

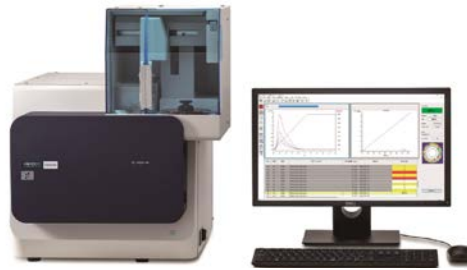
News Release

FOR IMMEDIATE RELEASE

Hitachi High-Technologies Launches HM1000 screening equipment for phthalates

—Quick, simple testing for phthalates newly restricted under RoHS directive—

Tokyo, Japan, July 13, 2017 – Hitachi High-Technologies Corporation (TSE: 8036, Hitachi High-Tech) announced today that its wholly owned subsidiary and analytical instrument manufacturer and marketer Hitachi High-Tech Science Corporation (“HHT Science”) has developed the HM1000 thermal desorption chemical ionization mass spectrometer to speed up and simplify testing for four types of phthalates¹ for restriction of hazardous substance (RoHS) regulations. The use of these chemicals will be restricted in the European Union (EU) from July 2019 under the RoHS directive. The HM1000 goes on sale in Japan and overseas on July 13.



HM1000

Phthalates are widely used as plasticizers for softening plastic and rubber in vinyl chloride products such as wire sheaths, electrical insulation tape, and packing films. These materials are contained in a wide range of items, including toys, household appliances, electronic devices, and other consumer goods.

The amendment of the RoHS directive to restrict the use of phthalates from July 2019 has created an urgent compliance issue. All manufacturers will need to assess and manage the amounts of phthalates contained in parts and finished products. However, conventional testing methods² are problematic in that they rely on component extraction using organic solvent and are therefore time consuming and require specialist expertise since they involve complex equipment using large volumes of solvent³. New screening equipment is needed to help manufacturers test products quickly and simply, either as part of procurement or on the factory floor.

The HM1000 comprises three sections: a sample heating unit to gasify the phthalates within a sample; an ionizing unit to ionize the gasified phthalates; and a mass spectrometer to measure the ionized components produced. Simplification of conventional testing methods enables each sample to be screened for phthalates in under 10 minutes. The preparation procedure is as simple as putting the sample in the sample pan. Specialist software then automatically completes the analysis of sample components, detecting the amount and content percentage of each phthalate present. In addition, an auto-sampler allows for continuous automated analysis of up to 50 samples (including any reference specimens), resulting in a streamlined testing process.

Developed for the screening of phthalates, the HM1000 helps customers not only achieve amended RoHS compliance quickly, but also contributes to developing products with lower environmental impact.

Under its mid-term management strategy of aiming to become a global player in scientific equipment by 2020, Hitachi High-Tech Group will continue to promote development and sales expansion, and contribute to global manufacturing through testing and analysis equipment. In addition, the Group will consistently aim to “be Global Top in high-tech solutions,” and respond swiftly to the needs of customers and markets, working from the customer’s perspective as a fast-moving creator of cutting-edge businesses.

*1 The four phthalates newly added to the list of Restricted Substances under RoHS are di-2-ethylhexyl phthalate (DEHP), butyl benzyl phthalate (BBP), dibutyl phthalate (DBP), and diisobutyl phthalate (DIBP). The directive comes into force on July 22, 2019, excluding certain products. Maximum content under the RoHS regulation is 0.1% by weight.

*2 Conventional methods include Soxhlet extraction via organic solvent and gas chromatograph mass spectrometry by thermal extraction and so forth, which generally takes 30 minutes to several hours for each sample.

*3 A liquid that can dissolve the target substance to be tested

【Main Features】

1. High-speed measurement

Simultaneous measurement of multiple components in the gases created from the sample and a newly designed sample heating unit for rapid heating and cooling of samples enable high-speed measurement at a rate of less than 10 minutes per sample.

2. Simplified measurement

The screening equipment can be easily used for phthalate screening by untrained personnel working in procurement or on the factory floor thanks to an auto-sampler (continuous testing of up to 50 samples) and specially designed software (for automatic detection and characterization of sample components).

3. Low running costs

The equipment only requires electric power and a supply of nitrogen gas, helping to keep operating costs low.

【Main Specifications】

Throughput	10 min/sample
Auto-sampler	Up to 50 samples
External dimensions	510 (W) × 615 (D) × 615 (H) mm
Power supply	AC200~240V
Carrier gas	Nitrogen (Can be used with a gas generator. Exhaust equipment not required)

【Price (excl. tax)】 : From 14 million yen

【Sales Target】 : 100 units/year

WEB Site

http://www.hitachi-hightech.com/global/product_detail/?pn=ana-hm1000

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