Qualitative GMO testing is now available in a more convenient and affectable manner. Our testing method is sensitive and reliable to an operational limit of 0.1%.

2. For Species Identification, species-specific DNA sequences of specific animals and fungi can be tested. The molecular approach is utilised to identify species that include common edible animals, pork, cow, cordyceps sinensis, etc.

3. Avian Influenza Virus (AIV) in poultry and poultry products can be easily tested using Real-time Polymerase Chain Reaction (RT-PCR) in the different kinds of food products.

4. Norovirus analysis is performed by RNA extraction, followed by Gel-Based PCR for the presence of Norovirus Genogroups I and II.
Chemical and nutritional

Hong Kong food regulations relating to nutrition label offer consumers a new perspective on food product selection. They challenge industry with servicing consumers who have an increasing awareness of proper diet and food nutrition. ALS offers accurate and reliable analysis for the customers on nutrition label and the nutrient contents.

**Our most popular nutritional tests:**

**Hong Kong Nutrition Label** tests include:
- Energy
- Carbohydrates
- Protein
- Total Fat
- Saturated Fat
- Trans Fat
- Sugar
- Sodium

**USA Nutrition Label** tests include:
- Energy
- Carbohydrates
- Protein
- Total Fat
- Saturated Fat
- Trans Fat
- Sugar
- Sodium
- Calcium
- Iron
- Cholesterol
- Vitamin D
- Potassium

**Label and Ingredient Review**
Contaminants
Substances which can contaminate foodstuffs include inorganic matters such as heavy metals, industrial plasticizers which have been transferred from packaging materials, or organic compounds like Melamine or synthetic antibiotics. ALS can provide a wide range of testing including Heavy Metals Residues, Mycotoxins, and Veterinary Drug Residues.

Specialist contaminant analysis includes:

- Veterinary Drug Residues
- Malachite Green & Leuco Malachite Green
- Nitrofurans
- Fluorquinolones
- Chloramphenicol
- Harmful Substances
- Melamine
- Dicyandiamide
- Benzo(a)pyrene
- 4-methylimidizole
- Mycotoxins
- Aflatoxins B1, B2, G1, G2
- Phthalates
- Dimethyl phthalate (DMP)
- Diethyl phthalate (DEP)
- Di-n-butyl phthalate (DBP)
- Butyl benzyl phthalate (BBP)
- Bis(2-ethylhexyl) phthalate (DEHP)
- Di-n-octyl phthalate (DNOP)
- Di-iso-nonyl phthalate (DINP)
- Di-iso-decyl phthalate (DIDP)
- Heavy Metals
- Arsenic
- Antimony
- Boron
- Cadmium
- Chromium
- Copper
- Lead
- Mercury
- Tin
- Zinc

Additives and minerals
At ALS Hong Kong we have an established reputation to provide analytical testing services for additives and minerals. Customers will receive fast and accurate testing results on their products. We offer a comprehensive range of HKLAS accredited tests, through the use of scientific equipment such as HPLC, LCMS-MS, UPLC and ICP-OES.

Any food manufactured, imported or sold in Hong Kong should comply to the Hong Kong Regulation under Preservatives of the Public Health and Municipal Services Ordinance, Chapter 132B with regards to the positive list of permitted preservatives as well as the maximum permitted level for specific food products as stated in Schedule 1 of the Regulation. We can provide a range of tests to satisfy regulatory requirements.

We also provide a number of additives and mineral tests to meet clients’ needs.

Additives tests include:

- Preservatives
- Sulphur dioxide
- Sodium Nitrate
- Sodium Nitrite
- Benzoic acid
- Sorbic acid
- Salicylic acid
- Parabens
- Propionic acid
- Boric acid
- BHT
- BHA
- TBHQ
- Propyl gallate
- EDTA
- Food Colourants
- Sudan Red I, II, III, IV
- Red 2G
- Rhodamine B
- Orange II
- Yellow 2G
- Sunset Yellow
- Tartrazine
Comprehensive **Range** of **Capabilities** and **Services**

**Pharmaceutical Testing**

“ALS has always provided excellent customer service. They go out of their way, after working hours, to ship sample containers overnight to my office.”

