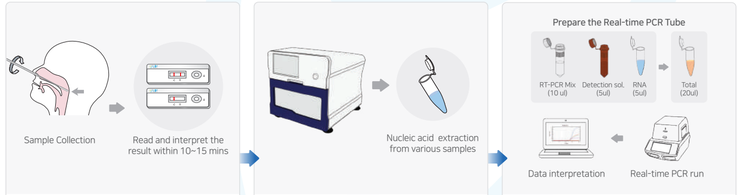
Total Process of LiliF® Diagnostics

LiliF® Full Package System



Step 01

Screening Part

Easy and quick diagnosis whether disease is infected or not within 10~15 minutes without any additional equipment

Step 02

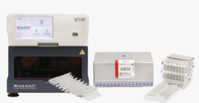
Extraction Part

Fast and easy extraction of nucleic acids (DNA/RNA) from various pathogenic samples

Step 03

Confirming Part

Confirmation of disease through diagnostic kits with high sensitivity and specificity Rapid Diagnostics

Rapid Diagnostics (RDT)	**Automatic Extraction** System	**Molecular** Diagnostics (MDx)
		
Rapid Kits • LiliF® GBN COVID-19 Ag Rapid Kit • LiliF® S.pneumoniae Ag Rapid Kit	**Auto Machine & Extraction kit** • Miracle-AutoXT Automated Nucleic Acid Extraction System • AutoXT PGS DNA/RNA Kit • AutoXT CLiNiC-Q multi DNA Kit	**Detection Kits** • LiliF® COVID-19 Multi Real-time RT-PCR Kit • LiliF® VRE vanA/vanB Real-time PCR kit

Like an undisrupted deep-rooted tree

‘Perseverance’

Based on long term experience and know-how,
we have been constantly challenging to provide the best quality and service to our customers.
We are starting a new challenge in the field of diagnosis with great respect.

LiliF® History

1999 Established iNtRON Biotechnology, Inc.

2011 Listed on KOSDAQ

2017 Development of Avian influenza diagnostic kit

2018 Sales of VRE(vancomycin-resistant enterococci) diagnostic kits

2020 Obtain export license of COVID-19 Real-time PCR kit

2021 US FDA Registered of automated nucleic acid extraction system

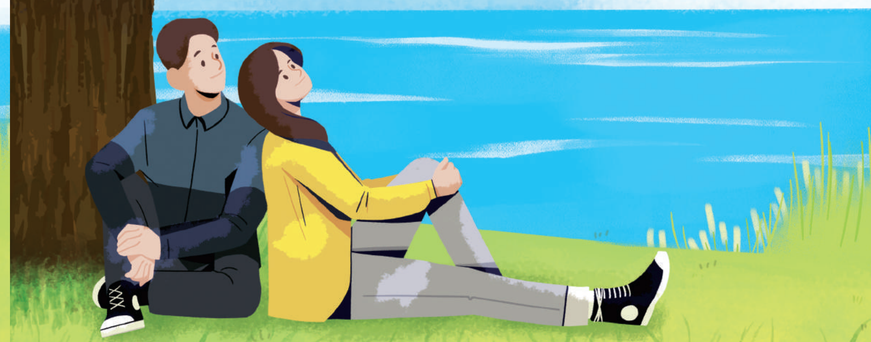
2022 GMP Expansion and Automation Facility Establishment of DR Division RDT Center/MDx Center.
MFDS approval of LiliF® Streptococcus pneumoniae Ag Rapid kit and LiliF® GBN COVID-19 Ag Rapid Kit

iNtRON Biotechnology

GMP/ ISO9001 / ISO14001 / ISO13485 Certified Company
www.intronbio.com
048530

A place where you can Lean on and Look forward to

LiliF® Diagnostics provides **Relief** and **Belief** to customers



LiliF Diagnostics

Sales/International Sales Head quarter **TEL** 031 739 5375 | **FAX** 031 739 5264 | **E-MAIL** tech@intronbio.com
Sales/Domestic Sales I Head quarter **TEL** 031 739 5733 | **FAX** 031 739 5744 | **E-MAIL** info_dr@intron.co.kr
Sales/Domestic Sales II Sub branch **TEL** 042 330 0917 | **FAX** 042 330 0915

