

JASA KALIBRASI

Laboratorium kalibrasi yang dikenal dengan nama ABICAL (Agro Based Industry Calibration and Analytical Laboratories) telah diakreditasi oleh NATA Australia tahun 1995 dan oleh KAN pada tahun 2001 yang kemudian direvisi setiap 4 tahun (2005 dan 2008) oleh KAN dengan ruang lingkup:

- Kalibrasi Massa (Anak timbangan 1mg sampai dengan 2kg, Neraca Analitik)
- Kalibrasi Volume (Pialon, Glasware kapasitas maksimal 1 L)
- Kalibrasi Suhu dan Kelembapan (Termometer, Termokopel dan Enclosure)
- Kalibrasi Instrumental (Spektrofotometer, Turbidimeter, Conductivimeter, pH meter, AAE, HPLC, dll)

Dalam Proses Akreditasi

- Kalibrasi Dimensi
- Analisis Instrumentasi (Elektronikmeter, voltmeter, dll)

Laboratorium kalibrasi BBA dikelola secara profesional sesuai dengan ISO / IEC 17025 : 2008 dan didukung oleh personil yang berpengalaman dan kompeten terdiri dari 9 personil (Analis, Sarjana Kimia dan Teknik Fisika)



CALIBRATION SERVICES

Calibration laboratory known as ABICAL (Agro Based Industry Calibration and Analytical Laboratories) is accredited by NATA Australia in 1995 and by National Accreditation Body (KAN), National Standardization Agency (BSN) in 2001 and regularly accredited in every 4 year (2005 and 2008). Scope of Accredited Calibration services:

- Mass Calibration (weight and balances)
- Volumetric calibration (glass operated volumetric apparatus, glassware volumetric measurement)
- Temperature & humidity calibration (air gasses air enclosures, temperature and humidity sensors)
- Instrumental calibration (spectrophotometer, conductivity, pH meter, AAE, HPLC, etc)

In accreditation process:

- Dimensional calibration
- Instrument analysis (electronicmeter, accuracy meter, etc)

Calibration laboratory is managed professionally in accordance with ISO/IEC 17025 : 2008 and supported by (5) (five) experienced and competent personnel in Chemical Analysis and Engineering Physics.

JASA SERTIFIKASI



Bata Besar Industri Agro mempunyai beberapa lembaga sertifikasi, terdiri dari:

1. Lembaga Sertifikasi Sistem Manajemen Mutu ISO 9001, Sistem Keamanan Pangan HACCP, Sistem Manajemen Keamanan Pangan ISO 22000 bernama ABICS (Agro-based Industry Certificate Services) yang telah diakreditasi oleh KAN/BSN, sesuai persyaratan Standar ISO/IEC 17021:2011 "Penilaian Kesesuaian: Persyaratan untuk Lembaga yang Melakukan Audit dan Sertifikasi Sistem Manajemen", dan ISO/TS 22003:2007 "Sistem Manajemen Keamanan Pangan - Persyaratan untuk Lembaga yang Melakukan Audit dan Sertifikasi Sistem Manajemen Keamanan Pangan". Secara profesional ABICS dapat membantu perusahaan / industri untuk memperoleh SERTIFIKAT Sistem Manajemen Mutu berdasarkan ISO 9001, HACCP dan ISO 22000. ABICS didukung oleh personil yang handal dan kompeten. Ruang lingkup akreditasi ABICS meliputi industri makanan, minuman, pertanian, perikanan, peternakan, perkebunan, dan perkebunan.
2. Lembaga Sertifikasi Produk yang bernama ABi-Pro (Agro-based Industry Product Certification) yang telah diakreditasi oleh KAN/BSN sejak tahun 2004 sehingga secara profesional ABi-Pro dapat membantu masyarakat industri untuk memperoleh SERTIFIKAT PRODUK PENGGUNAAN TANDA SNI. ABi-Pro didukung oleh personil yang handal dan kompeten terdiri dari 4 orang lead auditor, 8 orang auditor dan 13 orang petugas pengambil contoh. Ruang lingkup akreditasi ABi-Pro meliputi 56 komoditas, terdiri dari makanan, minuman dan pupuk.
3. Lembaga Sertifikasi Inspeksi Teknis bernama ABITS yang telah diakreditasi oleh KAN/BSN sehingga ABITS dapat membantu masyarakat industri untuk memperoleh SERTIFIKAT INSPEKSI KEUCUKUPAN PANAS dan LINGKUNGAN. ABITS bekerja berdasarkan SNI 19 - 17020 - 1998. ABITS memiliki 11 orang Inspektur dan 3 orang petugas teknis/petugas pengambil contoh, peralatan yang memadai dan metode uji yang standar.



