

## Dual-TD™

### Higher productivity and faster results

Dual-TD combines two thermal desorption units in a system that is dedicated to the high-throughput analysis of VOCs and SVOCs.

Dual-TD is compatible with any existing dual-channel GC and comprises two TD100-xr units operating in parallel to process two sample tubes simultaneously. It is ideal for analysts routinely measuring VOCs in sorbent tube background, carrying out targeted trace compound analysis, or measuring total VOC analysis, who need to eliminate workflow bottlenecks by instantly doubling throughput with no extra validation or changes to the methods.



#### Double sample throughput – increased productivity

Dual-TD is perfect for analytical laboratories who struggle with the daily analysis of high numbers of tubes. Dual-TD addresses this by enabling the simultaneous processing of two tubes running the same method, instantly doubling throughput.

#### Shorter run times – faster results

Dual-TD also takes advantage of Markes' time-saving 'overlap mode', in which desorption of two sample tubes takes place while the previous are being analysed in the GC. This means two samples are ready to inject as soon as the GC is ready, cutting down on time between analyses.

Dual-TD has the option to use hydrogen as a carrier gas, significantly reducing run times compared to helium gas. This is achieved without any compromise in analyte sensitivity or peak resolution.

#### Product highlights

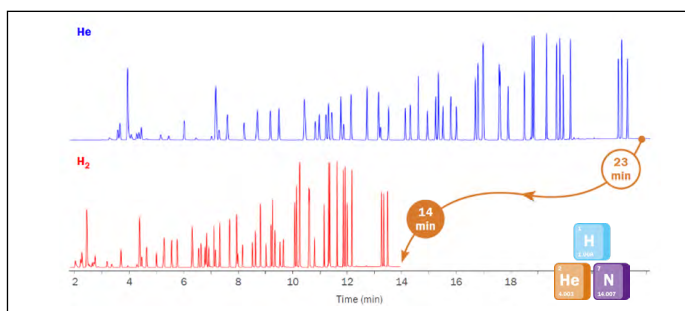
- **Double productivity** – Simultaneous analysis of two tubes doubles the productivity of the GC, releasing the burden on other GC-MS instruments in your laboratory.
- **Faster results** – Overlap mode shortens the time between GC injections, for faster turnaround.
- **Sustainability** – Dual-TD is solvent- and cryogen-free, and offers the ability to use H<sub>2</sub> carrier gas, as a more sustainable option with a lower carbon footprint (especially when using a H<sub>2</sub> generator instead of cylinders).

## Ultimate convenience

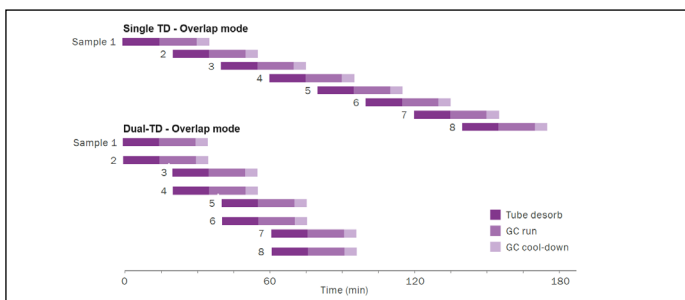
Dual-TD is designed with the analyst in mind. Markes' easy-to-use MIC™ software is optimised for Dual-TD so only one TD sequence needs to be set up. This saves time whilst ensuring sequences remain synchronised with utmost efficiency.

Markes Instrument Control sequence editor

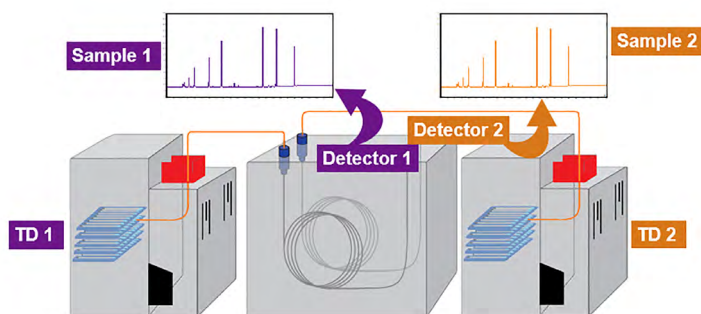
Sample Type	Method	TD System Selection	Tube TD100A	Tube TD100B
1 Sample	TD - Dual 2-3 Stage Desorb	Both	1	1
2 Sample	TD - Dual 2-3 Stage Desorb	Both	2	2
3 Sample	TD - Dual 2-3 Stage Desorb	Both	3	3
4 Sample	TD - Dual 2-3 Stage Desorb	Both	4	4
5 Sample	TD - Dual 2-3 Stage Desorb	Both	5	5
6 Sample	TD - Dual 2-3 Stage Desorb	Both	6	6
7 Sample	TD - Dual 2-3 Stage Desorb	Both	7	7
8 Sample	TD - Dual 2-3 Stage Desorb	Both	8	8



**Faster run times with hydrogen carrier gas compared to helium**



**Enhanced productivity – process more samples with ‘overlap mode’**



**Dual-TD GC system enables high throughput processing of sorbent tubes in duplicate**

## Thermal desorption technology from Markes International

- **Sustainable and affordable operation** – Cryogen- and solvent-free, for reduced cost per sample.
- **Effective water management** – Moisture in samples is easily managed to maintain instrument uptime.
- **Intuitive and powerful operating software** – Markes Instrument Control (MIC) software simplifies instrument use for targeted or untargeted workflows, making analysis with Dual-TD easy for any operator, from the novice to the most experienced scientist.
- **Sample security** – Markes' innovative sample re-collection capability safeguards valuable samples and overcomes the 'one-shot' limitation of other TD systems.
- **Safeguarding data quality** – Automated internal standard addition and leak testing guarantees the integrity of results.
- **Ongoing expert support from Markes' TD specialists**, plus free software upgrades for the lifetime of your instrument.

### Markes International

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