



# Autof *MS1000* / MALDI-TOF

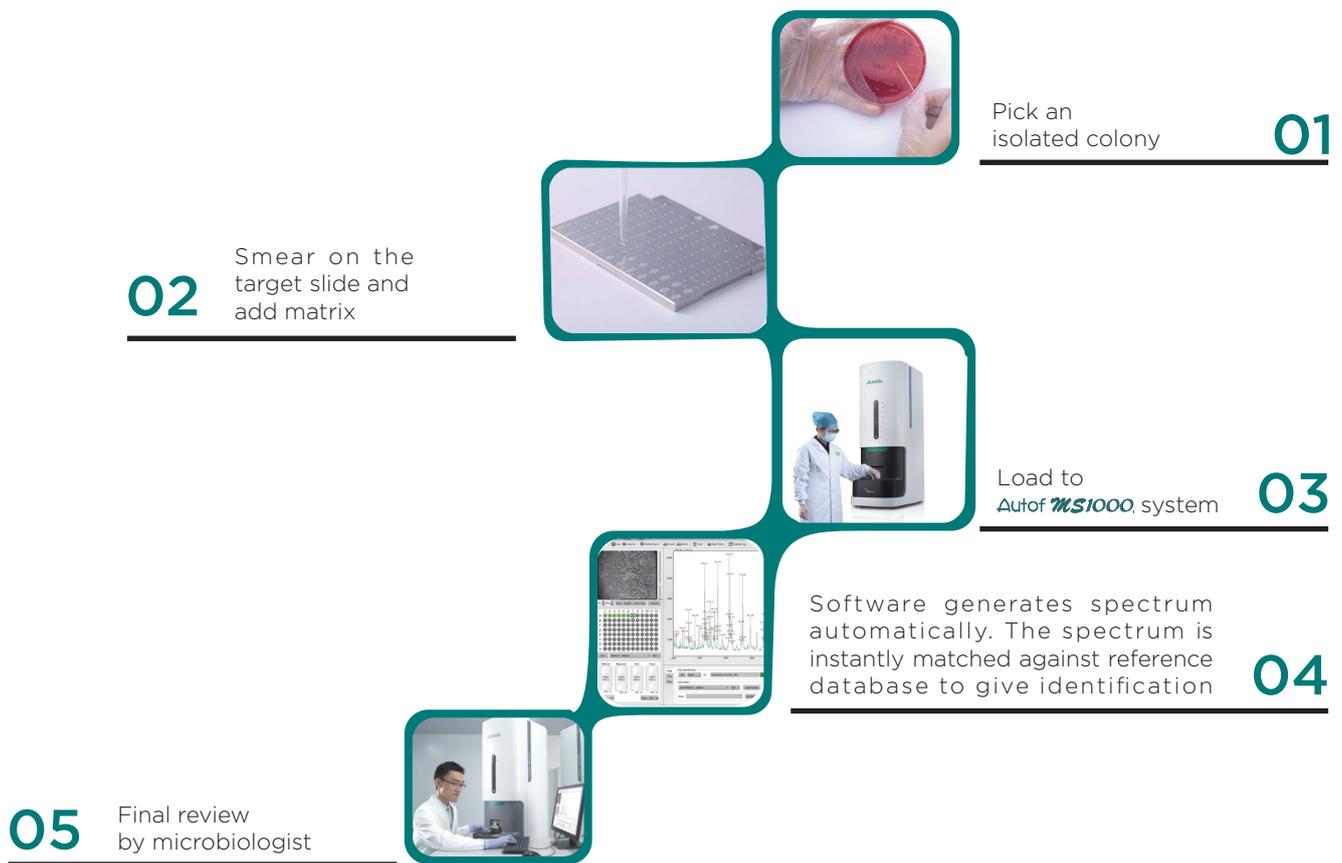
Automated mass spectrometry microbial identification system  
Professional spectrum identification platform with comprehensive databases