CERTIFICATION SERVICES

Center for Agro-Based Industry has five certification bodies accredited by KAN/BSN and conducted professionally for serving agro-industrial community. The certification bodies consist of:

1. **Certification Body for certification of Quality Management System: ISO 9001, HACCP System, Food Safety Management System: ISO 22000** named ABICS (Agro-based Industry Certificate Services) has been accredited by KAN (BSN), according to the requirement of ISO 17021:2011 (CERT) Certificate Body, Issuance/Registration/Review/for Agencies Perform Audit and Certification of Management System and ISO 22003:2007 (CERT) Certificate Body, Issuance/Registration/Review/for Agencies Perform Audit and Certification of food safety management systems). ABICS could provide services professionally to help the company / industry to get ISO 9001/ISO 22000 of Quality Management System based on ISO 9001, HACCP and ISO 22000 Standards. ABICS supported by a reliable and competent personnel. The scope of ABICS accreditation includes food industries, beverage, agriculture, fisheries, livestock, and farm.
2. **ABi-Pro (Agro-based Industry Product Certification)** is a product certification body that issues legal SNI Marking Product Certification accredited by KAN (National Accreditation Body) since 2004. The certificate is advantageous for improving the reputation of the industry to gain national acknowledgment that the product quality fulfil the SNI (National Standard) Standard requirements. For SNI mandatory products, the SNI marking is a prerequisite legal status. The certification process can be conducted with certification of Quality Management System (ISO 9001) or HACCP (which in turn will have the certification benefit). ABi-Pro is supported by qualified and competent persons consisting of 4 lead auditors, 8 auditors and 13 supporting officers. Accreditation scope of ABi-Pro consist of 51 commodities include food products, beverage products, and fertilizer.
3. **ABITS (Agro-based Industry Technical Inspection Services)** is a certifiable body that conducts technical inspection and issues Certificate of Thermal Accuracy for carrying factory industry Accredited by KAN (National Accreditation Body) since 2004. Thermal Inspection for Carried Food, Food Product Quality Inspection and Environment Certificate for inspection and others (SNI). The operation is based on SNI 19-17020-1998. ABITS have 11 inspectors and 3 technical officers/supporting officers, adequate equipment and standardized methodology.

Balai Besar Industri Agro Center for Agro-Based Industry

CAB establish collaboration with various domestic institutions as well as with international institutions, such as:

- KQAL (Australia Government Analysis Laboratories)
- AQIS (Australia Quarantine Inspection Services)
- JICA (Japan Industry Cooperation Agency)
- UNIDO (The United Nations Industrial Development Organization)
- KITECH (Korea Institute Technology)
- MRI (National Research Institute)
- BVL (Institute of Food Safety, Netherlands)
- Institute Fresenius Germany
- Safety Tech, Inc. (Japan)

GALLERY INOVATION

- Sample of new products
- Miniature technology (modeling)
- Business brochures, leaflets

**“ We Serve the Best Services to
Improve Our Nation “**

RESEARCH & BUSINESS DEVELOPMENT ON AGRO BUSINESS

PRODUCT TESTING

CALIBRATION

STANDARDIZATION

CERTIFICATION

TECHNICAL INSPECTION

DESIGN & ENGINEERING

TRAINING

CONSULTATION



AQIS
AUSTRALIAN QUARANTINE
INSPECTION SERVICES



Natural
Resources
Institute



KITECH
KOREA INSTITUTE OF
TECHNOLOGY AND CULTURE



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Puji syukur kami persembahkan kepada Allah SWT, Tuhan Yang Maha Esa, atas terbitnya informasi dalam profil singkat Balai Besar Industri Agro (BBIA) dengan motto: "We Serve The Best Service To Improve Our Nation". Dalam profil singkat BBIA ini didapatkan tagline, fungsi dan peran BBIA dalam pembangunan industri nasional khususnya di bidang industri agro (Ago Industry).

