Animal Healthcare Business

OPTIPHARM Co., Ltd.

Animal Health Monitoring & Hematological Analysis

Laboratory
Rodents

Laboratory
Miniature Pigs

Hematological
Analysis

Cell, Protein Analysis

Biological Sciences

OPTIPHARM

Optipharm's Laboratory Animal Health Monitoring diagnoses infectious pathogens (viruses, bacteria, parasites, fungi) that affect the life and health of laboratory animals to prevent diseases and maintain the accuracy and reproducibility of experimental results.

OPTIPHARM
Animal Health Monitoring

Regular and continuous Laboratory Animal Health Monitoring is one of the essential factors that maintain the laboratory animal breeding facility and determine the results of the experiment, so it diagnoses pathogens in the laboratory animal population as quickly as possible to prevent the spread of infection.

In particular, for the safe management of Specific Pathogen Free (SPF) animal breeding facilities, microbial monitoring can be conducted periodically to diagnose infection conditions and maintain clean animals.

Service Process

Consultation
Animal Diagnosis Business Team

Request quotation
Necropsy schedule, Test items etc.

Inspection request
Delivery Inspection Animals

Necropsy
Necropsy Sampling, and test

Sending results
Post mail and E-mail

Necessary Facilities or Laboratory

Confirmation of Animal Health Status

Sudden Death

Apparent Weight Loss or Hair Loss

Environmental Monitoring of Laboratory Animal Facility

In case of Animal Health Report is needed.

Apparent Lesion

Decrease in the number of live Births

Confirmation of Asymptomatic Infection

International Standards Certification Agency Program

Optipharm Co.,Ltd. participates in the PEP (Performance Evaluation Program for Diagnostic Laboratory) annually of ICLAS (International Council for Laboratory Animal Science) an international scientific organization.

ICLAS

INTERNATIONAL COUNCIL FOR LABORATORY ANIMAL SCIENCE

CONSEIL INTERNATIONAL DES SCIENCES DE L'ANIMAL DE LABORATOIRE
Established in 1956 under the auspices of UNESCO
In official interaction with: OIE World Organization for Animal Health
World Health Organisation (WHO) International Council of Scientific Unions (ICSU)
Council for International Organisations of Medical Sciences (CIOMS)
World Veterinary Association (WVA)

ICLAS LABORATORY ANIMAL QUALITY NETWORK

Certificate of Participation in the ICLAS Performance Evaluation Program for Diagnostic Laboratories

This is to certify that ***Optipharm, Inc. Chungcheongbuk-do, Korea*** *is a participant in the Serology and Microbiology ICLAS Performance Evaluation Programs for diagnostic laboratories for the period 1 July 2023 – 30 June 2024.*

