

Global Innovation · Local Solution

Triple Quadrupole LC-MS/MS System

# QSight 420MD

»»»» Exceptional Sensitivity and Accuracy | High Efficiency and Stability |  
Easy-to-use | User-friendly Software

»»»» The "Gold Standard" Platform for Precision Testing



#### Suzhou

Building 14, No. 218 Sangtian Street, Suzhou Industrial Park, Suzhou, Jiangsu Province, China

#### Shanghai

Room 701, Building B, Phase 3, Qiantan World Trade Center, No. 221 Dongyu Road,  
Pudong New Area, Shanghai, China

#### Beijing

5th Floor, No. 101, Building 1, No. 5 High-Tech Fifth Street Courtyard, Huilongguan Town,  
Changping District, Beijing, China

#### Singapore

11 Biopolis Way, Helios L03-10/L08-6-06, Singapore

[www.virtuedx.com](http://www.virtuedx.com)

+86 400-853-5420



Wechat Official  
Account

2024 - V1.0



VIRTUEDX





Virtue Diagnostics (Virtuedx) is a company that focuses on localized innovation as its strategy, expanding its in vitro diagnostic product business in emerging market countries and regions, including China. Since its establishment in 2019, the company has built major in vitro diagnostic product lines, including immunofluorescence, biochemistry, hematology, mass spectrometry, and molecular diagnostics, through self-research and development, mergers and acquisitions, and localized expansion. These products cover about 70% of the in vitro diagnostic market demand in emerging markets.

Virtue Diagnostics (Virtuedx) has established a research and development and operations center in Suzhou, China, acquired a new generation pathology diagnostic company in Beijing, set up an innovative R&D base in Singapore, acquired the largest local in vitro diagnostic company in Brazil, and built the largest and most comprehensive in vitro diagnostic product R&D and production base in Southeast Asia in Indonesia.



### Clinical Mass Spectrometry

Integrated solutions including LC-MS/MS system, sample preparation, assays, consumables, and testing services.



### Multiplex IHC

RUO products and service for pharma and clinic scientists, focusing on clinical research on cancer and autoimmune disease



### Molecular and Immunology

Clinical diagnostic products and services in the fields of oncology, maternal and child health, chronic diseases, emergency and infections.



### 1000+m<sup>2</sup> R&D Center

Provide a foundation for the long-term development with partners.



### 6000+m<sup>2</sup> Operation Center

Meet production requirements for reagents and instruments, equipped with a diagnostics laboratory.



### Beijing Laboratory

Provide customers innovative solutions with advanced multi-plex IHC pathology technology.



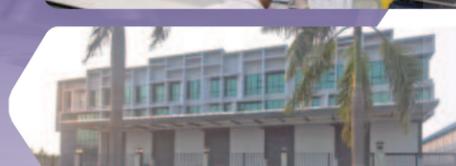
### Indonesia Production Facility

8000+m<sup>2</sup> instruments and reagents production facility, strategized to cater to the Southeast Asian market.



### Brazil Labtest Subsidiary

Acquired a well-known Brazilian IVD company, leveraging its R&D, production, and sales channels to expand in the South American market.



June 2019

Closed 30M USD A round fundraising from Eli, Lilly and PerkinElmer Ventures

November 2020

Acquired Panovue for the multiplex immuno histochemistry platform

August 2021

QSight 420MD Triple Quadrupole LC-MS/MS System was approved by the NMPA

May 2022

Assay kits launched, including vitamins, catecholamines, and steroid hormones

October 2022

Built the SEA operation base in Indonesia

April 2020

Set up of the Clinical Mass Spectrometry Platform in Singapore R&D center

December 2020

Grand opening of Suzhou operation base

January 2022

Closed \$100 million B-round fundraising

September 2022

Acquired Brazil's Labtest to enter the Latin American market.

January 2024

Signed a global exclusive distribution agreement with Revvity

## QSight 420MD Designed for Clinical Applications

QSight 420MD Triple Quadrupole LC-MS/MS System is designed for clinical applications, manufactured and registered by Virtuedx in China. As the first vertical clinical LC-MS/MS system, it integrates eight technologies and holds four patents. Its overall design is user-friendly, efficiently and stably operated and delivers high-sensitivity and accurate results. Its unique features of "**less contamination**," "**fast and accurate**" ensure reliable results.

