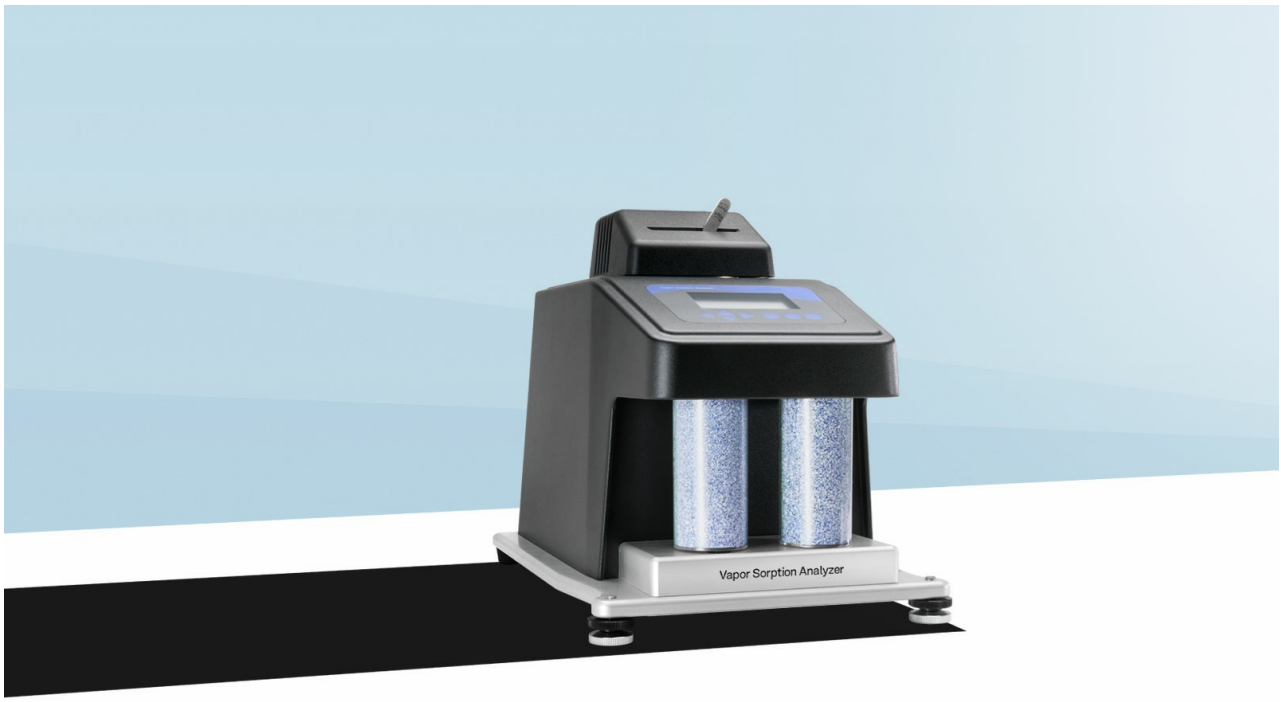
Vapor Sorption Analyzer

metergroup.com/food/products/vsa



Two essential testing modes mean complete moisture analysis

AQUALAB VSA

Missing: critical moisture information

Isotherms can help you determine shelf life, choose the right packaging, and diagnose and solve problems in your product. What you don't need is the hassle of creating those isotherms. Old-school studies take months and require a room full of desiccators. Newer DVS methods are faster, but they're also expensive, and they don't give you enough data for a complete picture. Isotherms have been a promise that doesn't deliver—until now.

Make moisture dynamics crystal clear

What if you could create an isotherm in just 48 hours? And not just a curve with a few points, but detailed absorption and desorption curves composed of hundreds of points that show exactly what happens as your product absorbs and desorbs water? The VSA does that and more. Existing DVS instruments give you snapshots in time. The VSA gives you DVS capability PLUS a new DDI mode that shows you the whole picture of how your

product changes during adsorption and desorption. And its full-featured modeling software puts answers at your fingertips. Solve problems like caking and clumping, matching the excipient to the API, and choosing correct packaging.

Get higher resolution in less time

The VSA's groundbreaking design uses a fast water activity sensor combined with a very precise scale to create isotherm graphs dynamically. It passes humidified air over samples and measures both weight and water activity simultaneously. It then creates sorption and desorption isotherm curves with hundreds of points, instead of just five or six. And it does so in only a couple of days (approximately 48 hours), instead of a couple of months.

Double your insight with two different modes

Competitor instruments only use the DVS method. The VSA delivers DVS isotherms, and it also gives you truly dynamic high-resolution DDI isotherm curves. DDI curves make details visible which have never been seen before. They unlock new information to allow more precise formulation, more accurate predictions, and more complete product knowledge.

Turn your data into solutions

The VSA comes with intuitive, full-featured modeling software. The Moisture Analysis Toolkit shows you how to turn your data into solutions using research-tested predictive models. You'll find all the models you need in one place, organized in a simple-to-use program. Identify the critical humidity for glass transition, evaluate packaging performance, determine hygroscopicity, track hysteresis, predict coating breakdown, find susceptibility to caking/clumping, and more.

Found: the complete moisture picture

The VSA delivers fast, high-resolution graphs that change the way you understand your product. Dual testing modes and sophisticated modeling software turn your data into the solutions you need to manufacture, monitor, store, and ship a great product.

Features

- 5 minutes to set up a test
- data automatically recorded and sent to your computer
- measure both DVS and DDI isotherms
- Use high resolution DDI isotherms to identify critical moisture ranges
- DVS isotherms allow you to studykinetics
- Get the same or better performance of other systems, but pay 50-80% less
- Determine shelf life
- Identify the critical humidity for glass transition

- Evaluate packaging performance
- Determine hygroscopicity
- Track hysteresis
- Predict coating breakdown
- Find susceptibility to caking/clumping and more

Specifications

Isotherm Methods	Dynamic Dew Point Isotherm (DDI) & Static (DVS)
Accuracy	±0.005 a_w
Resolution	0.0001 a_w
Range	0.030 to 0.950 a_w
Repeatability	±0.003 a_w
Temperature Control	15 to 60 °C (sample chamber temperature; sample temperature is measured separately, and may vary)
Temp Stability	±0.1 °C
External Gas	7 psi max
Sample Weight Range	500 to 5,000 mg
Mass Resolution	0.5 mg
Sample Cup Volume	10 cc
Water Reservoir	20 ml
Program Identification	Alphanumeric, programmable to display product name, lot, or product ID number.
Data Storage	1 Test

Data Communications	USB
Display	128 x 64 pixel graphical display with backlighting
Case Dimensions	38.1 x 26.7 x 30.5 cm (15 x 10.5 x 12 in)
Case Material	Machined aluminum frame; polyurethane plastic with fire retardant
Weight	14.97 kg (33 lbs)
Power	110 V to 220 VAC, 50/60 Hz
Operating Environment	4 to 50 °C; 0 to 90% relative humidity (noncondensing)
Certifications	CE
Warranty	One year parts and labor

We manufacture, test, calibrate, and repair every instrument in house. Our scientists and technicians use the instruments every day in our product testing lab. No matter what your question is, we have someone who can help you answer it.

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