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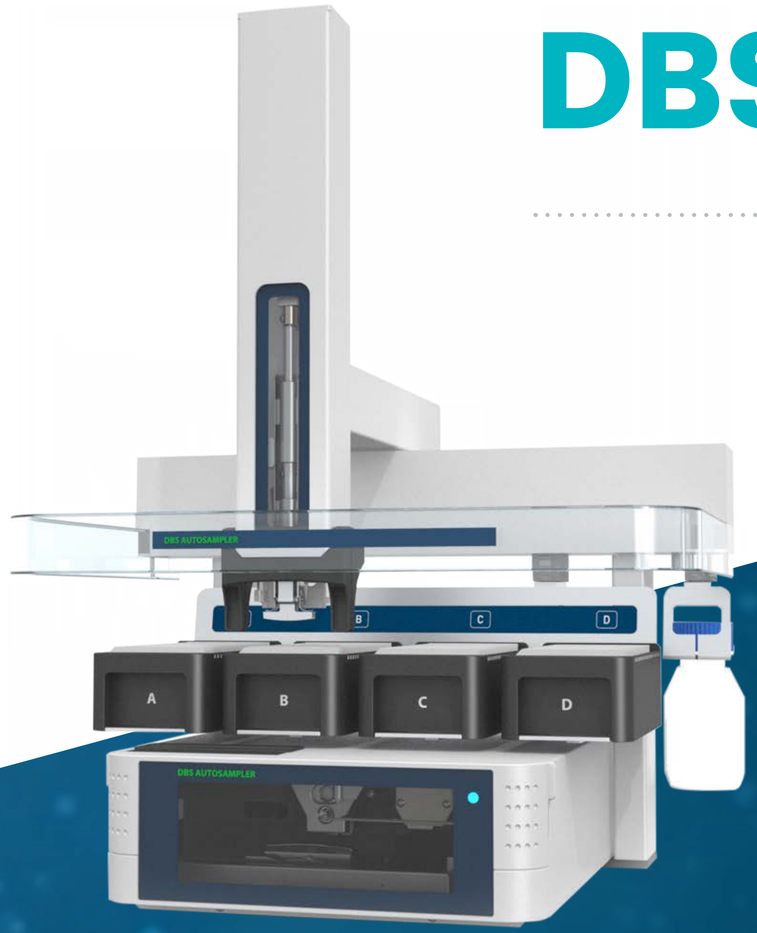
DBS Autosampler™

A revolution in DBS sampling



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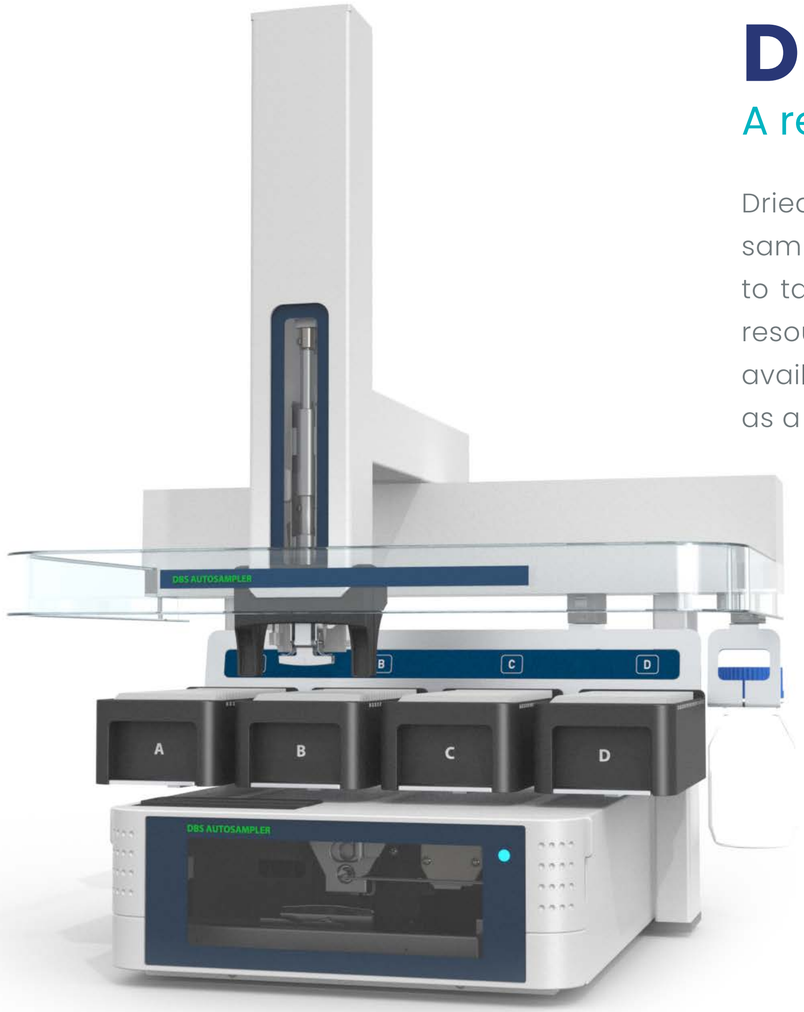
Better Sample Care.



