

BCEIA
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自动顶空进样器 *AutoHS Headspace Sampler*



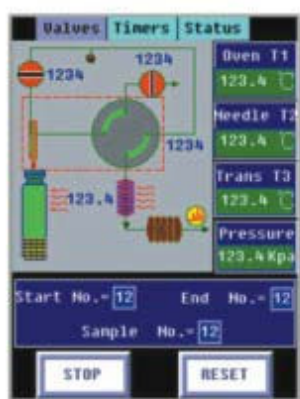
COLINTech

成都科林分析技术有限公司

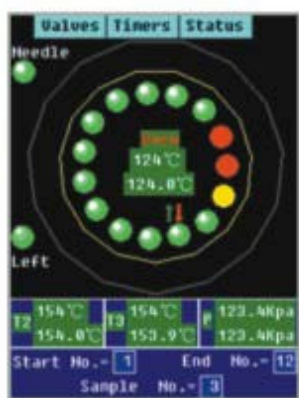
Chengdu Colin Analysis Technology Ltd.

www.colintech.com

自动顶空进样器



图一



自动顶空进样相对于其它气相色谱样品处理技术来讲，它消除了复杂的容易产生错误的步骤。能使您在较短的时间内获得大量有用信息。AutoHS智能的触摸屏图形用户界面使得操作极为方便。专利的结构设计，具有动态和静态功能，大大拓展了顶空技术的应用范围，达到国际先进水平。

Headspace Samplers eliminate tedious and error-producing steps required in other GC sample preparation techniques, enabling you to extract more information from your samples in less time. The intuitive touch screen graphical user interface provides easy control of the sampler. A patent device with dynamic and static function extended the range of the headspace technology application. Reached an advanced level in the world.

应用广泛

- A. 水质挥发性有机物分析
- B. 香味分析
- C. 药物溶剂残留分析
- D. 食用油溶剂残留分析
- E. 聚合物中单体分析
-

要了解更多的应用请与我们联系

特点Features

现代的用户接口界面 Modern User Interface

智能的彩色触摸屏用户界面，能方便地直接设定或编辑、存贮及调用方法，快速启动分析。先进的动态图形显示，能清楚地展示有关样品提取过程中各部分的动作状态，使用户对仪器运行过程一目了然。

An intuitive, color touch screen user interface provides instant access to system functionality. Set parameters, recall stored methods and start sampling quickly. The modern screen graphical user interface displays a sampling process. And making user know well it.

中英文可选择 Chinese and English are Available

全流路自动泄漏测试 Leak Test

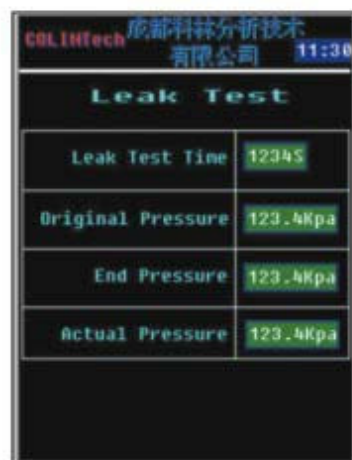
使分析质量更为可靠。如图二所示，用户选定泄漏测试，仪器将进入全流路泄漏测试（包括样品瓶在内的），最大限度地保证仪器可靠性。

This function will help user to complete the whole carrier gas system test with a vial and get a high reliability.