Dengan terbitnya profil singkat tentang BBIA ini, diharapkan masyarakat industri dan pihak-pihak terkait lainnya memperoleh informasi tentang BBIA berikut jasa pelayanan teknis yang diunggulkannya, dengan harapan masyarakat industri dapat memanfaatkannya secara optimal. Pada akhirnya semoga antara BBIA dan masyarakat industri nasional bertukar-bertukar kerjasama dan hubungan dapat terbina, dalam rangka mewujudkan industri yang langgah, kompeten dan berkarya sang baik di pasar lokal, nasional ataupun global.



PREFACE

Please thank God Almighty, for the publication of The Center for Agro Based Industry (CABI) profile entitled with "We Serve The Best Service To Improve Our Nation". This document provide a brief description of CABI with regard to its duty, task and role in the development of industry, especially in the field of agro-industry.

By publishing this profile, the agro-industrial community and other stake-holders will be provided with appropriate information of CABI including its services. Furthermore, the industries are expected to use and gain the benefit of the services in optimally manner. Finally, the synergy and cooperation between CABI and all stake-holders can be developed toward the development of competitive and competitive industries in the national and global market.

■ TESTING LABORATORY :

- Instrument Testing Laboratory:
 - LC-MS/TOF System
 - GC-MS with Turbo-Mass Software
 - Gas Chromatography-ICP
 - High Pressure Liquid Chromatography (HPLC)
 - Atomic Absorption Spectrophotometer (AAS)
 - ICPES-Inductively Coupled Plasma (Emission Spectrophotometer)
 - UV-Vis Spectrophotometer
 - Mercury analyzer
- Food Testing Laboratory
- Microbiological Testing Laboratory
- Water, Waste and Environmental Testing Laboratory
- Beverage Testing Laboratory
- Raw Materials and Intermediate Testing Laboratory



■ CALIBRATION LABORATORY:

The laboratory is equipped with highly standardized equipment referred to national and international traceability:

1. Mass Standards Reference
 - Mass Class E2 Weights (7 unit)
 - Mass Class F1 Weights (3 unit)
 - High precision balances up to 2000 gram (3 unit)
2. Temperature and humidity Standards Reference
 - Class E-4 with Platinum Resistance Thermometer PT 100, resolution 0.001 °C
 - Humidity reference indicator (2 unit) and hygroprobe chamber
 - Type K, S Thermocouple
 - High precision temperature indicator (4 unit)
 - Calibrator bath and enclosure (5 unit)
3. Instrument Analytic Standards Reference
 - Filter specific (2 unit)
 - Reference material standard/ standard solutions: Ph, conductivity, turbidity, etc
4. Dimensional Standards Reference
 - Optical parallel (Thickness: 12.00, 12.12, 12.25 and 12.37 mm)
 - Optical Flat (Diameter: 45 mm)
 - Gauge Block (Density: 2.5 t / d: 25.0 mm)



■ PROCESSING LABORATORY

Food Processing Laboratory is equipped with various equipment and pilot scale processing facilities such as various dryer, bakery processing, canning, vacuum frying, Friars processing, integrated coconut processing, etc. Non Food Processing Laboratory with various equipment such as : The Essential Oil processing unit, cocoa oil waste product, compost processing, etc.

■ LIBRARY AND INFORMATION

CABI library has more than 12,000 titles of books, 300 journal numbers scientific reports, clipping, etc, particularly those related to the aspect of agro-based products. Website CABI: <http://www.bbi.go.id>

■ HUMAN RESOURCES

In conducting its activities CABI is supported by 160 employees with various expertise include agricultural product technology, food technology, food engineering, chemical technology, pharmacy, biology, chemical engineering, physical engineering, industrial engineering, computer science and social science (economic, laws and management).

JASA RISET

Jasa Riset (J.Riset) BBA mencakup:

- Peningkatan atau perbaikan proses produksi, efisiensi dan mutu produk.
- Mengetahui masalah teknologi
- Pengembangan produk baru
- Revisi dan rancang bangun peralatan produksi
- Studi kelayakan usaha
- Pengujian awal stages produk makanan dan minuman.



BBA memiliki peneliti yang kompeten dengan bidang keahlian meliputi teknologi hasil pertanian, teknologi pangan, bio teknologi, farmasi, teknik kimia dll serta didukung oleh laboratorium uji yang berkualitas dan laboratorium proses yang memiliki peralatan lengkap.