## Autof *MS1000*

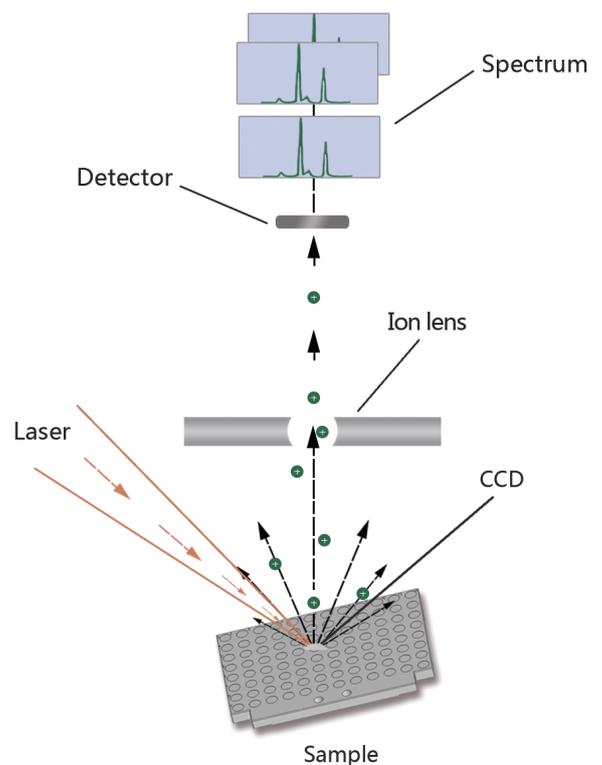
Fast and accurate microbial identification platform for clinical, drug testing and other research applications.

# Sample workflow



## HOW MALDI-TOF works

- Put the sample mixed with matrix on the target slide to high-vacuum cassette position.
- Ionize the sample by pulsed laser.
- The ions obtain the same kinetic energy and pass through the time-of-flight detector.
- The mass-charge ratio of the ions is proportional to the square of the time-of-flight.
- The identification results are generated by comparison with the reference spectra in the database.



# Hardware

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- Innovative optical design enhances the resolution.
- FPGA chip improves accuracy and stability of slide positioning.
- High power turbo molecular pump realizes the simultaneous tests once slide loaded.
- Ion source vacuum degree up to  $10^{-7}$  mbar.
- Unique design of signal detection system guarantees high repeatability.
- 0.01  $\mu\text{m}$  high-precision pump filter reduces biological safety risk control.

# Software

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## Acquisition system

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- Efficient batch processing system saves labor cost and time.
- Rapid identification module obtains a sample result in 0.1 seconds.
- LIS connection available.
- Real-time acquired spectra improves the convenience.

## Analysis System

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- Customized report templates and database self-built functions supported.
- Multi-functional microbial mass spectrometry analysis supported.
- Highly integrated functional design.
- Remote multi-user operations supported.



# Database

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- A large number of quality control strains from various fields.
- Real-time database updating system to meet the needs of multiple industries.



# Specification

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## Laser

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- 337 nm nitrogen laser, fixed focus
- Maximum pulse rate - 60 Hz (60 laser shots per second)
- Laser power and laser aim under software control

## Analyzer

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- Linear flight tube of 1.05 m drift length
- Vacuum maintained by a mechanical pump and a turbo molecular pump

## Mass range

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- 1-500 KDa

## Dimensions

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- Size (W\*L\*H, mm): 450×705×1280
- Weight: 101kg excluding data system

## Installation requirements

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- Input: AC 100-240V, 50-60Hz, 290VA
- Stable and continuous power supply
- Temperature: 10-30 °C
- Humidity: less than 70% non-condensing
- Vibration free