#605, 137, Sagimakgol-ro, Jungwon-gu, Seongnam-si, Gyeonggi-do 13202, Korea

Rapid Diagnostics

LiliF® GBN COVID-19 Ag Rapid Kit

Reg No. 22-771

COVID-19 is a respiratory infection caused by a new type of coronavirus (SARS-CoV-2) that has been spread around the world in 2019. It shows fever, pneumonia, and respiratory symptoms. Continual monitoring and quarantine activities are mandatory because saliva droplets of the infected patients are highly contagious through the respiratory tract or the mucous membranes of the eyes, nose, and mouth. We introduce LiliF® GBN COVID-19 Ag Rapid Kit that enables you to detect of SARS-CoV-2 antigens by immunochromatography in nasopharyngeal smear samples of patients with infection symptoms.

Cat. No.	IRH41071
Size	1 test × 25 / kit
Intended for use	Detection of SARS-CoV-2 Ag
Specimen	Nasopharyngeal swab
Testing time	15 mins
Certificate	MFDS (Reg No. 22-771)

Interpretation of Results

Clinical Performance | Sensitivity 92.5% Specificity 98.5%

LiliF® GBN COVID-19 Ag Rapid Kit		Hospitalized Patient Performance (RDT)		
		Positive	Negative	Total
Test Result	Positive	74	2	76
	Negative	6	128	134
	Total	80	130	210

LiliF® Streptococcus pneumoniae Ag Rapid Kit

Reg No. 22-80

Streptococcus pneumoniae is a bacteria that is commonly found in the nose and throat. The bacteria can sometimes cause severe illness in children, the elderly and other people with weakened immune systems. Streptococcus pneumoniae is the most common cause of middle ear infections, sepsis (blood infection) in children and pneumonia in immunocompromised individuals and the elderly. We introduce LiliF® Streptococcus pneumoniae Ag Rapid kit that enables you to easily and quickly detect S. pneumoniae antigens, which is the most common bacterial infection cause of pneumonia, without any equipment.

Cat. No.	IRH41631
Size	1 test × 20 / kit
Intended for use	Detection of S.pneumoniae Ag
Specimen	Urine
Testing time	10 mins
Certificate	MFDS (Reg No. 22-80)

Interpretation of Results

Clinical Performance | Sensitivity 97.7% Specificity 100%

LiliF® S.pneumoniae Ag Rapid Kit		Hospitalized Patient Performance (RDT)		
		Positive	Negative	Total
Test Result	Positive	42	0	42
	Negative	1	100	101
	Total	43	100	143

Extraction System

Miracle-AutoXT Automated Nucleic Acid Extraction System

Reg No. 17-610

LiliF® automated extraction system has been optimized for diagnostic experiments by obtaining US FDA, MFDS, and CE-IVD registration and approval. It has been exported to various countries and supplied to major domestic national institutions. Miracle-AutoXT is a magnetic bead type automated nucleic acid extraction equipment that generates less noise and vibration when operated, and optimizes the reaction between samples and reagents through protocol and test mode service, heating block, and UV lamp functions for various samples. You can easily obtain high-purity and high-yield products.

Various Function

- Prevention of Contamination through UV lamp operation
- Optimization response of samples and reagents through heating
- Built-in hidden operation mode

World Class Certified Product

- Obtain US FDA, CE-IVD, MFDS (Reg No. 17-610)
- Global quality verification by exporting various countries
- Supply to many domestic national institutions and diagnostic companies

Simple Program

- Apply optimized protocols by sample types
- Apply Fast Version in order to reduce experimentation time
- Self-check is possible through Test Mode operation (2mins)

High Speed & Durability

- Simple experiments that do not require pre/post processing
- Up to 32 samples can be processed simultaneously
- Less noise and vibration during equipment operation

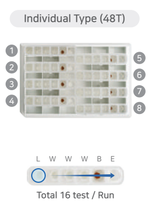
How to Use Miracle-AutoXT & AutoXT Extraction Kit

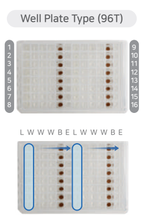
Scan the QR code to see how to use Miracle-AutoXT & AutoXT Kit on YouTube

AutoXT Extraction Kit

Reg No. 19-1315

AutoXT Extraction Kit, an exclusively compatible extraction product with Miracle AutoXT system, has all the necessary reagents for the experiment dispensed. Therefore, it can be experimented without a separate pre/post processing procedure. Also, various plates are provided for each standard so customers are able to choose them according to their experiments. When the Miracle-AutoXT is operated, the magnetic bead moves and automatically proceeds with the extraction step, and not only prevents possible contamination during the experiment, but also minimizes the error between experimenters, so that researchers can conduct the experiment easily and quickly.





