



EXPEC 3750 GC-MS

Gas Chromatograph-Quadrupole Mass Spectrometer

Multi-dimensional application, stable and efficient

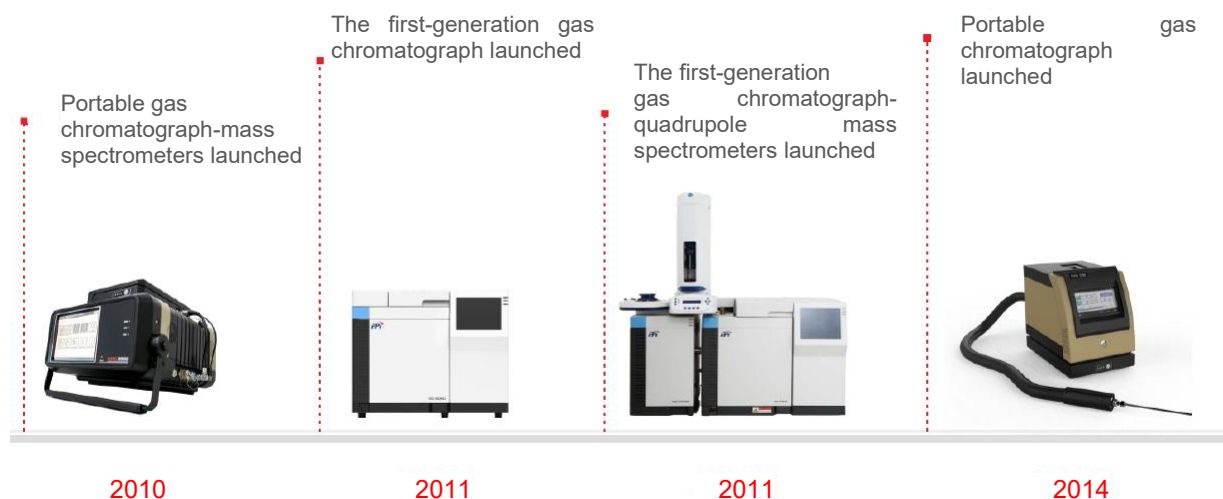
About EXPEC

Founded in 2015, and headquartered in Hangzhou, Zhejiang Province, Hangzhou EXPEC Technology Co., Ltd. (EXPEC Technology) is a national high-tech enterprise focused on the R&D, industrialization, and innovative application of major scientific instruments. Through technical innovation, we aim to achieve the automated and intelligent analysis, detection and monitoring in the field, grow into a world-leading maker of scientific instruments and support China's aspiration to become a major player in the field of scientific instruments.

Our R&D team has adhered to the development mode of "independent R&D, persistent innovation, and deep customization". After investing heavily in the R&D of major scientific instruments for more than 10 years, we have undertaken a large number of projects under the National Key R&D Program of the Ministry of Science and Technology and the preparation of the relevant national/industrial standards, mastered the technologies for mass spectrum, chromatographic, optical spectrum, and physico-chemical analysis and detection, as well as the technologies of pre-injection gas, liquid and solid processing, developed a series of industry-leading product mixes for laboratory analysis, field analysis (portable, online, mobile) and automated analysis, and provided the global customers with all-round specialized scientific analysis solutions in fields such as the advanced industry, environmental monitoring, medical diagnosis, life science, food, drugs and emergency safety.



Development of gas chromatography/gas temperament combination





Qingshan Lake Innovation Base of EXPEC Technology
 Research-and-development and industrialization base for high-end scientific instruments (100 mu / 130,000 square meters)
 Innovation Center of Mass Spectrometer, Engineering Research Center of Mass Spectrometry Technology of Zhejiang Province, and postdoctoral workstation

<p>The domestic explosion-proof gas chromatograph launched</p>	<p>Gas chromatograph-triple quadrupole mass spectrometer launched</p>	<p>A new-generation GC 2000 gas chromatograph launched</p>	<p>A new-generation gas chromatograph-quadrupole mass spectrometers launched</p>
<p>2018</p>	<p>2020</p>	<p>2022</p>	<p>2023</p>

A new-generation gas chromatograph-quadrupole mass spectrometer

| Stable and efficient high-end analysis tool

The EXPEC 3750 gas chromatograph-quadrupole mass spectrometer (GC-MS) of Hangzhou EXPEC Technology Co., Ltd. is a laboratory bench type gas chromatograph-quadrupole mass spectrometer independently developed based on the over-20 year experience of the team in mass spectrometry research and development. The ultra-inert sample flow path, high-precision gas path control, abundant ion source configuration options and analysis quadrupole, and durable and highly sensitive detector all ensure the stable and efficient product quality of EXPEC 3750 GC-MS.