DBS Autosampler™

A revolution in DBS sampling

Dried blood spot (DBS) sampling is an emerging technology for bioanalysis, offering easy, convenient cost effective sample collection, transport and storage. It also offers the possibility for patients who require regular monitoring to take their own blood samples in the comfort of their own home, saving patient stress, transport costs, clinic resources and provides a convenient sampling option in remote locations where medical facilities are not readily available. Our DBS Autosampler™ uses a leak-tight clamp to directly desorb dried blood spots or dried matrix spots as a liquid sample for analysis. Enabling a completely automated workflow for DBS analysis.

- **Flow-through desorption (FTD™) technology**
- **No disc punching**
- **Dried matrix sampling**
- **Automation of the entire workflow**

FTD™ – Flow-through Desorption

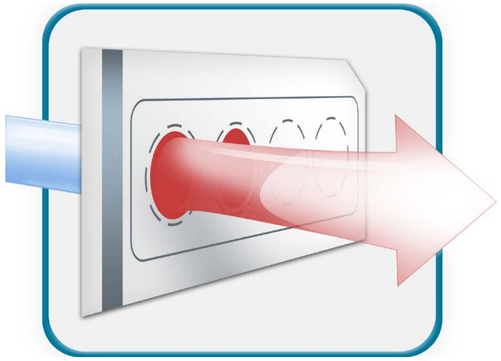
No manual intervention required with our patented FTD technology. Direct elution of DBS from cards enables optional on-line clean-up and analyte separation by SPE prior to analysis in an automated workflow. Replaceable clamp head sizes of 2, 4, 6 or 8 mm clamp and seal filter paper cards up to pressures of about 200 bar (up to 100 bar for the 8 mm clamp). Desorption solvent is delivered by a high pressure dispenser (HPD™).