Patri Vergara
Director, ICLAS Laboratory Animal Quality Network

<Certificate for PEP participation>

Examination Animals

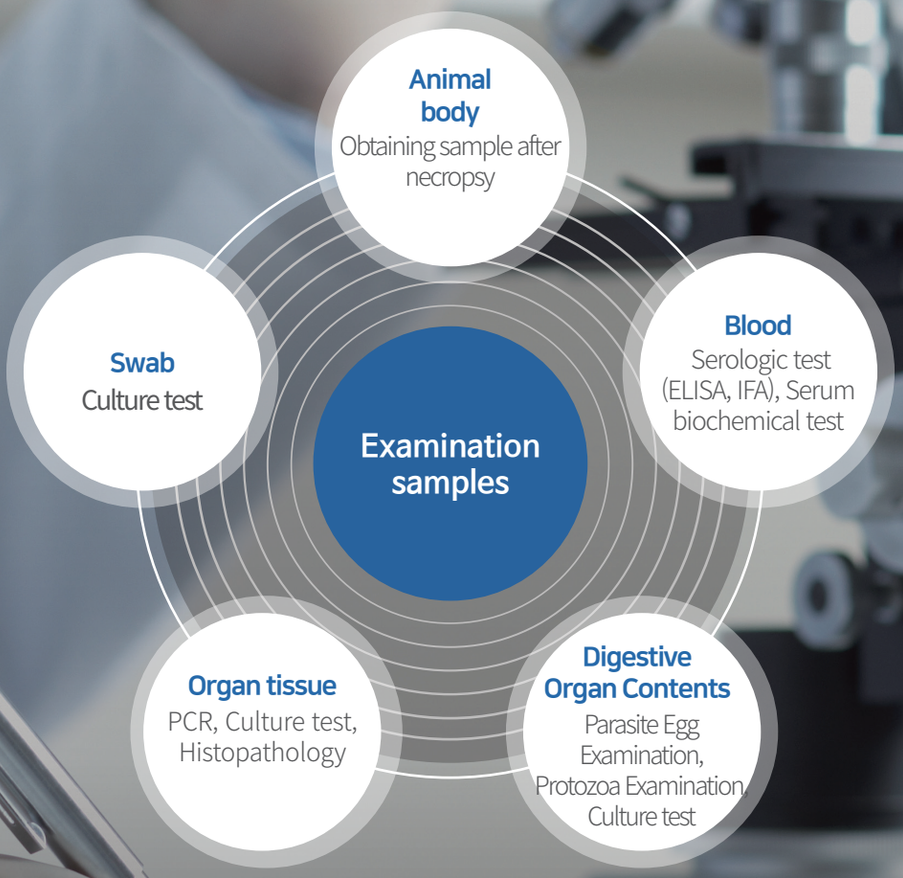
- **Basic parasite test (Protozoa)** 4 weeks old animals
- **General Examination** Raised animal in the breeding facility for a long time or 5-6 weeks old animals (5-10 animals)
- **In case of new animals are taken into the breeding facility**
  Examination 4 weeks after being taken into the facility at least
- **In case of IVC (Individually ventilated cage) or animals are taken out frequently**
  Examination as Sentinel animal with 3-4 weeks old animal raised together for at least 4 weeks

Examination Schedule/ Reservation

Sampling and necropsy of laboratory animal microbial monitoring should be conducted from Monday to Thursday

Test results should take at least 2-3 weeks to be sent. For a necropsy, please contact us at least one week before examination

Animal Health Monitoring



Test Item Mouse, Rat, Guinea pig, Rabbit

Category

A	Zoonosis
B	Microorganisms that are highly contagious and cause fatal damage to life
C	Microorganisms that are not fatal but cause a symptomless infection and affect physiological function
D	Microorganisms that cause opportunistic infections
E	Non-pathogenic microorganisms used as microbiological management indicators for animal facilities

Mouse Infectious agents

Classification	Infectious agents	Category	Methods
Viruses	Hantavirus	A	Serum analysis
	Lymphocoytic choriomeningitis virus (LCMV)		Serum analysis
	Ectromelia virus	B	Serum analysis
	Mouse hepatitis virus (MHV)		Serum analysis
	Sendai virus (HVJ)		Serum analysis
	Minute virus of mice (MVM)	C	Serum analysis
	Mouse adenovirus (MAV)		Serum analysis
	Mouse cytomegalovirus (MCMV)		Serum analysis
	Theiler's murine encephalomyelitis virus (TMEV)		Serum analysis
	Pneumonia virus of mice (PVM)		Serum analysis
	Reovirus 3		Serum analysis
	Lactate dehydrogenase-elevating virus (LDV)		Serum Biochemical Analysis
	Mouse thymic virus (MTV)		Indirect immunofluorescence
	K virus (Mouse pneumonitis virus)		Serum analysis
	Mouse parvovirus (MPV)		Serum analysis
	Murine norovirus (MNV)		Serum analysis
	Polyoma virus		Serum analysis
	Rotavirus (Epizootic diarrhea of infant mice, EDIM)		Serum analysis
Bacteria & Mycoplasma	*Salmonella* spp.	A	Culture
	Streptobacillus moniliformis		PCR
	Citrobacter rodentium	B	Culture
	Mycoplasma spp.		PCR
	Mycoplasma pulmonis		Serum analysis
	Rodentibacter pneumotropicus	C	Culture
	Rodentibacter heylii		Culture
	Filobacterium rodentium		Serum analysis
	Clostridium piliforme (Tyzzer's disease)		Serum analysis
	Corynebacterium kutscheri		Culture
	Corynebacterium bovis		Culture
	Bordetella bronchiseptica		Culture
	Helicobacter spp.		PCR
	Helicobacter hepaticus		PCR
	Helicobacter bilis		PCR
	Helicobacter typhlonius		PCR
	Pseudomonas aeruginosa	D	Culture
	Staphylococcus aureus		Culture
	Klebsiella pneumoniae		Culture
	Klebsiella oxytoca		Culture
	β-hemolytic Streptococci		Culture
	Streptococcus pneumoniae		Culture
Fungi	Dermatophytes	A	Culture
	Encephalitozoon cuniculi		Serum analysis
	Pneumocystis murina	B	Serum analysis
Parasites	Ectoparasites	C	Microscopy
	Giardia spp., *Spironucleus* spp.		Microscopy
	Nonpathogenic protozoa	E	Microscopy
	Helminths (including Pinworm)		Microscopy

