

Standard Features »

Real-Time Organic p/p₀ Measurement

All DVS Advantage systems accurately measure the concentration of both water and organic vapours using our unique in-line Optical Sensor technology.

Organic vapours which are regularly used with the Advantage include: Methanol, Ethanol, Isopropyl alcohol, Butanol, Cyclohexane, Heptane, Octane, Nonane, Decane, Ethyl acetate, Toluene, Xylene, MEK, Chloroform, & Dichloromethane.



2nd Generation Organic Leak Sensor

For enhanced laboratory safety, the DVS Advantage now includes as standard an improved organic leak sensor.

FEATURES

- Enhanced stability.
- User-adjustable trigger levels - enabling the system to be adapted to different laboratory environments.
- LED indicator - providing a quick reference to the sensor level reading.



Iso-activity, Density and Amorphous Content Measurements

The DVS Advantage Control software can run iso-activity experiments as well as producing traditional isotherms. A sample density experiment wizard is also now included as standard.

In addition, our Advanced Analysis Suite of macros can also calculate amorphous content.



NEW MODULAR OPTIONS

The DVS Advantage is now even more versatile, with new modular options further enhancing its broad range of experimental capabilities.

Modular Options »

Colour Video Microscope

The DVS colour video microscope is fully detachable with improved specifications, coupling qualitative sample information with precision DVS isotherm data.

The microscope shows visual sample changes including swelling, deliquescence events, cracking and phase changes.

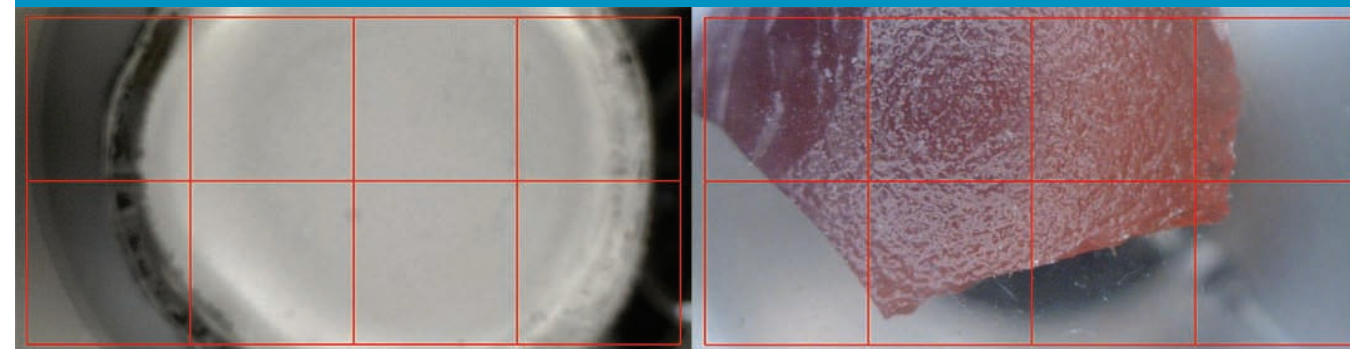
This optional feature can also be used in combination with some other DVS Advantage modular features.

KEY SPECIFICATIONS

- 1.3 Megapixel colour images (1280 X 1024).
- Adjustable focus.
- Adjustable magnification of 50x to 200x.
- Picture overlay information includes: date, sample info, experimental info, adjustable scale marker and overlay grid.
- Images exportable to .bmp, .tiff, and .jpeg file formats.



DVS Colour Video Microscope images of Lactose (left) and Candy samples (right), showing the Overlay Grid feature.