By inheriting the classic software and hardware operating habits, the EXPEC 3750 GC-MS is easy to use, preventing the user from re-learning, saving time, and focusing more on obtaining accurate analysis results efficiently.

Relying on the reliable materials, reasonable structural design, and complete system testing, the EXPEC 3750 GC-MS have excellent mobile properties. With the ultra-efficient capacity to create a vacuum environment, the EXPEC 3750 GC-MS can easily adapt to diversified application scenarios in addition to the laboratory, such as the online, vehicle-mounted, and navigation, achieving multiple purposes by one machine.

Inherit the classic workstation without changing usage habits

➤ Inherit the classic workstation without changing the usage habits

- The workstation software inherits the classic operation interface, allowing the users not to change their usage habits.
- The kernel uses Chinese language, which is specially designed for the Chinese users
- With the batch processing function, the statistical analysis is automatically performed on sample data, to draw sample trend charts



➤ Multiple ion source configurations

- Universal ion sources (EI and CI) are covered and flexible configuration for applications is realized
- SIP high-sensitivity ion source is supported, the transmission lens design is optimized, and the ion transport efficiency is displayed, greatly improving the sensitivity
- Color-coated inert metal material is used, to reduce complex matrix adsorption, and effectively extend the instrument time



➤ Durable and highly sensitive detector

- The target ion flow passes through triple off-axis trajectories before reaching the electron multiplier, effectively shielding neutral interference and reducing the baseline noise
- Highly durable electron multiplier effectively reduces the usage cost of mass spectrometer



➤ **Ultra-stable liquid injection port**

- The full electronic flow control is adopted and the self-diagnosis function is supported, eliminating the need for manual soap leakage detection and reducing the risk of system contamination.
- Optional injection port subjected to the permanent super-inert surface treatment is applicable to the detection of highly adsorbent and corrosive samples.



➤ **Ultra-high precision electronic flow controller (EPC)**

- The EPC kernel is made of ruby material, with the consistent and excellent performance in flow control
- The pressure control precision of EPC is up to 0.001psi



➤ **Outstanding human-machine interaction experience**

- With the human-machine interaction based on Android intelligent operating system, Chinese interface, and combined with skeuomorphic graphic UI design, the monitoring content is intuitive and clear
- 8-inch large color screen display, with a resolution of 1280*720 (RGB), supports the capacitive screen full-touch operation



Multi-accessory in combination and multi-scenario application

| Laboratory and vehicle-mounted multi-scenario applications

- With the excellent aseismic design, the EXPEC 3750 GC-MS is easy to be deployed on the vehicle and free from the impact of bumps on the analysis results
- By creating a vacuum environment in an ultra-efficient manner, measurement can be performed immediately after the parking, thus saving the valuable time



| Enrich sampling system with high-adaptability connection



Automatic liquid sampler

- 16-position, 110-position and 150-position can be selected according to sample throughput
- It supports the dual-tower simultaneous injection function



Multifunctional sampler

- It supports the liquid, headspace/solid-phase microextraction multi-mode sample injection
- It supports SPME automatic fiber aging



Automatic air bag sampler

- It supports 30-position high-throughput air bag sample or syringe injection
- The direct injection of gas samples or the injection after the enrichment and concentration is optional



Automatic headspace sampler

- 75-position high-throughput sample waiting positions, and 12-position simultaneous sample heating positions
- It supports the priority injection of urgent samples



Atmospheric preconcentration sampler

- Samples can be cooled to -160 °C without consuming liquid nitrogen
- Complete set of sampling, multi-position sampling, tank cleaning, standards and other accessories are provided



Heart-cutting accessories

- Locally co-distilled chromatographic peaks in complex samples can be further separated in the second column of different polarity
- It supports the full flow path constant flow method analysis in Column 1 and Column 2

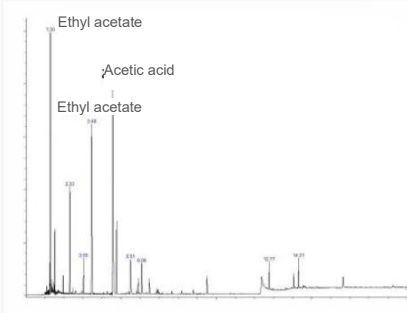
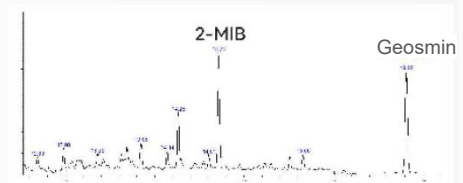
| Enrich the industry applications and facilitate the scientific research and exploration in laboratory

Environmental industry



Find the source of odors in drinking water

Objectionable odors appear due to the presence of trace concentrations of olfactory substances in drinking water. EXPEC 3700 GC-MS and related solutions can achieve highly sensitive analysis of odorants in water at ppt or even sub-ppt levels, easily meeting the requirements of GB 5749.