Rat Infectious Agents

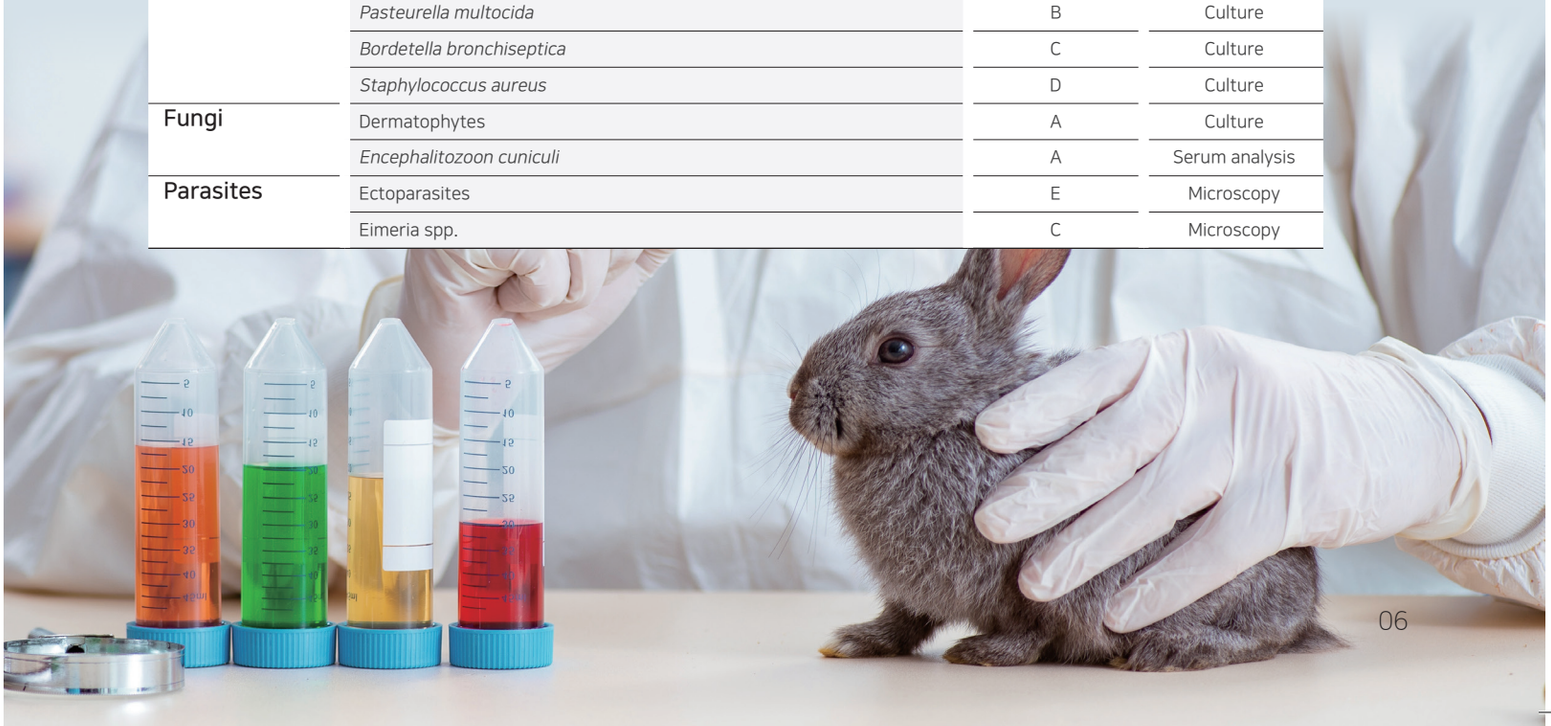
Classification	Infectious agents	Category	Methods
Viruses	Hantavirus	A	Serum analysis
	Sendai virus (HVJ)	B	Serum analysis
	H-1 virus	C	Serum analysis
	Rat coronavirus (Sialodacryoadenitis virus)		Serum analysis
	Kilham rat virus (KRV)		Serum analysis
	Minute virus of mice (MVM)		Serum analysis
	Mouse adenovirus (MAV)		Serum analysis
	Mouse encephalomyelitis virus (GDVII)		Serum analysis
	Pneumonia virus of mice (PVM)		Serum analysis
	Reovirus 3		Serum analysis
Bacteria & Mycoplasma	*Salmonella* spp.	A	Culture
	Streptobacillus moniliformis		PCR
	Mycoplasma spp.	B	PCR
	Mycoplasma pulmonis		Serum analysis
	Rodentibacter pneumotropicus	C	Culture
	Rodentibacter heylii		Culture
	Filobacterium rodentium		Serum analysis
	Clostridium piliforme (Tyzzer's disease)		Serum analysis
	Corynebacterium kutscheri		Culture
	Bordetella bronchiseptica		Culture
	Helicobacter spp.		PCR
	Helicobacter bilis		PCR
	Pseudomonas aeruginosa	D	Culture
	Staphylococcus aureus		Culture
	Klebsiella pneumoniae		Culture
	β-haemdytic Streptococci		Culture
	Klebsiella oxytoca		Culture
	Streptococcus pneumoniae		Culture
Fungi	Dermatophytes	A	Culture
	Encephalitozoon cuniculi		Serum analysis
	Pneumocystis carinii	B	PCR
Parasites	Ectoparasites	C	Microscopy
	Giardia spp., *Spironucleus* spp.		Microscopy
	Nonpathogenic protozoa	E	Microscopy
	Helminths (including Pinworm)		Microscopy

