



MALDI-TOF MS Wide Application Range & Rapid Detection

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Smart MS⁺ 5020

Auto Microbial Rapid Identification Mass Spectrometer System

Accessories

Stainless target plate

High-density coating process to ensure that the surface of the target plate is flat and reusable; Partition quality control to reduce unnecessary losses during operation.



Reagents kit

Matrix reagent

Sample pre-treatment reagent

Blood culture positive sample treatment reagent



* The above specification is subject to change without notice.

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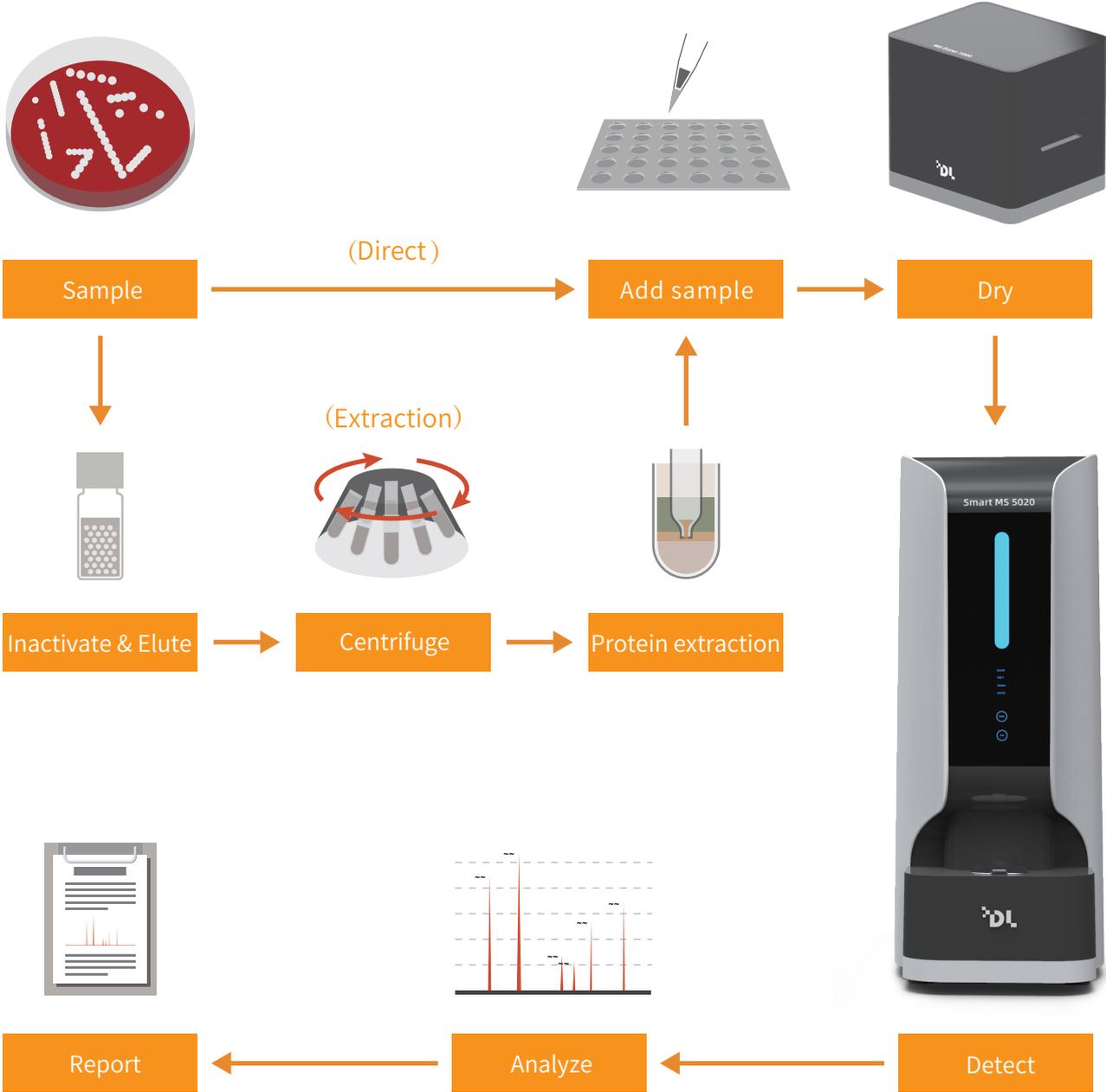
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Work flow