JASA PEMBUATAN RANCANG BANGUN DAN PEREKAYASAAN PERALATAN INDUSTRI (RBPI)

Balai Besar Industri Agri dengan fasilitas "workshop" nya yang memiliki serta SDM yang berpengalaman dapat memberikan Jasa Pelayanan Jasa Pembuatan Rancangan Bangun dan Perekayasaan peralatan industri agri bag pelaksanaan kerangka UKR.

Peralatan yang sudah diproduksi oleh BBA antara lain:

- Peralatan Penggiling Kelapa
- Peralatan Penggiling Minyak Kelapa
- Peralatan Penggiling Virgin Coconut Oil dan lain lain



R & D Services

Research Services include:

- Improvement of production processes, efficiency and product quality
- Technological problem solving
- Design and engineering of agro-industrial equipment and machines
- New product development
- Feasibility study of agro-industry
- Shelf-life estimate by accelerated test for food and beverage product

CABI is supported by competent researchers with various expertise include agricultural product technology, food technology, bio technology, food engineering etc with an accredited testing laboratory and process laboratory with ISO accreditation.



DESIGN AND ENGINEERING SERVICES

Center for Agro-Based Industry providing Design and Engineering Services for SME's. It providing Design and Engineering Services. CABI is supported by adequate workshop and operation personnel. Design and to spare in a same see especially:

- Coconut Processing Equipment
- Fruit Processing Equipment
- Virgin Coconut Oil Processing Equipment, etc



BBA adalah institusi pemerintah yang secara struktural berada dibawah Badan Pengkajian Kebijakan Ilmu dan Mutu Industri (BPKMI) Kementerian Perindustrian.

Tugas pokok dan fungsi BBA adalah : melaksanakan kegiatan dibidang kerjasama, standarisasi, pengujian, sertifikasi, kalibrasi dan pengembangan kompetensi sesuai kebijakan teknis yang ditetapkan oleh Kepala Badan Pengkajian Kebijakan Ilmu dan Mutu Industri.

Sejarah berdirinya BBA berasal dari masa pemerintahan colonial Belanda yaitu didirikan pada tahun 1905 dengan nama *Bruy Analyse Portieren dan Poedagangien* (*Bureau voor Lantbouw en Handel Analyse*). Kemudian pada tahun 1934 lebih dikenal dengan nama *Balai Penyelidikan Kimia*, yang tugas pokoknya adalah melakukan pengujian kimia untuk produk pertanian dan perdagangan. Pada tahun 1980 lembaga ini berganti nama menjadi *Balai Besar Industri Hasil Pertanian* dan sejak 29 November 2002 berubah nama menjadi **BALAI BESAR INDUSTRI AGRO (BBA)**.



BRIEF HISTORY

CABI is a government institution, attached to The Agency for Policy, Business Climate and Industrial Quality Assessment, The Ministry of Industry, The Republic of Indonesia.

The main task and function of CABI is carrying out activities on research, coordination, standardization, testing, verification, calibration and development of agro-industrial competency in accordance to the policy defined by the head of The Agency for Policy, Business Climate and Industrial Quality Assessment.

The establishment of CABI can be traced back to the beginning of the twentieth century. During the Dutch colonialization period, the institute named *Bureau voor Lantbouw en Handel Analyse* (*Bureau of Agriculture and Trade Analysis*) was established in 1905, which was then changed into *Chemical Research Institute* in 1934. Its main activity was testing, particularly chemical testing for agricultural and trade products. And then in 1984 it had become *Institute for Research and Development of Agro-Based Industry* (RDABI) which since 29 November 2002 was changed again into *Center for Agro-Based Industry* (CABI).

VISI BBIA

Menjadikan BBIA sebagai institusi yang profesional, mandiri dan terkemuka dalam memberikan jasa pelayanan teknis bagi industri agro serta menjadi institusi yang unggul di bidang komponen aktif bahan alami komoditas agro.

MISI BBIA

- Melaksanakan secara profesional jasa pelayanan teknis untuk industri agro yang meliputi jasa, kerjasama litbang, pengujian, kalibrasi, sertifikasi, pelatihan, REPI, konsultasi dan inspeksi teknis.
- Melakukan pengujian, riset, pengembangan dan pendalaman teknologi komponen aktif bahan alami komoditas agro secara berkelanjutan untuk membantu pengembangan industri agro.
- Mendukung pemerintah pusat dalam rangka melaksanakan kebijakan industri nasional.