**Intelligent Software**

- Remote control capability
- Equipped with reporting software

**Vertical Design**

- Anti-vibration lab bench-free
- Dimensions: 50\*50\*110cm
- Extremely space-saving

**Convenient Installation**

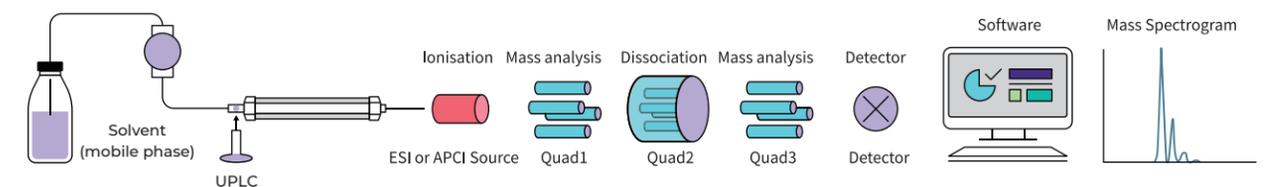
- Plug-and-play
- Tool-free installation
- 80%** saving on cabling

**Modular Maintenance**

- Easy to maintain
- Enhance maintenance efficiency

**Vertical, user-friendly, highly efficient**

### Working Principle of the Triple Quadrupole Mass Spectrometry System



## Eight Major Technologies Ensuring Efficient and Stable Operation

### Dual Source configuration

ESI and APCI dual source configuration enabling combinations, such as ESI/ESI, ESI/APCI, and APCI/APCI. Plug-and-play design for easy-to-use and accelerated compound analysis

### Coaxial Heating

One ion source achieves multiple ionization modes, more efficient

### Stay-Clean Source

Self-cleaning design actively exhaust waste from the plenum chamber of the source to eliminate the ion source contamination

### Laminar Flow Ion Transfer

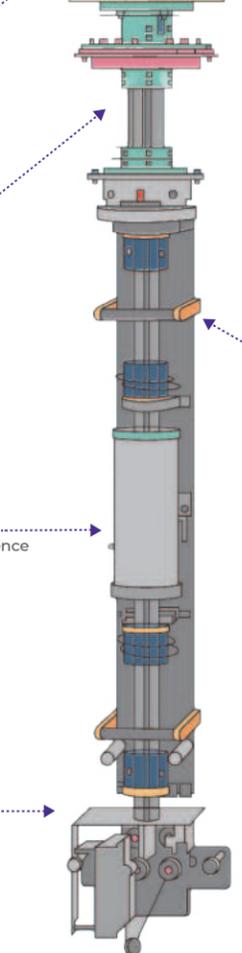
Laminar gas ion guide technology for stable and highly efficient field-free ion transfer

### Highly Efficient Collision Cell

Speed up analysis and reduce cross-interference

### UniField Detector

UniField Detector™ counts positive and negative ions simultaneously, without high-voltage switching



### Mass Spec Interface

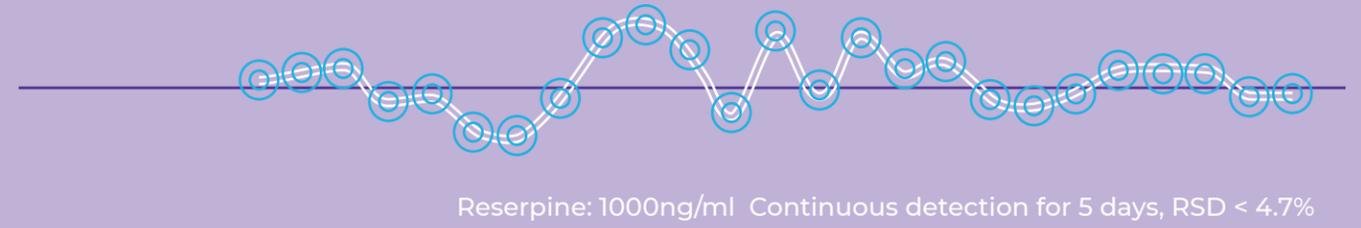
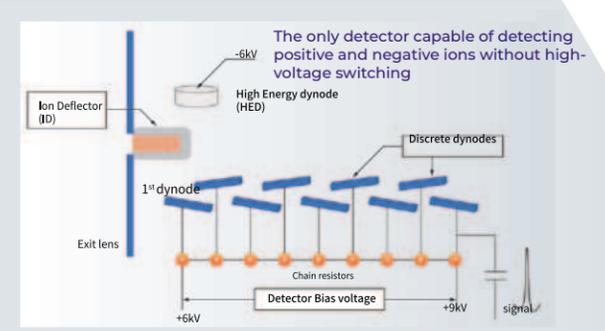
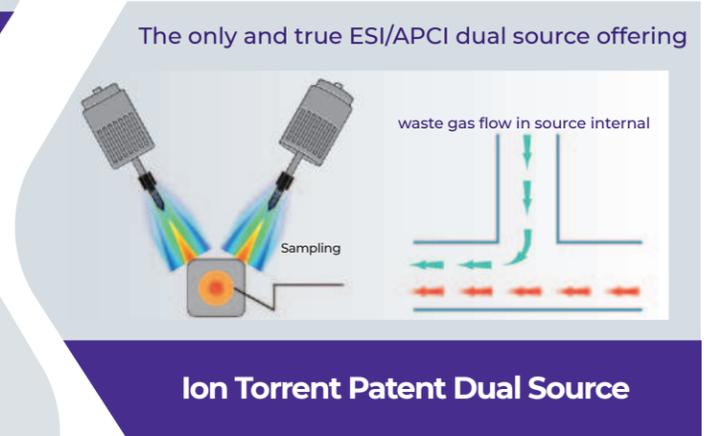
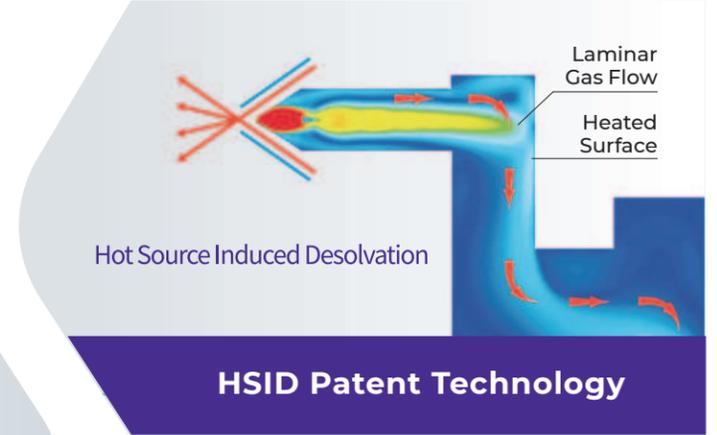
HSID technology and reverse blowing design for efficient ion transfer and unparallel contamination reducing ability