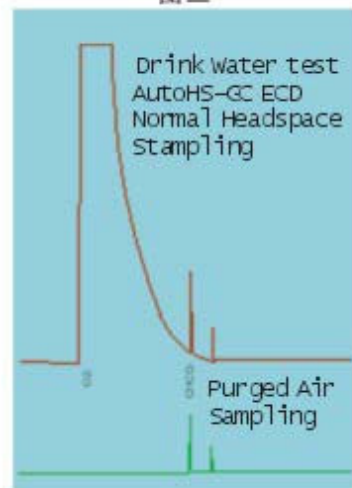
动态和静态任意选择 Dynamic and Static Mode are Available

采用单针双流路及气路选择技术，能很方便实现动态和静态顶空功能。防止样品高温氧化功能。提供一种样品反映动力学研究手段，对于一些特殊样品，Purge模式为用户提供了样品处理前顶空瓶内空气置换，避免了样品的变性，影响分析质量。（如图三所示）

Double holes in needle and gas selecting provide dynamic and static headspace methods. Employed the technique prevent from sample decomposition or oxidization. Employing the Purge mode, can sweep the air in vials with carrier gas. The mode is useful in kinetic studies.



图二



图三

AutoHS Headspace Sampler

高的样品输出特性和良好稳定性 High Sample Throughput and Good Stability

几乎任何样品中的挥发性化合物都能简单、快速地用顶空气相色谱分析，顶空进样技术提供了对液相和固体样品的无溶剂萃取，从而节约了时间并消除了其它样品制备方法中可能出现的错误，如吸附和萃取。（如图四所示）

Volatile compounds in almost any sample matrix can be analyzed simply and quickly by headspace gas chromatography. Headspace sampling provides a method that extract sample of liquid and solid with a solvent-free and minimizes rework by eliminating many of the tedious and error-producing. The system completely rely on volatilization to separate the compounds from the sample matrix, so sample extraction, clean up and preconcentration are not necessary.

File Name	Sample Name	Time [min]	Ethanol		
			Area [μs]	Adjusted Area	Height [s]
YC312007.rst	ethanol	1.72977255	0.98	2.3117	
YC312008.rst	ethanol	1.72980135	0.98	2.3138	
YC312009.rst	ethanol	1.72979352	0.98	2.3095	
YC312010.rst	ethanol	1.72977649	0.98	2.3040	
YC312011.rst	ethanol	1.72989283	0.99	2.2975	
YC312012.rst	ethanol	1.72993786	0.99	2.3032	
YC312013.rst	ethanol	1.72993836	0.99	2.3007	
yc312005-20050315-125559.rst	ethanol	1.72991335	0.99	2.3199	
yc312006-20050315-130411.rst	ethanol	1.72987391	0.99	2.3181	
Averages		1.72985558	0.99	2.3087	
%RSD		1.5e-08	1	0.71	
				0.3389	

图四

恒定模式和吹扫模式 (Constant and Purge Mode)

AutoHS提供了极大的样品输出能力，40个样品位的样品盘和15个样品位的加热炉，对许多应用都可以进行无人干预操作。在Purge模式下，可以一次性上装13个瓶进入炉内，进行气体置换。恒定模式 (Constant Mode) 使用优化的样品重叠模式，顶空的汽化平衡是在恒温条件下获得的，恒温器可以同时容纳12个样品瓶，以确保在上一个样品被分析完之前，准备好下一个样品的分析。这一过程，大大节约了由于分析下一个样品所需加热恒温平衡时间，也使样品的重复性得到保证。提供样品流路的同时，样品输出采用去活性衬管连接，消除了样品间的污染。（如图五所示）

AutoHS provides high sample throughput. Equipped with a 40-sample tray and 15 positions in the heating oven allowing unattended overnight operation for many applications. It can load 13 vials to be purged in the Purge Mode. In Constant Mode, a automated constant heating time is employed with optimized sample overlapping for maximum sample throughput in the minimum amount of time. It can simultaneously thermostat up to 12 samples, ensuring that the next sample is always ready for analysis upon completion of the previous run. This adds up to a significant time savings since there is no need to wait for the next sample to heat and get best reproducibility. A deactivated sampling path, from switch valve to transfer line, is standard on the AutoHS. The clean gas swept the sample path.