Guinea Pig Infectious Agents

Classification	Infectious agents	Category	Methods
Viruses	Lymphocytic choriomeningitis virus (LCMV)	A	Serum analysis
	Guinea pig adenovirus	C	Serum analysis
	Sendai virus (HVJ)		Serum analysis
Bacteria	*Salmonella* spp.	A	Culture
	Streptobacillus moniliformis		PCR
	Clostridium piliforme (Tyzzer's disease)	C	Serum analysis
	Bordetella bronchiseptica		Culture
	Pasteurella multocida		Culture
	Rodentibacter pneumotropicus		Culture
	Streptococcus pneumoniae		Culture
	β-haemdytic Streptococci		Culture
	Staphylococcus aureus	D	Culture
	Pseudomonas aeruginosa		Culture
	Klebsiella pneumoniae		Culture
	Klebsiella oxytoca		Culture
Fungi	Dermatophytes	A	Culture
	Encephalitozoon cuniculi		Serum analysis
Parasites	Ectoparasites	E	Microscopy
	Eimeria spp.	C	Microscopy

Rabbit Infectious Agents

Classification	Infectious agents	Category	Methods
Viruses	Sendai virus (HVJ)	C	Serum analysis
	Rabbit pox virus	C	Serum analysis
	Rabbit rotavirus	B	Serum analysis
	Rabbit Hemorrhagic Disease Virus		Serum analysis
Bacteria	*Salmonella* spp.	A	Culture
	Clostridium piliforme (Tyzzer's disease)	B	Serum analysis
	Pasteurella multocida	B	Culture
	Bordetella bronchiseptica	C	Culture
	Staphylococcus aureus	D	Culture
Fungi	Dermatophytes	A	Culture
	Encephalitozoon cuniculi	A	Serum analysis
Parasites	Ectoparasites	E	Microscopy
	Eimeria spp.	C	Microscopy