JASA KONSULTANSI

Bidang layanan konsultasi BBIA diantaranya:

- Teknis teknologi mengenai agro industri seperti pemecahan masalah teknologi, pengenerkaan produk, perbaikan produksi, pengembangan produk, dan lain-lain
- Penyusunan dan Penerapan dokumen Sistem Manajemen Laboratorium sesuai ISO/IEC 17025:2008
- Penyusunan dan penerapan dokumen Sistem Keamanan Pangan (GMP/SHACCP) ISO 22000
- Penyusunan dan penerapan dokumen Sistem Manajemen Mutu ISO 9001:2008
- Penyusunan dan penerapan dokumen Sistem Manajemen Lingkungan sesuai ISO 14000

Dalam memberikan Jasa Konsultasi BBIA mempunyai SDM yang kompeten dan berpengalaman di bidang Teknologi Pangan, Food Engineering, Food Safety, Manajemen Laboratorium, Manajemen Sistem Mutu dan Manajemen Lingkungan.



VISION AND MISSION

VISION

To establish CAB as a professional institution, more self-financed and leading in providing technical services to the agro industry and become a leading institution in the field of active components in natural material.

MISSION

- Implement a professional technical services for the agro industries, which also includes services : (a) R & D, testing and calibration, (b) Monitor, training, REPI, consultancy and technical inspection.
- Conducting studies, research, development and enhance technology of the active component of natural materials, in sustainable manner to assist the development of agro industries.
- Supporting the Central Government in order to implement the National Industry Policy.

TECHNICAL CONSULTATION SERVICES

Center for Agro-Based Industry provide consultancy services in:

- Technological aspects of agro-industry (technical problem solving, product diversification, production process improvements, product development, use of food additives, feasibility study, etc.)
- Preparation and implementation of Laboratory Management System documentation in accordance to ISO/IEC 17025:2008
- Preparation and implementation of documentation in Food Safety Management System (GMP/HACCP) (ISO 22000)
- Preparation and implementation of Quality Management System documentation in accordance to ISO 9001:2008
- Preparation and implementation of Environment Management System documentation in accordance to ISO 14000

In providing consultancy services CAB is supported by competent personnel in field of: Food Technology, Food Engineering, Food Safety, Laboratory Management, Quality Management System and Environmental Management.



JASA PELATIHAN

BBIA memberikan jasa layanan pelatihan secara reguler dan non reguler (sesuai permintaan).

Pelatihan reguler meliputi:

- Pelatihan Kalibrasi (suhu, massa dan volume)
- Pelatihan Sistem Manajemen Mutu sesuai SNI (ISO/IEC 9001 : 2008)
- Pelatihan Sistem Manajemen Keamanan Pangan (GMP/HACCP) (ISO 22000)
- Pelatihan Validasi Metode Pengujian
- Pelatihan Kualifikasi Keterampilan Pengukuran Dasar Kimia Analitik
- Pelatihan Pengenerasi dan Pendaftaran ISO 17025 : 2006
- Pelatihan Dokumentasi Sistem Manajemen Laboratorium
- Pelatihan Audit Internal Sistem Manajemen Laboratorium



Pelatihan non reguler (sesuai permintaan, antara lain):

- Pelatihan Teknologi Pengolahan Pangan (panggang, basah, kedelai, Umbi-umbian, jagung, kopi, kelapa, buah-buahan, sayuran, tidak busuk, ikan, daging, susu dan lain-lain)
- Pelatihan Teknologi Pengolahan Non Pangan (minyak atsiri, seraman obat, pakan ternak, bahan pewarna, bedak, aroma terapi, pengemas dan pelababan, perikanan masa simpan dan lain-lain)
- Pelatihan Pengujian Laboratorium (Analisis Kimia dan Instrumentasi)

BBIA mempunyai imunitas/pelatih dari rara sumber yang berpengalaman serta didukung dengan fasilitas yang lengkap diantaranya ruang kelas yang nyaman dengan fasilitas lengkap, laboratorium yang terakreditasi dan laboratorium proses yang mempunyai peralatan lengkap.



TRAINING SERVICES

BBIA provides training services in regular and non regular bases on request.