### Mass Analyzer

High-resolution mass analyzers suitable for complex matrix analysis



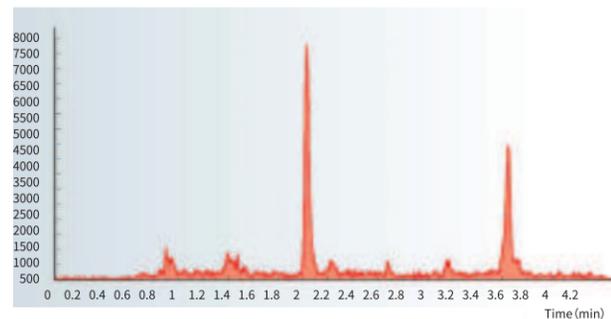
## Four Patents Securing Sensitive and Accurate Detection Results



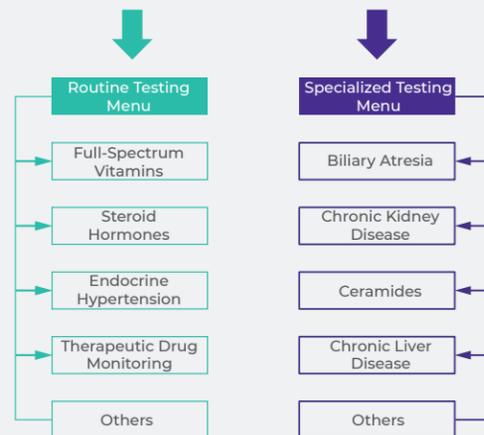
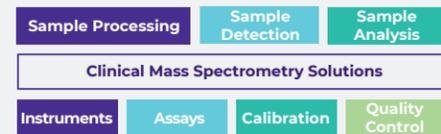
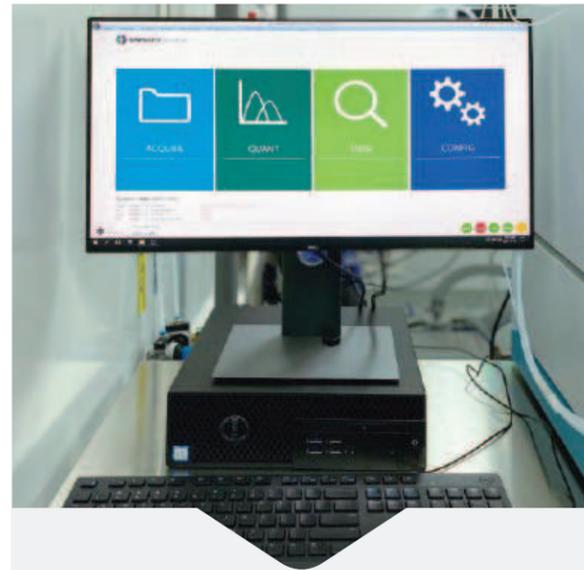
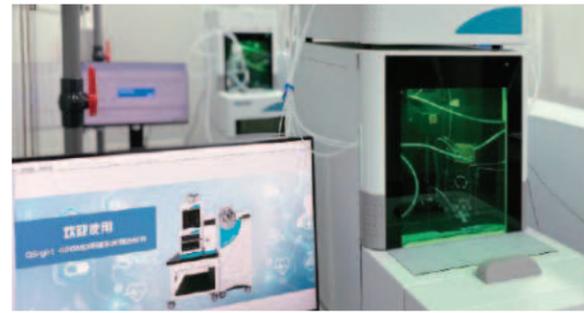
## Superior Performance and broad assay Menu