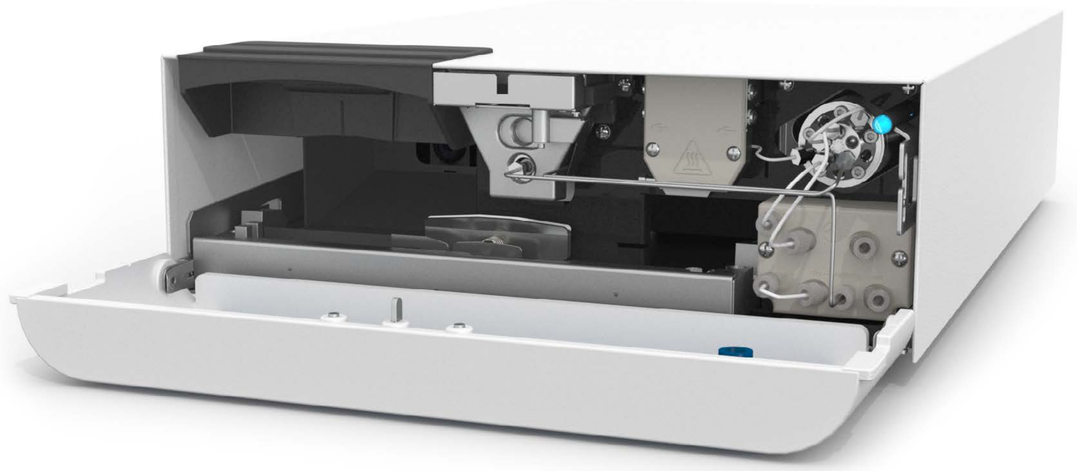
IVC™ – Intelligent Vision Camera

Accurate spot positioning and sample traceability is vital for accuracy. Our camera has been designed so that it not only provides accurate positioning of DBS cards in the high pressure clamp for direct, flowthrough desorption of bloodspots; but also offers sample barcode identification for 1D or 2D barcodes, full or partial spot desorption options and full image capture for sample information storage, tracking and traceability.

AISA™ – Automated Internal Standard Addition

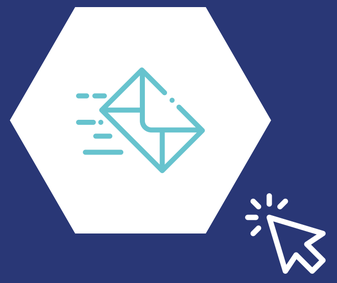
Accurate automated internal standard addition using a loop injection method. A specified volume of internal standard is loaded in a loop using an integrated mini pump. The internal standard is then added to the sample during desorption of a blood spot using a high pressure dispenser (HPD™).



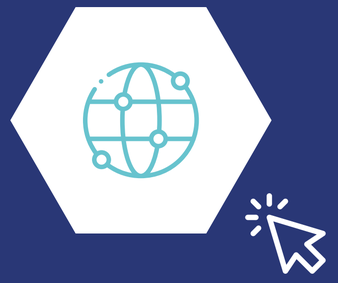


Specifications

Flow-through desorption concept (FTD™)	Leak-tight clamp heads provide direct elution of DBS from cards without punching discs.
Desorption methods	Partial spot, full spot.
Clamp heads	Replaceable. Sizes (2 mm, 4 mm, 6 mm and 8 mm available). SS316. Leak-tight up to 200 bar for 2 mm, 4 mm and 6 mm clamp heads. Leak-tight up to 100 bar for 8 mm clamp head. Programmable clamping force 300 – 3000 N.
Sample capacity	4 spot Whatman or PerkinElmer type DBS card in a cassette format, with an extended capacity of up to 96 DBS cards, or 384 samples.
Intelligent Vision Camera (IVC™)	Camera designed to provide - missing card detection - accurate positioning of DBS cards in the clamp - 1D and 2D sample barcode identification - full or partial spot desorption options - full image capture for sample information storage, tracking and traceability.
Internal standard loop	20 µL.
IS pump	Internal standard pump max. 95 µL/sec.
Compressor	To dry fluid lines and clamp heads after desorption and wash.
Clamp positioning precision	0.2 mm.
Injection valve	SS stator and PEEK rotor seal, bore 0.25 mm, 1/16" connection ports, except port 4 (1/32" connection port).
Valve switching time	<100 msec.
Reproducibility desorption	RSD < 1%; Due to paper quality larger values are typically obtained.
Reproducibility internal standard	RSD < 1%.
Cycle time, typical using HPD™	150 sec including desorption and wash.
Cycle time, from card retrieval to ready to desorb	20 sec.
Wetted parts in sample flow path	SS316, PTFE, PEEK.
Wetted parts in dispenser and wash lines	Tefzel, Teflon, PEEK, KelF, Glass.



Get in touch



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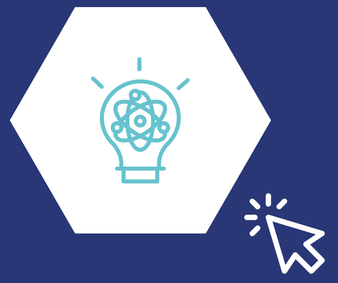

Our technologies

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