Laboratory Pig Infectious Agents

Classification	Infectious agents	Methods
Virus	Classical swine fever virus (CSFV)	Serum analysis
	Encephalomyocarditis virus (EMCV)	PCR
	Porcine cytomegalovirus (PCMV)	PCR
	Influenza A virus in swine (IAV-S, formerly Swine Influenza virus)	Serum analysis
	Porcine parvovirus (PPV)	PCR
	Porcine reproductive and respiratory syndrome virus (PRRSV)	Serum analysis
	Transmissible gastroenteritis virus (TGEV)	PCR
	Porcine epidemic diarrhoea virus (PEDV)	PCR
	Porcine Rotavirus	PCR
	Foot and mouth disease virus (FMDV)	Serum analysis
	Japanese encephalitis virus (JEV)	PCR
	Porcine circovirus type 2 and 3 (PCV2 and PCV3)	PCR
	Hepatitis E virus (HEV)	PCR
	Aujeszky disease virus	Serum analysis
Bacteria & Mycoplasma	*Actinobacillus pleuropneumoniae*	Serum analysis
	Erysipelothrix rhusiopathiae	Culture
	Glaesserella parasuis (formerly *Haemophilus parasuis*)	Culture
	Mycoplasma hyopneumoniae	PCR
	Pasteurella multocida	Culture
	Salmonella spp.	Culture
	Brucella suis	PCR
	Pathogenic Escherichia coli	Culture
	Clostridium perfringens	PCR
	Brachyspira hyodysenteriae	PCR
	Lawsonia intracellularis	PCR
Parasites	*Coccidia* (*Cystoisospora suis* and *Eimeria* spp.)	PCR
	Toxoplasma gondii	PCR
	Gastrointestinal helminths (Ascaris, Trichuris etc.)	Microscopy

Hematological, Cell and Protein Anaysis

· Hematological, cell and protein analysis are widely used in pharmaceutical industry, life sciences research, clinical diagnosis, gene expression analysis, and protein quantitative analysis.

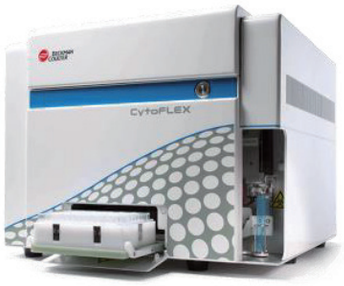
· Hematological analysis examines the composition of animal blood samples to determine overall health conditions and to evaluate abnormalities.

· Flow cytometry(FC) is a technique used to detect and measure physical and chemical characteristics of a population of cells or particles.

· Luminex analysis is a bead-based immunoassay that accurately measures multiple analytes in one sample with multiplexes. A flexible and accurate multi-analysis platform used for quantitative or qualitative analysis of biomarkers

Automatic Blood Cell Analyzer

Automatic Biochemical Analyzer



Flow Cytometer

Luminex Analyzer

Blood Cell Analysis

▶ Examination Animals

- About 20 species animals
- · Rodents (Mouse, Rat, Gerbil, Hamster, Guinea pig)
- · Mammals (Camel, Cat, Cattle, Dog, Dolphin, Ferret, Goat, Horse, Marmoset, Mini-pig, Nonhuman Primate(NHP), Pig, Rabbit, Sheep)
- · Birds (Chicken, etc.)

▶ Sample Volume

- · Whole blood 1ml (3ml capacity EDTA tube recommended)