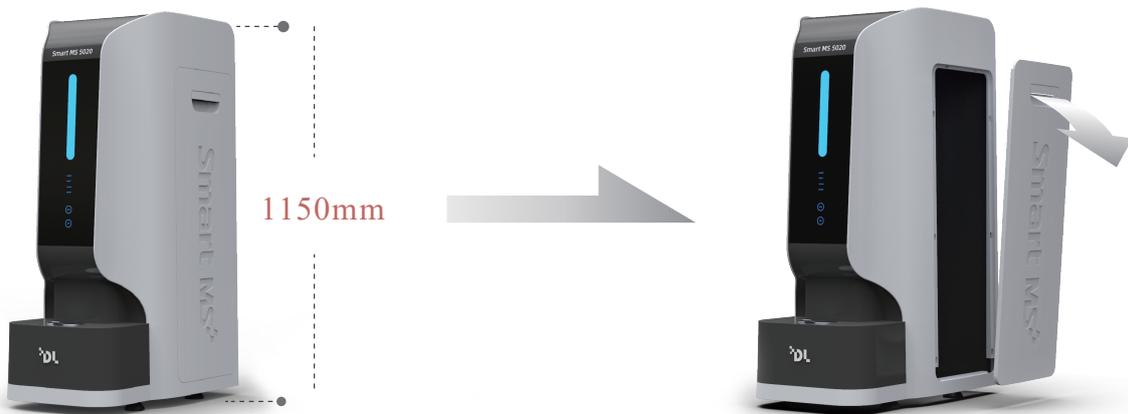


*Drying Box(Optional): Used for storing and drying target plates. Capacity: 4 pieces of plates.



Optimized structure for easy operation and maintenance

- Compact design with height of 1150mm and save space.
- Integrated touch control panel to enhance user operation experience.
- Snap-in door on both sides for easy daily maintenance.



Core technology innovation with comprehensive hardware upgrade

- Highly-integrated FPGA+ARM modular circuit control system, stable and efficient.
- The patented target plate ensures high work efficiency.
- High-speed molecular pump and low-noise mechanical pump can complete the vacuum recovery within 30s.
- Intelligent vacuum management system maintains a high vacuum of 4×10^{-8} Pa and improves the ratio of signal-to-noise.
- Adopting a grid-free and cleaning-free ion source with wide-range ion focusing technology to improve resolution and stability;
- The front amplifier with high gain and low noise. Fast speed and high precision data acquiring system with the rate up to 1-2G hz.
- Solid state laser: 200 billion shots.



Modular library and AI neuron search



The library has PMF data of more than 5,000 species including mycobacterium, filamentous fungi, anaerobic bacteria, Legionella, Nocardia and common clinical pathogens, and supports cloud database searching to meet the needs of clinical institutes, CDC, and other industrial fields.



DL MASS Software System



Integration of data collection, spectrum analysis, and identification. 96 samples detection at a time;

靶点	序列号	备注	处理方法	备注
A1	1			
A2	2			
A3	3			
A4	4			
A5	5			
A6	6			
A7	7			
A8	8			
A9	9			
A10	10			
A11	11			
A12	12			
B1	13			
B2	14			
B3	15			
B4	16			
B5	17			
B6	18			
B7	19			
B8	20			
B9	21			
B10	22			
B11	23			
B12	24			
C1	25			
C2	26			
C3	27			
C4	28			
C5	29			
C6	30			
C7	31			
C8	32			
C9	33			
C10	34			
C11	35			
C12	36			
D1	37			
D2	38			
D3	39			
D4	40			
D5	41			
D6	42			
D7	43			
D8	44			
D9	45			
D10	46			
D11	47			
D12	48			
E1	49			
E2	50			
E3	51			
E4	52			
E5	53			
E6	54			
E7	55			
E8	56			
E9	57			
E10	58			
E11	59			
E12	60			
F1	61			
F2	62			
F3	63			
F4	64			
F5	65			
F6	66			
F7	67			
F8	68			
F9	69			
F10	70			
F11	71			
F12	72			
G1	73			
G2	74			
G3	75			
G4	76			
G5	77			
G6	78			
G7	79			
G8	80			
G9	81			
G10	82			
G11	83			
G12	84			
H1	85			
H2	86			
H3	87			
H4	88			
H5	89			
H6	90			
H7	91			
H8	92			
H9	93			
H10	94			
H11	95			
H12	96			



The morphological information of the sample is provided including microscopic cell morphology and culture medium colony morphology, assisting in the verification of the result.

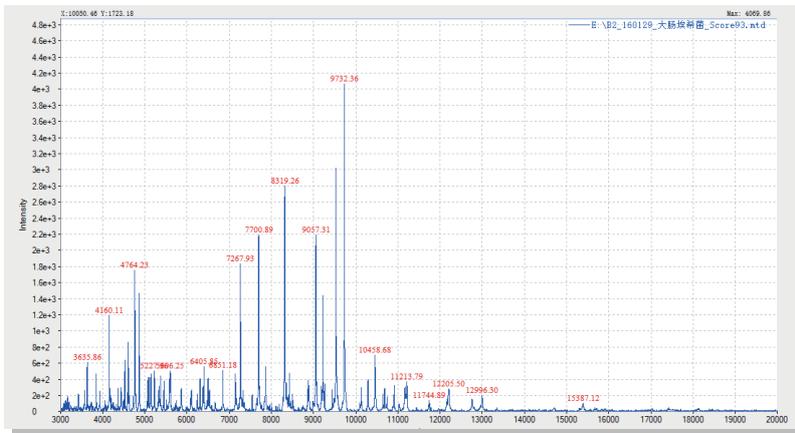


Detection of microbial resistance like cephalosporinases, carbapenemases etc.

Provide microbial self-built database function;



The system can intelligently identify and correct the ± 10 Da of the spectrum offset with synchronous searching during the process. And the detection result will be obtained within 0.1s.



With cluster analysis and PCA analysis function, the system can achieve laboratory testing and scientific research such as microbial drug resistance analysis, strain traceability analysis, mixed bacteria analysis, etc.