HEALTH CARE FIRM
ALS Hong Kong can provide a wide range of sampling, testing and consulting services in Proprietary Chinese Medicine (pCm) Testing. The business has the resources, facilities and capabilities to carry out safety tests, stability tests and drug tests.

The laboratory’s staff are extensively trained and committed to provide professional testing services to clients. The testing methods are set up in accordance to Pharmacopoeia of the People Republic of China (CP), British Pharmacopeia (BP) standard testing methods.

**Testing services include:**

**Pharmaceutical Testing**

- Proprietary Chinese Medicine (pCm) - Testing based on international methods of:
  - British Pharmacopeia
  - Pharmacopoeia of the People Republic of China

**Safety tests**

- Heavy metals and toxic elements
- Microbial limit
- Pesticide residues

**Stability tests**

- Size of granules
- Determination of water
- Determination of dispersibility
- Hardness
- Packing variation
- Weight variation
- Disintegration test
- Hardness (friability)
- Dissolution rate
- Relative density
- Insoluble materials
- Filling
- pH value
- Adhesion test

**Drug tests**

- Sibumarine
- Phenolphthalein
- Sildenafil
- Vardenafil
- Tadalafil
- Glibenclamide
- Diclofenac
- Paracetamol

**Pharmaceutical Testing**

- Proprietary Chinese Medicine (pCm) - Testing based on international methods of:
  - British Pharmacopeia
  - Pharmacopoeia of the People Republic of China
Comprehensive **Range of Capabilities** and **Services**

**Environmental Testing**

"ALS is easy to work with — it's nice to feel like you are dealing with your local lab."

ECOTOXICOLOGY COMPANY
ALS are able to offer an extensive range of client solutions, with one of the largest environmental laboratory networks in Asia. Comprehensive analytical and project capabilities are available in China, Singapore, Hong Kong, Thailand, Malaysia, and Indonesia.

With a geographically and technically diverse service offering, a highly skilled and motivated management and technical team, and a commitment to client services, we are positioned to provide superior analytical outcomes for your environmental project needs.

ALS Hong Kong provides a full range of environmental analytical testing services, specialising in the analysis of soil, sediment, water (raw, waste, drinking, catchment, recycled, saline, product), leachates, dust, air, gas (indoor, stack, ambient), biota, industrial hygiene, and radiochemistry. Equipped with the latest technologies and staffed with qualified and experienced professionals, ALS Hong Kong takes pride in providing Service Excellence and Quality across our diverse offerings to our Environmental client base.

**Testing and monitoring services include:**

**Water and wastewater testing**

- Physical Testing
  - pH, Turbidity, Conductivity, Colour, Suspended solids, Total Solids, Total dissolved solids
- Inorganic Testing:
  - Ammonia, Nitrate and Nitrite, TKN, Total Nitrogen, Reactive Phosphorus, Total Phosphorus, Cyanide, Total and Free Residual Chlorine and Silica
- Organic Constituent Testing:
  - BOD, COD, Oil and grease, Total Surfactants, Total Phenols and Volatile acid
  - Organic Testing
    - VOCs and SVOCs
    - Total Petroleum Hydrocarbon
    - Pesticides and Herbicide
    - PCBS
    - Acrylamide
    - Haloacetic acid
- Heavy Metals and Mineral Testing
  - RCRA & USEPA Priority Pollutant Metals
- Water Testing Schemes
  - Cleaning & Disinfection of Fresh Water Inside Services
  - Swimming Pools Water Quality (Regulation, Cap. 132CA, Section 10)
  - Quality Water Recognition Scheme for Building (Plus)

