



# EXS3000 Mass Spectrometry System

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A Smart Matrix Assisted Laser Desorption Ionization-Time of Flight Mass Spectrometry System



Microbiology



## EXS3000 Mass Spectrometry System

Based on matrix-assisted laser desorption/ionization time-of-flight mass spectrometry technology, EXS3000 could be used in diagnostic identification of microorganisms, like several kinds of bacteria, fungi and so on. From easy operation, high-throughput rapid screening to comprehensive target characterization, without bacterial cultivation, this mass spectrometry system offer broad utility to meet all laboratory needs.



# How to identify a microorganism in EXS3000?

Without pure culture, EXS3000 brings end-users more rapid experience and more accurate microbe identification result.

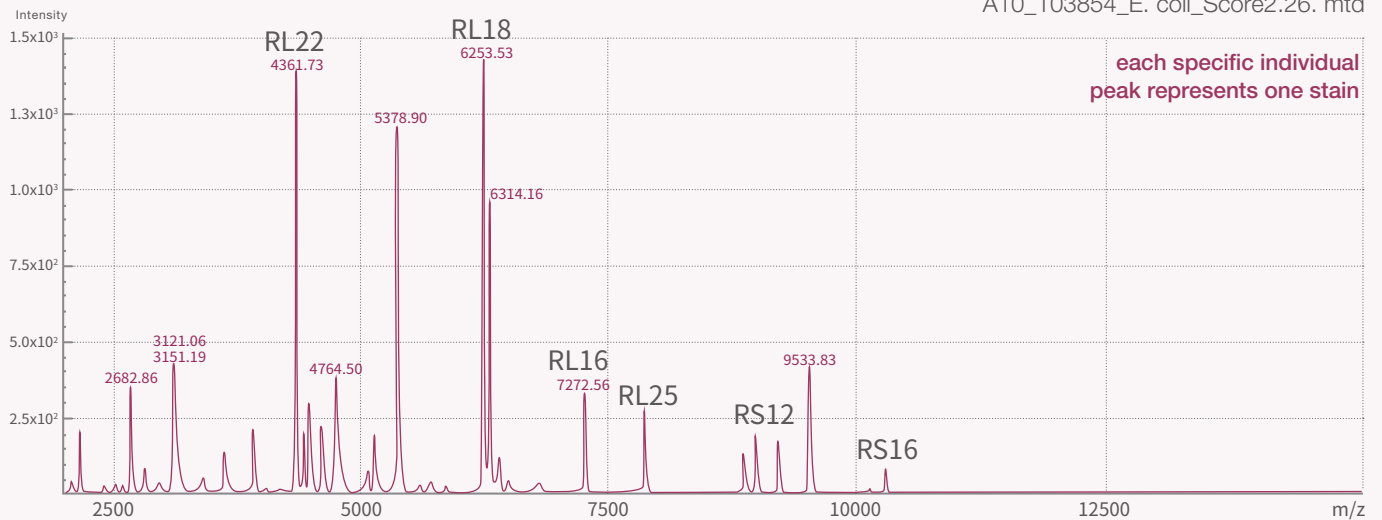


## Peptide Mass Fingerprinting (PMF)

The peptide mass fingerprinting (PMF) of the microbe could be algorithmically matched against a database of reference spectra so that could identify the subject strains.



X:1671.43 Y: 1299.83  
A10\_103854\_E. coli\_Score2.26. mtd



Fingerprinting Technology for Whole Bacterial Ribosomal Protein

## A Broad Range of Application Fields

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- Clinical pathogenic microorganism rapid identification and infection control
- Microorganism identification and monitor traceability in CDC
- Microorganism detection and quality control in pharmaceutical factory and food factory
- Inspection and quarantine field
- Microbiological testing and research in the fields of scientific research, industry, agriculture, environment, animal husbandry and veterinary medicine
- Analysis of peptides and protein biomarkers
- Nucleic acid detection and prime analysis



# Advanced and distinctive microbe pretreatment reagent formulation technology

- Less pretreatment procedure, better precision and more effectively break down dense mold cell walls, only required 2 min for mold pretreatment.
- Blood culture positive sample could directly identify in mass spectrometry system without pure culture. This could improve identification efficiency of blood stream infection bacteria and reduce report time
- Ready-to-use matrix solution, good stability and room temperature storage.



Name	Storage Temperature	Expiration	Open-vial Stability
Microbe Sample Pretreatment Kit for Mass Spectrometry System	15-25°C	12 months	7 days
Mold Sample Pretreatment Kit for Mass Spectrometry System	15-25°C	12 months	7 days
Blood Culture Positive Sample Pretreatment Kit for Mass Spectrometry System	2-8°C	12 months	30 days
Sample Processing Matrix Solution for Mass Spectrometry System	15-25°C	12 months	7 days

# Technical Specification

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<b>Mass Range</b>	1500-30000 Da
<b>Mass Accuracy</b>	Relative Indication Error≤500 ppm
<b>Sensitivity</b>	S/N ratio ≥100 (0.04 µg/mL, [Glu1]-human fibrin peptide B) S/N ratio ≥100 (4 µg/mL, horse myoglobin)
<b>Mass Resolution</b>	R≥500
<b>Repeatability</b>	≤600 ppm
<b>Mass Stability</b>	≤800 ppm
<b>Pre-treatment Reagents</b>	Microbe Sample Pretreatment Kit,Mold Sample Pretreatment Kit, Blood Culture Positive Sample Pretreatment Kit,Sample Processing Matrix Solution
<b>Strains database</b>	Over 2000 species including 10,000 microbe in local database; Over 4000 species including 20000 microbe in cloud database,like CDC database in US.
<b>Operation Environment</b>	Temperature:10-30°C Relative Humidity:(20-85)°C Atmospheric Pressure:(70-106)Kpa
<b>Operation System</b>	Windows 7(64 bit) and above, support LIS
<b>Laser</b>	N2 UV laser,frequency 1-60 Hz
<b>Power Supply</b>	100-240 V, 50/60 Hz, 300 W
<b>Weight</b>	116.1 Kg
<b>Dimension (mm)</b>	490(W) *800(D) *1215(H)



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