▶ Precautions for handling and shipping samples

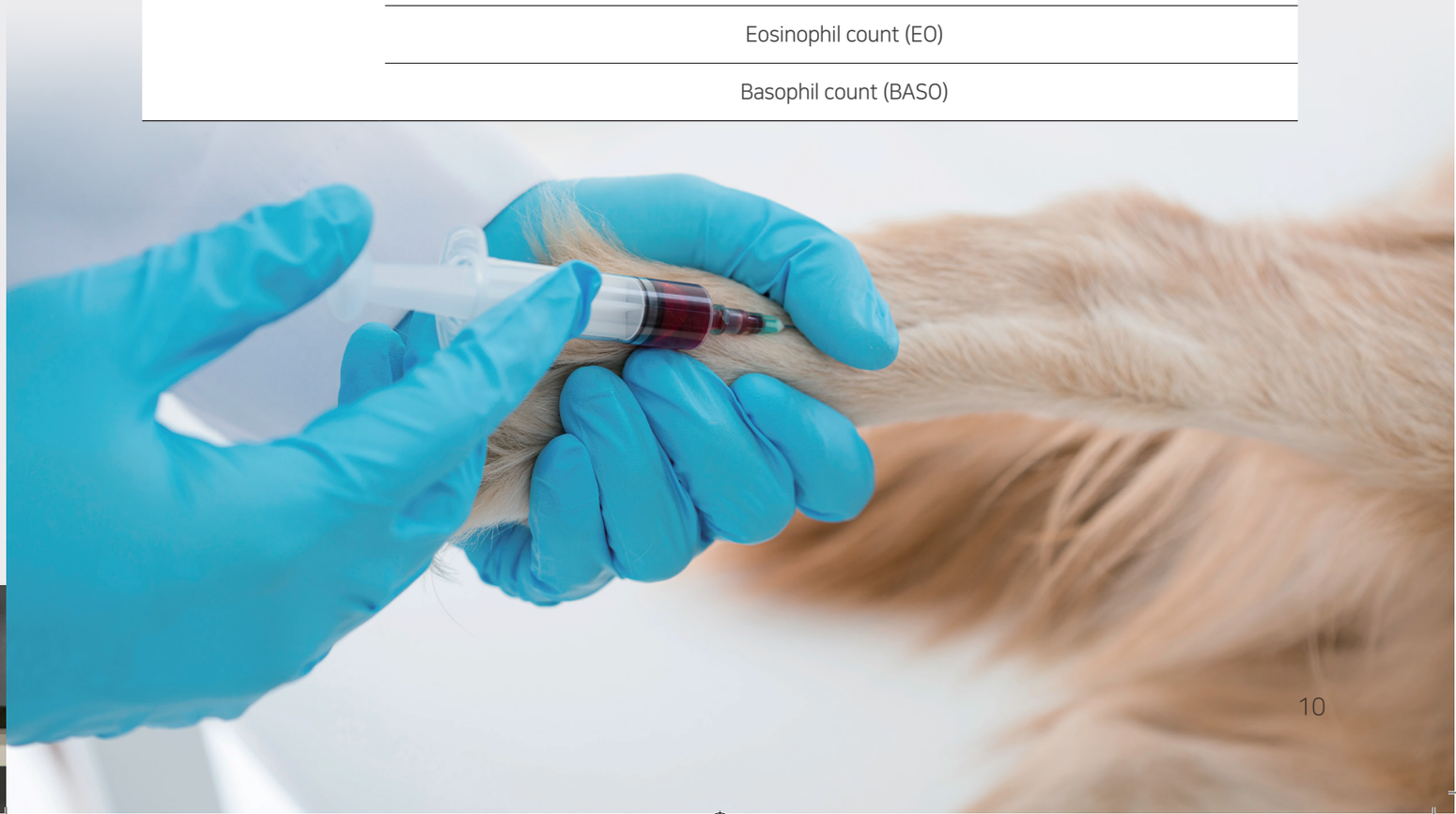
- · If hemolysis occurs during the blood collection process, the result value may be affected.
- · The whole blood should be transported in a refrigerated state, and the test should be carried out as soon as possible after blood collection for accurate examination.

▶ Examination schedule/Reservation

- · The available hematological analysis is from Monday to Friday.