**Soil, sediment and solid waste**

- Risk Based Remediation Goal in soil and groundwater
  - Heavy Metals
  - SVOC
  - VOC
  - PCBS
  - Total Petroleum Hydrocarbon
- Free Cyanide
- TBTO
- Dioxin
- ETWB No. 34/2002 in sediment
- Heavy Metals
- PAHs, PCBS, TBT – Interstitial water
- Toxicity testing
  - 10 days amphipod survival test
  - 20 day polychaete Growth and Survival test
  - 48-60 hour Bivalve Larvae Survival and Normality

**Compost and soil texture testing**

- Compost Testing (Hong Kong Organic Resource Centre)
  - Ammonia
  - Oxygen Uptake Rate
  - C/N Ratio
- Impurities
- Heavy Metals
- Nutrient N, P, K
- Pathogen
- Seed Germination Index
- Fabricated Soil Testing
  - Particle size distribution
  - pH Value
  - Organic matter
  - Nitrogen Content
- Vibrio cholera
- Vibrio parahaemolyticus
- Environmental Swab
- Airborne bacteria and fungi count

**Microbial testing**

- Water Testing
  - Heterotrophic plate count
  - Yeast and Mold count
  - E. coli
  - Total coliform
- Legionella testing (ISO and AS/NZS Method)
- Pseudomonas aeruginosa
- Sulphate reducing bacteria
- Staphylococcus aureus
- Vibrio cholera
- Vibrio parahaemolyticus
- Environmental Swab
- Airborne bacteria and fungi count

**Stack emission sampling and analysis, Continuous Emission Monitoring System (CEMS)**

- On-site sampling
- TSP and RSP (PM10 and PM2.5)
- Heavy Metals
- Volatile Organic Compounds (VOC)
- SO₂, NO₂, CO, CO₂, and O₃

**Air quality sampling and analysis**

- Industrial Hygiene (IH)
- Indoor Air Quality (IAQ)
- TSP and RSP measurement
- Noise Measurement
- Odour Patrol and Survey Services

**Olfactometry analysis**

- Olfactometry sampling and analysis in water and ambient air
- Odour Patrol and Survey Services
Quality assurance program built for client needs

“If I ever have questions about sampling or analysis, I go directly to ALS. The staff are extremely knowledgeable and helpful.”

Quality Management System

ALS is committed to consistently providing quality data and service to satisfy the requirements of each client by focusing on rapid turnaround time, results, and client value added services.

The ALS Quality Management System (QMS) is structured to include the needs of clients and ALS corporate policies, as well as accreditation, licensing, and certification requirements. ALS achieves and maintains its high standard through a quality system focus combined with documented policies and procedures. The system is supported by a dedicated team of highly experienced professionals who maintain the Quality Management System, conduct internal audits and proficiency programs, control documentation, identify improvement opportunities and assist in training and compliance.

Our QMS focuses on the generation of high-quality data that is delivered on time, and meets client and regulatory requirements.

ALS employs a multi-layered approach to optimising quality including:

- Blanks and Duplicates
- Matrix Spikes and Surrogates
- Laboratory controls and Standard Reference Materials
- Analyst comparisons and Blind samples
- Long term participation in international Proficiency Testing programmes
- Final review and approval by a signatory

All analytical methods used at ALS undergo validation prior to their approval for use in the laboratory. The approved methods contain criteria for quality control and performance criteria that provides information on each preparation and analytical stage of analysis. Data generated are compared to data quality objectives.

ALS policy:

- Generate scientifically sound and legally defensible data
- Provide high quality testing services in compliance with accreditation and regulatory requirements

Scheduled internal audits are performed on all quality management system elements. System audits are qualitative evaluations of all components of the laboratory systems. They determine if the measurement systems are being used appropriately. Such audits typically involve a comparison of the activities given in the QA Manual with those actually scheduled or performed and are conducted by a Quality Assurance Manager at each facility. Audit findings are used by ALS to improve process performance.
Health, Safety and the Environment as a priority

ALS is committed to a safe work culture. Our global minimum standard assists in managing health, safety and environment risks. ALS employs a team of Health and Safety professionals at both regional and corporate level to support continual improvement and best practice.

