2t Headspace Sampler

Manual Headspace Sampler
The fruit of Experience

Technical Specifications

Heating temperature Range:	up to 140ºC.
Variable injection:	up to 2,5 ml.
Temperature accuracy:	+/- 0,75ºC
Holds up to 6 vials of:	2, 4, 6, 9, 10, 12, 20, 22 and 27 ml.
Sampling time control with accoustic alarm:	1 to 99 seconds
Equilibrium time control with accoustic alarm:	1 to 99 minutes
Stabilization time from 25ºC to 70ºC with 1 ml syringe and 6 empty 20 ml vials:	20 minutes
Safety temperature:	175ºC
Power:	110 / 220 +/- 10% VAC.

It is according the Pharmacopeia test:

European Pharmacopeia 7th. (2011).

USP 35-NFO (2012).

The Teknokroma 2t Headspace Sampler for Headspace technique within your reach with a low cost and high precision level

The 2t sampler is the first manual system for Static Headspace that allows the application of this technique in a quantitative, manner.

Until now it was only possible to use the technique of Static Headspace with automatic equipment. This “equipment” has a high
cost, low versatility and complex operations. For this reason the Static Headspace technique has not been fully used in most laboratories.

The 2t sampler solves these problems making the technique available to all Gas Chromatography users in a economical and simple way.

It complies with all requeriments of the European CE.

Applications

- Volatiles in pharmaceuticals
- Flavours analysis in food and cosmetic products
- Alcohol and other toxic compounds in blood
- Screening of volatiles in all type of environmental samples (soils, waters, plastics, polymers, etc.)

Put the syringe into the black holder.

After the equilibrium time is achieved, move the syringe holder into vial number 1, and aspirate the sample by moving the plunger up until the prefixed volume is reached.

Insert the closed vials with the sample into the heating block.

Inject the sample into the GC.
Repeat this sequence for the additional samples.

Performance qualification

To check the Headspace SHS system 0112 proper performance, the following reproductibility test is recommended. In this test, we check not only the equipment performance but we also evaluate:

- The vials are correctly sealed.
- The sampling procedure followed by the analyst is correct
- The Gas Chromatograph works properly
- The data-aquisition system works properly

Sample preparation

Add 2.5 µl of benzene and 2.5 µl of toulene to 100 ml of water (25ppm), stir up until it is completely dissolved.

Adjust head space sample conditions and inject.
Integrate the benzene and toluene peaks of the 6 chromatograms obtained.

The Relative Standard Deviation of the area quotients must be lower than 5%.

Benzene area	Toulene area	Area Ratio
3418.461	5441.008	0.628
3466.125	5449.905	0.625
3359.176	5381.354	0.624
3316.646	5374.388	0.624
3782.404	6035.683	0.627
3794.026	6063.646	0.626
	Mean Value	0.626
	Standard deviation (SD)	0.00163
	Relative standard deviation (RSD)	0.26%

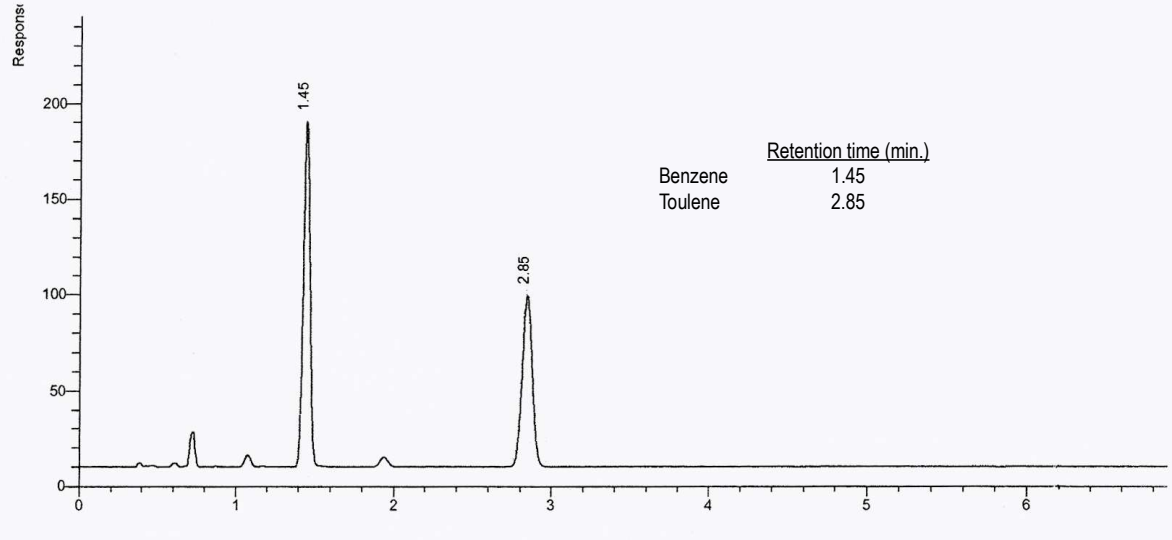
Cat.No	Description
TR-132300	2t Sampler for Static Headspace mod. SHS 0112 (syringe not included)
TR-132113	APE Syringe nod. 1001 HS 1 ml.
TR-132112	APE Syringe nod. 1002 HS 2.5 ml.

Chromatographic Parameters

Column: TRB-1, P/N TR-113015 15m x 0,53mm x 3µm
Injection: 0,7 ml, headspace, split 1:2, 150ºC
5 ml in 10 ml vials (25 ppm benzene/toulene in water)
Carrier gas: He, 4psi (27.6 kPa)
Oven: 60ºC (10 min)
Detector: FID, 250ºC

Headspace conditions

10ml vials, P/N CC-10-CV
Cap with blue silicone/PTFE seal P/N CC-20-ST3
Healting block temperature: 75ºC
Equilibrium time: 30 minutes
Sampling time: 30 seconds
Syringe used: 1ml (1001 LTN, pst 5, P/N HA-81343)
Sampled volume: 0,7ml



	Retention time (min.)
Benzene	1.45
Toulene	2.85