Reveal the secrets of fragrance

In daily life, it is always interesting to explain the chemical composition of the characteristic flavor, so as to realize the origin traceability and authenticity identification. However, the aromatic substances are difficult to be captured, isolated and identified. EXPEC 3700 GC-MS integrates an efficient flavor excitation and introduction system, which can truly reproduce the complex aroma composition in nature through the chromatography and mass spectrometry, thereby helping the laboratory to successfully reveal the secret of aroma.

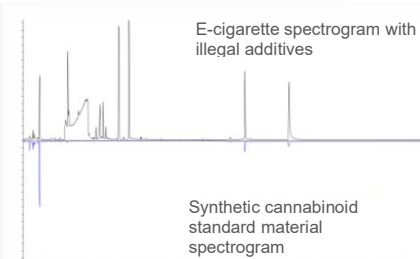
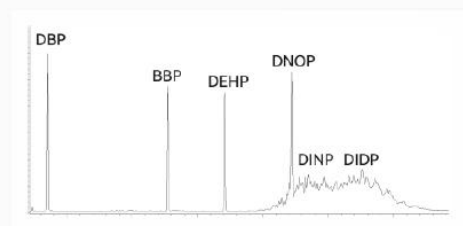
Food industry

Material industry



Protect the health and detect plasticizers in plastics

From EU RoHS to China RoHS, increasing attention is paid to the ubiquitous plasticizers. However, the system contamination caused by high boiling points makes it difficult to achieve the blank, linear and reproducible plasticizer analysis. With the selected system materials, optimized ionization efficiency, and anti-pollution design, EXPEC 3700 GC-MS can solve problems such as the background blank, working curve linearity, and system reproducibility.



Support the drug and poison analysis, to protect people's safety

Drugs, substances abused, and related metabolite compound molecules usually have highly reactive groups and have strong mental stimulation to the human body. They greatly disturb the peak shape and sensitivity in the analysis process. EXPEC 3700 GC-MS shields the component activity through the full flow path inerting, to obtain the stable and excellent peak shapes.

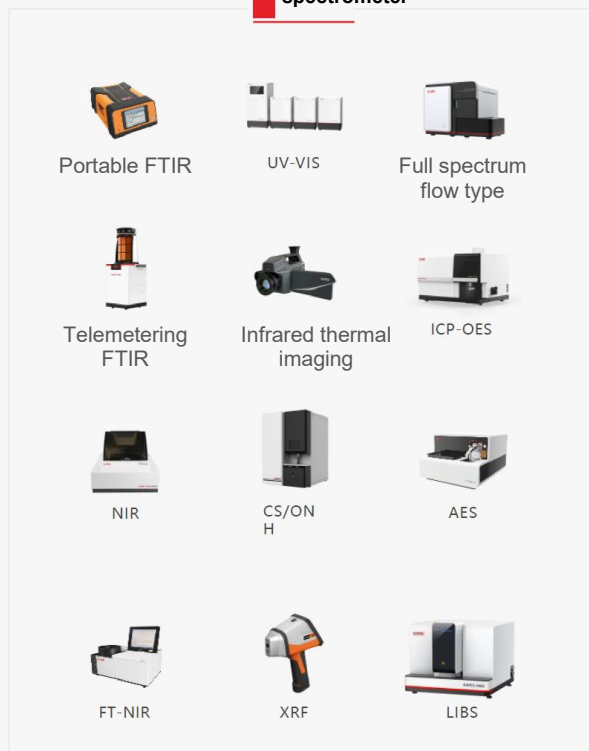
Forensic



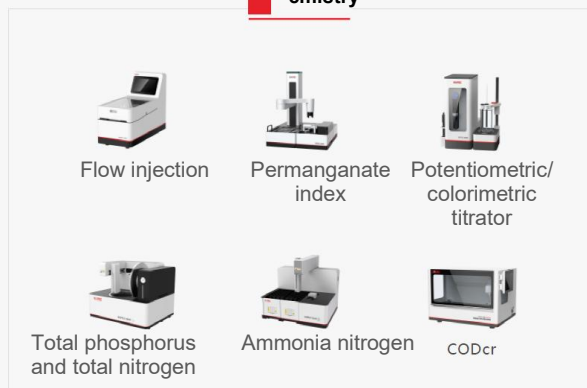
Chromatograph-mass spectrometer



Optical spectrometer



Physicochemistry



Pre-treatment



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