Automatic blood cell analyzer

Classification	Examination Items
Red blood cells	Red blood cell count (RBC)
	Hemoglobin concentration (HGB)
	Hematocrit (HCT)
	Mean corpuscular volume (MCV)
	Mean corpuscular hemoglobin (MCH)
	Mean corpuscular hemoglobin concentration (MCHC)
	Red cell distribution width (RDW)
	Reticulocyte percent (RET)
Platelets	Platelet count (PLT)
	Plateletcrit (PCT)
	Mean platelet volume (MPV)
	Platelet distribution width (PDW)
White blood cells	White blood cell count (WBC)
	Neutrophil count (NECT)
	Lymphocyte count (LYMPH)
	Monocyte count (MONO)
	Eosinophil count (EO)
	Basophil count (BASO)



Biochemical Analysis Test

▶ Sample Volume

· Serum 400ul

▶ Precautions for handling and shipping samples

· If hemolysis occurs during the blood collection process, the result value may be affected.

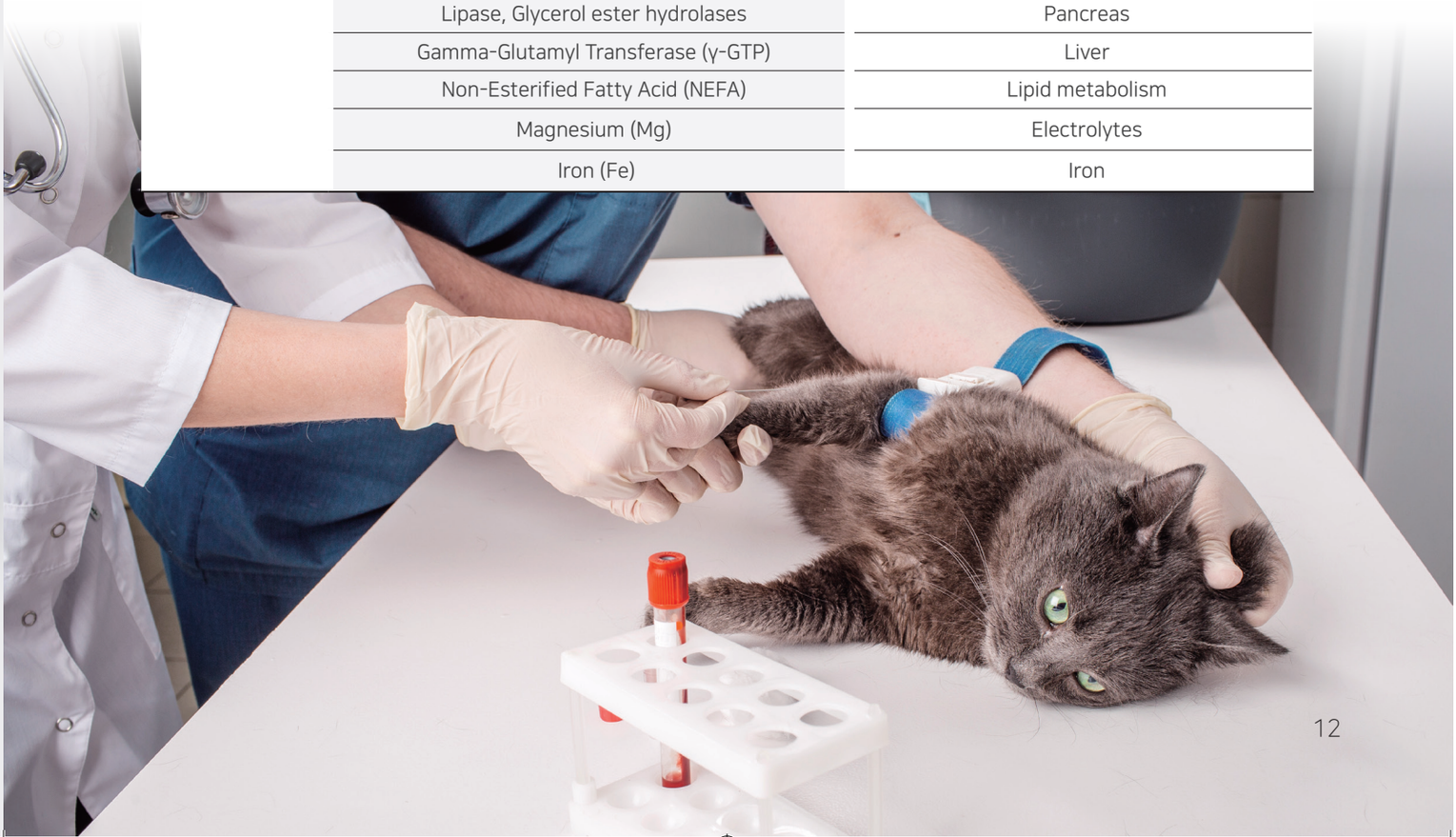
· The results of each test item may vary depending on the storage condition and duration of the serum for biochemical analysis tests. Long-term storage may require refrigeration.