It's regular training services, it includes:

- Calibration Training (temperature, mass and volume)
- Training on Quality Management System based on SNI (ISO/IEC 9001 : 2008)
- Training Food Safety Management System (GMP & HACCP) (ISO 22000)
- Training on Testing Methods Validation
- Training on Uncertainty Measurement
- Training on Introduction and implementation of ISO 17025 : 2006
- Training on Laboratory Management System Documentation
- Training on Internal Audit of Laboratory Management System

Non-regular Training services, it includes:

- Food Processing Technology Training (piscuits, soybeans, Root vegetables, corn, coffee, biscuits, tubers, vegetables, alternative: rice, meat, milk, etc.)
- Non-Food Processing Technology (essential oil, medicinal plants, food, bioactive, lubricant, aroma therapy, packaging, and labeling, determining shelf life and others)
- Training on Laboratory Testing (Chemical Analysis and Instrumentation)

JASA PENGUJIAN



Unit pelaksana teknis BBIA yang menderikan jasa pengujian dibidang agroindustri dan kalibrasi bernama ABCAL (Agro-Based Industry Calibration and Analytical Laboratories) yang sudah mendapat sertifikat akreditasi dari NATA Australia, pada tahun 1994 - 1996 dan sejak 30 September 1996 mendapat sertifikat akreditasi ISO 17025 dari Komite Akreditasi Nasional (KAN), Badan Standardisasi Nasional. Dengan ruang lingkup akreditasi meliputi:

- | | |
|-----------------------------|--|
| ■ Makanan | ■ Camarun (mikrobiologi, logam berat, PNH, antibiotik) |
| ■ Minuman | ■ Bahan Tambahan Pangan (pewarna, pemanis, pengawet) |
| ■ Bahan Makanan dan Minuman | ■ Vitamin A, B1, B2, B6, C, D, E |
| ■ Pakan Ternak | ■ Asam lemak dan Kalisatri |
| ■ Air Minum | ■ Serat Makanan |
| ■ Air Minum Dalam Kemasan | ■ Asam Fatat |
| ■ Air Limbah | ■ Analisis proksimat |
| ■ Pupuk | ■ Analisis Label Nutrisi (Nutrition Fact) |
| | ■ dan lain-lain |



Dengan total kriteria Uji/Lebih dari 120 Parameter (kimia, mikrobiologi, dan instrumentasi)

Laboratorium pengujian BBIA didukung dengan 61 SDM yang kompeten sesuai persyaratan ISO/IEC 17025. SDM dengan jenjang pendidikan mulai dari Sekolah Menengah Atas, SMA, D3 Analisis Kimia, S1 Kimia dan Biologi hingga S2 & bidang kimia. Layanan pengujian didukung oleh SDM fungsional. Bayaran dan pengujian mutu bearing serta tenaga terampil dengan mengikuti pendidik dan pelatihan teknis maupun manajemen.

TESTING SERVICES

ABCAL (Agro-Based Industry Calibration and Analytical Laboratories) is testing and calibration services unit in the Center for Agro-Based Industry (CABI).

ABCAL, consist of testing laboratory for food and non food and calibration laboratory. Testing laboratory has received accreditation certificate from NATA, Australia in 1994 - 1996 and since 30 September, 1996 from National Accreditation Body (KAN, National Standardization Agency (BSN), which comply with the ISO 17025. Scope of accredited testing includes:

- | | |
|--------------------------|---|
| ■ Food | ■ Camarun (mikrobiologi, heavy metals, PNH, antibiotik) |
| ■ Beverages | ■ Food Additives (coloring, preservatives, stabilizers) |
| ■ Food & Beverages stuff | ■ Fat and carbohydrate |
| ■ Feed | ■ Cholesterol |
| ■ Drinking Water | ■ Dietary Fiber |
| ■ Bottled Water | ■ Fat-soluble |
| ■ Sea, river, tap water | ■ Protein analysis |
| ■ Waste water | ■ Nutrition Labeling (Nutrition Fact) |
| ■ Fertilizer | ■ Oil & Trans-Fatty Acid |
| | ■ O. pathogens |
| | ■ Et. |



Total Test criteria more than 120 parameters (physical, chemical and microbiology)

Testing laboratory is managed professionally according to the requirements of ISO/IEC 17025 and supported by experienced and competent personnel comprising of 61 personnel in Chemical Analysis, Clinical and Biologist.