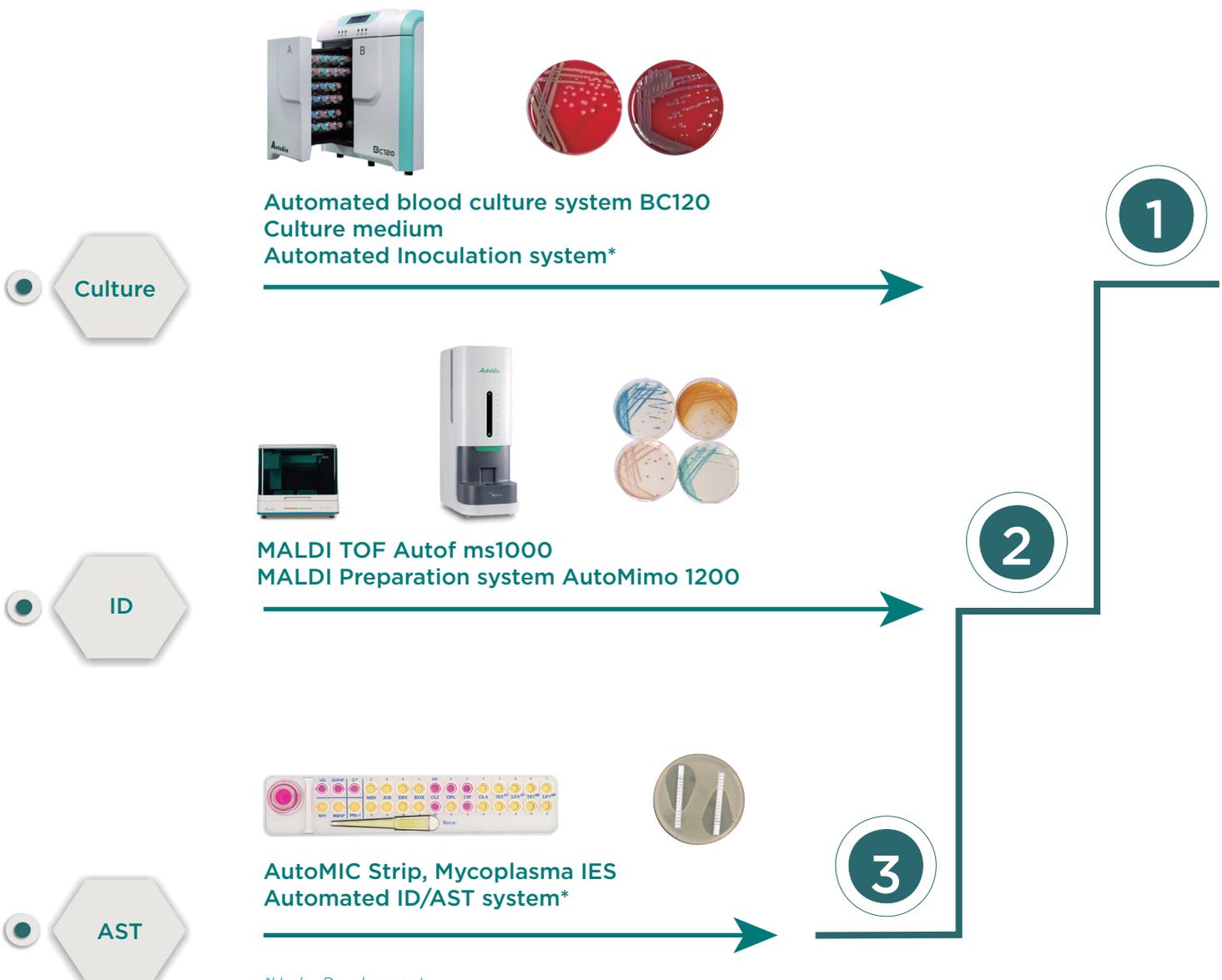


# Accessories and reagents

Ready-to-use and light-stable reagents provided

- No extra reagent preparation required.
- No need to perform stability studies of reagents.

## Autobio provides a complete solution of Microbiology



\*Under Development

## Chirus Limited

Chirus has brought together a range of innovative platform technologies covering a broad spectrum of laboratory medicine which includes clinical chemistry, haematology and microbiology. Our core focus is on leading edge rapid diagnostic technologies that can bring significant benefit to patient care.

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