▶ Examination Schedule/Reservation

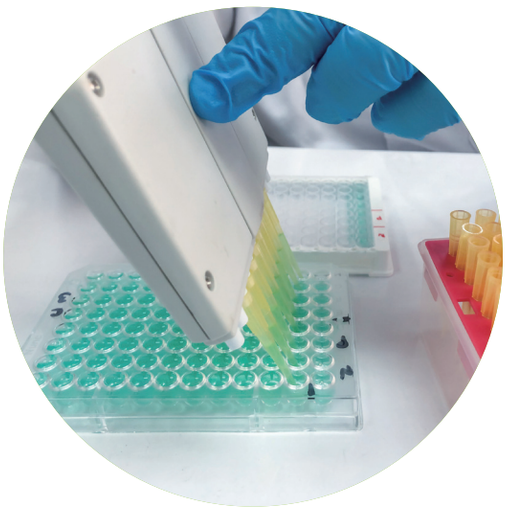
· The available hematological analysis is from Monday to Friday.

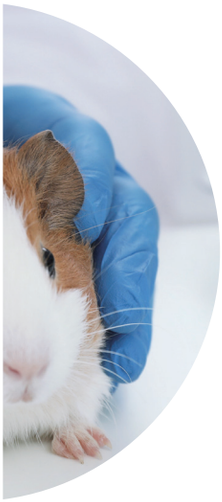
Automatic Biochemical Analyzer

Classfification	Examination items	Related organs and diseases
General Category	Alanine aminotransferase (ALT, GPT)	Liver
	Aspartate aminotransferase (AST, GOT)	Liver
	Alkaline phosphatase (ALP)	Liver etc.
	Creatine phosphatase (CPK)	Myocardium and Muscular systems
	Lactate Dehydrogenase (LDH)	Liver, Myocardium and Muscular systems
	Total Billirubin (T. Billirubin)	Liver
	Triglyceride (TG)	Lipid metabolism
	Total Cholesterol (TC)	Lipid metabolism
	Total protein (TP)	Liver
	Albumin (ALB)	Liver
	Blood Glucose (Glucose)	Liver and Pancreas
	Urea nitrogen in the blood (BUN)	Kidney
	Creatinine	Kidney
	Calcium (Ca)	Electrolytes
	IP (Inorganic phosphorous)	Electrolytes
	Sodium (Na)	Electrolytes
	Potassium (K)	Electrolytes
	Chlorine (Cl)	Electrolytes
Optional Category	Low-Density Cholesterol (LDL-cholesterol)	Lipid metabolism
	High-Density Cholesterol (LDL-cholesterol)	Lipid metabolism
	Glycated Hemoglobin (HbA1C)	Pancreas
	C-Reactive Protein (CRP)	Acute inflammation
	Haptoglobin (HP)	Acute inflammation
	α-Amylase (AMY)	Pancreas
	Lipase, Glycerol ester hydrolases	Pancreas
	Gamma-Glutamyl Transferase (γ-GTP)	Liver
	Non-Esterified Fatty Acid (NEFA)	Lipid metabolism
	Magnesium (Mg)	Electrolytes
	Iron (Fe)	Iron



Animal Health Monitoring & Hematological Analysis





OPTIPHARM Co., Ltd.

OPTIPHARM Co., Ltd.

Animal Health Monitoring & Hematological Analysis

Quotation inquiry

Animal Diagnostic Business Team

T. +82-43-249-7524~5 **E.** opt@optipharm.co.kr

OPTIPHARM

63, Osongsaengmyeong 6-ro, Osong-eup, Heungdeok-gu, Cheongju-si, Chungcheongbuk-do, 361-954
Rep. of Korea www.optipharm.co.kr