

▲ Decagon's Dynamic Dewpoint Isotherm (DDI) method means speed, accuracy, and completeness—adsorption and desorption isotherms in about 24 hours.

Accurate moisture sorption isotherms in a day, not weeks.

WHEN YOU ADD WATER to a product or dry a product out, water activity changes—but not in easily predictable ways. Every ingredient has a unique relationship of moisture content to water activity, which varies depending on whether water is going in or coming out. An isotherm is the map—the graph—of that relationship.

The isotherm predicts how an ingredient or a recipe will respond to moisture. It shows, for example, water activity ranges where you can add a significant amount of water without changing the water activity much, or indicates

products which are relatively insensitive to high environmental humidity.

Producing an isotherm by hand is painstaking. It can take anywhere from one to five weeks to determine just a dozen points on the graph. Commercially available instruments are expensive, slow, and still produce a limited number of graph points.

AquaSorp measures water activity directly, giving you complete adsorption and desorption isotherms with over a hundred points in about 24 hours. ■

Sometimes all you need to know is where you are.

But sometimes you need to figure out how to get where you've got to go.

AquaLab, like a GPS, tells you exactly what water activity you're at. But what if you need to know how to get the water activity you need?

AquaSorp lets you map out how to get there.

Using an AquaSorp Isotherm Generator, you can tinker with a recipe and predict how water activity will change as you change the formulation.

You can predict how abuse conditions like high humidity will affect your products and your ingredients.

You can know just how much water you can add to a product and still be safe.

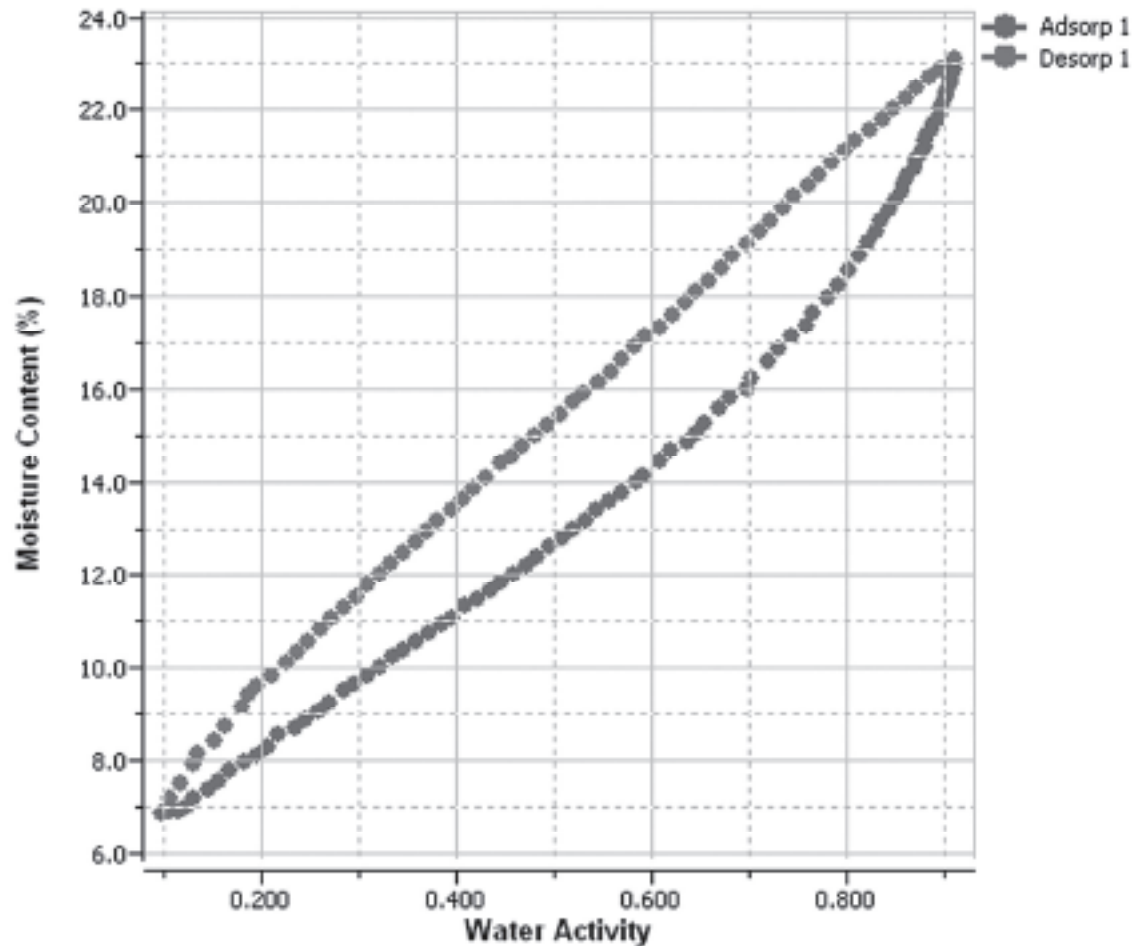
You can even predict textural changes and determine the most chemically stable point for dehydrated foods.

With AquaSorp, you address safety and quality issues before you make up-or dry out-the first batch. ■

**DECAGON
DEVICES**

AquaSorp Isotherm Generator Specifications

AQUASORP IG, an affordable isotherm generator, uses the same chilled-mirror technology as Decagon's AquaLab water activity meter. The Dynamic Dewpoint Isotherm (DDI) method gives you full sorption isotherm curve development—hundreds more data points in days instead of weeks. An easy to use software program simplifies data collection and analysis, including BET and GAB determination. ■



Water Activity Range
0.03 to 0.95 a_w *
(3 to 95% Relative Humidity)

Water Activity Accuracy
 $\pm 0.005 a_w$

Water Activity Repeatability
 $\pm 0.003 a_w$

Temperature Operating Range
15 to 40 °C

Humidity Operating Range
10 to 90%, non-condensing

Universal Power
110 V to 220 V AC, 50/60Hz

Size (Footprint)
16.6" w x 13" d x 11.5" h

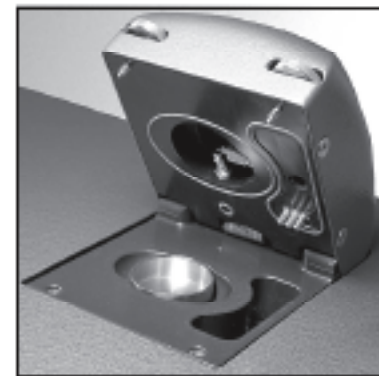
Weight
42lbs

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- Rapid moisture sorption isotherm determination.
- Large sample size, uses same sample cup as AquaLab.
- Simple interface with user controlled settings.
- Insert sample, press start, and walk away.
- Hundreds of data points to ensure accuracy and repeatability.
- Easy to use software collects and analyzes data including BET and GAB determination, and Decagon's Double Log Polynomial (DLP.)
- Easy export of data, graphs, and isotherm coefficients.

▲ AquaSorp delivers over a hundred points in about 24 hours.*

*Depends on the user selectable flow rate and sample type.



← AquaSorp sample chamber.

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