ALS believes the meeting of its safety and environmental obligations is essential to our long-term success. The company imparts its safety and environmental values from the first day the employee commences work with the company and throughout their term as a valued employee.

We do this by:

- Comprehensive safety training as part of the employee onboarding process
- Ongoing training, including formal training on core topics and personalized training based on risk assessments
- Integration with our day-to-day operations through our “Safety First” program and quality management system
- Auditing, reporting and review at all levels of the organization

ALS has a core value of “Safety as a Priority”. Being an employee of ALS is about putting safety first. This approach is identical for staff working in ALS Lima, Vancouver, Johannesburg, Hong Kong, or Sydney.

As part of this global approach, the minimum standard is driven by an ethic to deliver a consistently friendly and safe approach to work, regardless of differences in local laws.

The ALS HSE Minimum Standard requires each business to manage key risks by adopting the following:

- Ensuring health, safety and environmental resources are available;
- Ensuring managers are aware of their responsibilities;
- Implementing a plan for managing injuries and site emergencies;
- Ensuring contractors work safely;
- Ensuring that key safety information is available for all staff to view;
- Providing training on key safety risks;
- Ensuring that staff have an opportunity to provide feedback;
- Ensuring that work areas are designed and maintained in a safe manner
- Ensuring that all incidents are reported so we can learn from our experiences;
- Completing a review of health and safety issues on a regular basis; and
- Ensuring that a monthly site audit of Safety issues is conducted.

Fixed schedules are in place for auditing, reporting and review of the HSE management system by staff, supervisors, and management.

Environment

ALS is committed to minimizing its environmental footprint. To support this goal, each laboratory adheres to relevant legislation in their jurisdiction for waste storage and disposal. Samples and wastes are recycled or disposed in an environmentally responsible manner. Containers and packaging are recycled wherever possible.
Performing efficiently and ethically at all times

ALS is committed at all times to performing duties in efficient and ethical ways.

Compliance

ALS believes that meeting compliance obligations is a responsibility essential to its long-term success. The company is committed to adhering to all legislation relating to ALS operations. All ALS employees are responsible for complying with policies and procedures established to ensure that ALS fulfils requisite legislative requirements. Every employee, contractor, or agent of the company is held accountable to conform to the law and act ethically at all times.

Confidentiality

ALS employees understand the importance of confidentiality and have implemented policies that ensure the protection of client information. Employees are required to sign and follow ethics, conflict of interest, and confidentiality policies. These agreements are required to ensure that all employees are aware of the following items:

- Laboratory policy regarding ethics and the standards of integrity that are expected of them
- The notion that they are free from any undue pressures that might affect the quality of their work

Client confidentiality ensures that procedures for sending test results by mail, facsimile, email, or electronically meet client requirements. Requests for records made by a third party must be accompanied by written consent from the client. All employees assure clients that confidentiality is observed at all times when presenting records.

System Integrity

- Secure, virus-free system, including a firewall to protect data
- Back-up of all data
- Redundancy of major equipment and services
- Professionally managed and maintained
- LIMS (Laboratory Information Management System)
ALS is focused on providing high quality analytical services that provide clients with the confidence to make informed decisions. The laboratory is accredited to ISO17025 for the suite of services provided.

ALS is committed to utilising performance testing samples to ensure that all analyses are compliant with industry standards. Our focus is on providing high quality analytical services that provide clients with the confidence to make informed decisions. The laboratory is accredited to ISO17025 for the suite of services provided.

- Hong Kong Laboratory Accreditation Scheme (HOKLAS), administered by the Hong Kong Accreditation Scheme to the requirements of ISO17025:2005 in four fields: Chinese Medicine, Food, Pharmaceutical Products, and Environmental Testing.


“The certificates of analysis are always clear and precise. The time frames to get price quotes and samples analysed are excellent.”

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