图五

恒温时间渐进模式 (Progressive Mode)

温度渐进模式以一个较短的时间基数，对同等量含同样组份的一系列样品恒温平衡时间以等差级数递增，得到一组色谱数据，同一组分，当它在顶空达到平衡后，它的分压是不随时间变化的，平衡后所得到的色谱峰面积也就最高。从而获得一个最理想的平衡时间。在这个模式运行过程中，仪器将自动选择最短的运行时间，即能从单个样品恒温平衡到多个样品恒温平衡的自动转换。

In the Progressive Mode, the vials are thermostatted for an increasing time, representing a multiple of the first thermostating time. It is used in the determination of the necessary equilibration time, where a number of vials containing the same sample are to be thermostatted for increasing periods. Automatically optimized samples.

多次顶空模式 (MHE mode)

对于同一样品瓶的多次顶空提取，得到多个样品色谱图，用于方法的开发和对特种样品的分析。

The technique requires multiple extractions from the sample vial. This is very useful for developing method and running special sample.

仪器接口 Input/Output Port

与各种气相色谱仪连接，提供各种气路样品传输接口，电路输入/输出接口采用标准的信号接口、外部准备、启动、停止、准备输出和运行输出等。

Provided ports to connect with any gas chromatograph with a standard interface. They includes: ReadyIn, StartIn, StopIn, ReadyOut and RunOut.

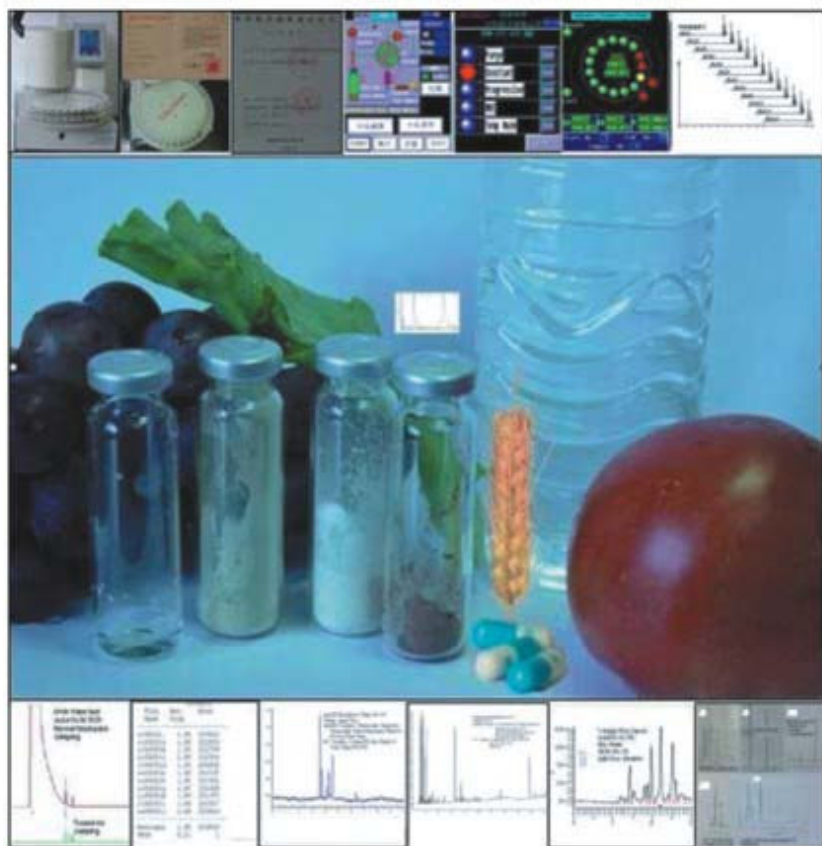
仪器硬件 Hardware

控制硬件包括专业公司特别制作微处理机系统，驱动部份采用先进的气动元件，消除了采用马达对电子线路的干扰，得到高的控制精度。采用进口气路控制元件。（如图六所示）

The microcomputer control system is made in special company. The precision pneumatic elements keep the disturbing away for electronics. Gas elements are from other country.



图六



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