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Dual Fibre Optic Adapters

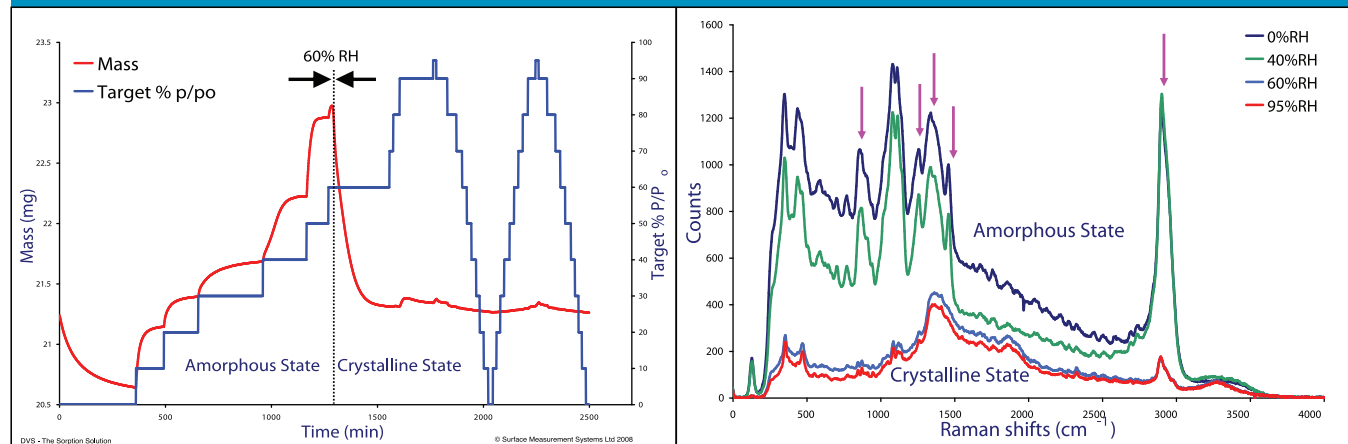
The Advantage can now measure state-of-the-art DVS gravimetric sorption data simultaneously with real-time Raman/NIR spectra.

Our specially designed, optional adaptors allow fibre optic probes to be coupled to the system.

The adaptors accommodate probes with diameters of 3/8", 1/2", or 12mm — allowing a wide range of commercial Raman and NIR spectrometer models to be interfaced with the DVS Advantage.



Morphology change observed in Lactose using a DVS/Raman system.



Pre-heaters

Modular coil pre-heaters are now available as an option in large or small sizes (diam. approx. 17mm and 25mm), delivering temperatures up to 150°C.

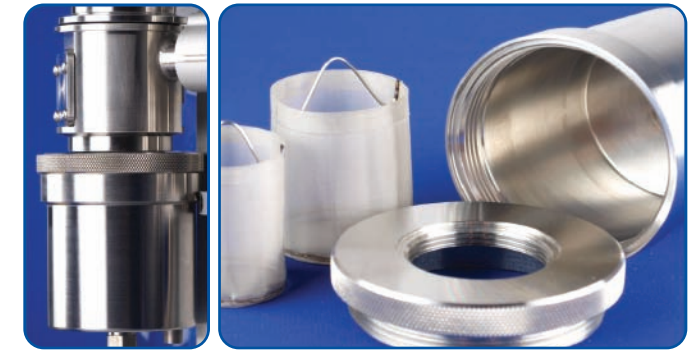
Pre-heaters are very useful in speeding up analysis cycle times (eg. for samples which have strong chemical adsorption, or the drying of inorganic hydrates), thus streamlining DVS experimental processes. In addition, pre-heating can be performed at a constant temperature or at a controlled ramp rate.



Expandable Manifold

A modular, extra-large sample chamber is also available as an option, with an inner diameter of 59mm and a depth of 65mm.

This chamber is perfect for high-volume samples, and can be used with our large sample baskets, made of fine mesh (316 stainless steel).



Modular Features in Combination

These new modular features can be used in particular combinations to create even more advanced DVS experiments.

The combinations available are shown below:

	VIDEO	FIBRE OPTIC	PRE-HEATERS	XL MANIFOLD
VIDEO	○	○	○	✗
FIBRE OPTIC	○	○	✗	✗
PRE-HEATERS	○	✗	○	✗
XL MANIFOLD	✗	✗	✗	○

○ = Yes ✗ = No



DVS mass vs time and colour video data measured simultaneously with Raman scans of a Liposome sample.