AutoXT PGS DNA/RNA Kit

Cat. No.	17168-48 (48T), 17168-96 (96T)
Application	Purify DNA/RNA of Various Samples
Specimen	Pathogenic Samples (Virus, Bacteria, etc)

AutoXT CLiNiC-Q multi DNA Kit

Cat. No.	17601-48 (48T), 17601-96 (96T)
Application	Purify gDNA of Various Samples
Specimen	Pathogenic Samples (Yeast, Gram-positive bacteria, etc)

Molecular Diagnostics

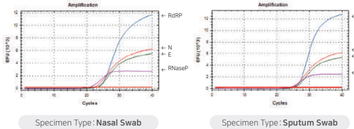
LiliF® COVID-19 Multi Real-time RT-PCR Kit

Reg No. 21-998

COVID-19 is a respiratory infection caused by a new type of coronavirus(SARS-CoV-2) that has been spread around the world in 2019. It shows fever, pneumonia, and respiratory symptoms. Continual monitoring and quarantine activities are mandatory because saliva droplets of the infected patients are highly contagious through the respiratory tract or the mucous membranes of the eyes, nose, and mouth. We introduce the LiliF® COVID-19 Multi Real-time RT-PCR Kit, which can simultaneously detect RdRP, E, N, and RNase P(IPC) from nasopharyngeal/oropharyngeal swabs and sputum samples of patients with symptoms of infection.

Cat. No.	IPH21506
Size	100 tests
Intended for use	Detection of SARS-CoV-2
Target	RdRp, E, N, RNase P(IPC)
Specimen	Nasal, Sputum swab
Testing time	90 mins
Certificate	MFDS (Reg No. 21-998)

Test Result



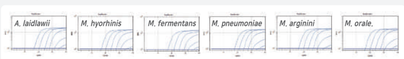
RNA extracted through Miracle-AuotXT & AutoXT PGS DNA/RNA Kit from nasopharyngeal smear samples and sputum samples was checked with the LiliF® COVID-19 Multi Real-time RT-PCR Kit diagnostic kit and found that RdRP, E, N, and RNase P (IPC) can be detected simultaneously.

e-Myco™ VALiD-Q Mycoplasma qPCR Detection Kit

e-Myco™ VALiD-Q Mycoplasma qPCR Detection Kit is a Real-time PCR-based product that can qualitatively and quantitatively test Mycoplasma incorporated in cultured cells within 1 and half hour by targeting Mycoplasma-specific 16S rRNA sequence. e-Myco™ VALiD-Q is a product that has verified each guideline of Mycoplasma validation test at domestic and abroad. It has high sensitivity that can replace the direct method for 6 major Mycoplasma species and high specificity that does not detect other closely related microorganisms.

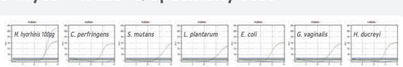
Cat. No.	25245
Size	50 tests
Application	Mycoplasma detection
Method	Real-time PCR
Type	Master Mix type
Detection limit	10 CFU/ml

e-Myco™ VALiD-Q Sensitivity Test



It is possible to detect up to a concentration equivalent to 10 CFU/ml for the 6 types of mycoplasma strains suggested in Mycoplasma validation test guideline, and confirms the sensitivity level to replace the direct method.

e-Myco™ VALiD-Q Specificity Test



As a result of an amplification experiment on 6 types of bacterial gDNA and positive control *M. fermentans* that are closely related to Mycoplasma, FAM signal(Target) and HEX signal(IPC) amplification signals were confirmed in *M. fermentans*, and 6 types of bacteria In the gDNA test group, by confirming only the amplification signal of the HEX signal(IPC), it was confirmed that the product could be detected by reacting specifically to mycoplasma.