Testing No.	Intra-Day Precision and Accuracy			
	25-OH-VD <sub>2</sub> (ng/ml)		25-OH-VD <sub>3</sub> (ng/ml)	
1	2.09	11.01	4.65	23.62
2	2.26	11.01	4.49	24.33
3	2.21	10.92	4.39	24.02
4	2.16	10.95	4.56	23.80
5	2.14	11.17	4.73	23.41
6	2.13	10.55	4.65	22.91
7	2.01	9.97	4.51	24.95
8	2.13	10.54	4.29	23.06
9	2.00	10.75	4.64	22.52
10	2.13	10.63	4.87	23.78
11	2.15	9.98	4.81	22.98
12	2.08	10.88	4.92	24.97
13	2.05	10.13	4.55	24.45
14	2.25	10.66	4.72	24.28
15	2.22	11.15	4.69	23.77
16	2.07	10.61	4.9	24.55
17	1.99	9.97	4.85	23.57
18	2.20	10.65	4.61	24.57
19	2.11	11.06	4.77	23.99
20	2.29	11.02	4.82	24.88
Target Value	2.00	10.00	5.00	25.00
Mean Value	2.13	10.68	4.67	23.91
Deviation	6.67%	6.80%	-6.58%	-4.36%
SD	0.09	0.44	0.17	0.70
CV%	4.10%	3.70%	3.68%	2.94%

Demonstrate good intra-day precision and accuracy even at low concentrations



Maintain high sensitivity at low concentrations



Optimize routine testing assays and select appropriate specialized testing assays to provide complete menu options for LC-MS/MS clinical applications

## Professional Services

### Flexible Cooperation

- Instrument purchase or rental
- Assays compatible with mainstream LC-MS/MS platforms
- Laboratories co-construction

### Comprehensive Supporting Consumables

- Adequate accessories and supplies
- Modular design for easy maintenance
- Diverse and durable consumables

### Professional Academic Services

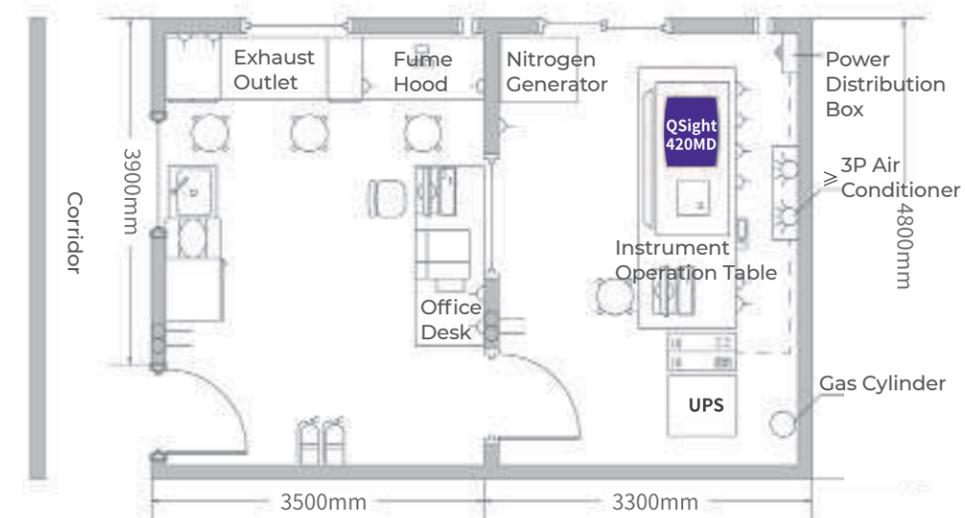
- Provision of professional academic services
- Regular training sessions by experts
- Assist in visiting hospital users

### Efficient Maintenance Service

- 24/7 customer support
- Equipment calibration services
- Professional engineers team ensure high-quality service

## Lab Layout Design

Mass spectrometry laboratories must consider not only biosafety, operational convenience, and compliance with general requirements like the "Design Guidelines for Clinical Laboratories" of China, the "General Biosafety Guidelines for Microbiological and Biomedical Laboratories," and the "General Guideline of The Clinical Laboratory Design" from NCCLS in the USA, but also need to meet the specific requirements of clinical mass spectrometry.



Virtuedx's extensive experience in mass spectrometry laboratories construction empowers your clinical mass spectrometry development.