

Sharing knowledge...

Shift your horizon.

Feel free to contact us.

Moisture issues: manage & control humidity of pharmaceutical products.

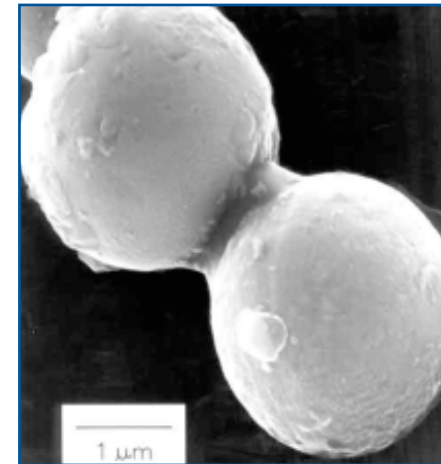
As a pharmaceutical formulator, a moisture sensitive drug can present you with a number of challenges due to their tendency to hydrolyze when exposed to humidity.

To protect drug efficacy, you need to precisely analyse and detect moisture uptake - during your manufacturing and packaging processes. Based on this information, you can take the appropriate actions to prevent drug degradation and maintain drug activity.

Recording accurate MSIs

The relationship between water activity and moisture content at a given temperature is called the Moisture Sorption Isotherm (MSI). This relationship is complex and unique for each product due to different interactions (colligative, capillary and surface effects) between the water and the solid components at different moisture contents.

Because of the complexity of sorption processes, the isotherms cannot be determined by calculation, but must be recorded experimentally for each product. Recording MSIs is essential if you want to determine the moisture content and water activity for the moisture sensitive products and other recipients in the formulation. A MSI does not just show how water will be distributed in a mixture. It also supplies valuable information you can use to design or modify drying processes and packaging materials that will improve product quality and safety.



Shift your horizon.

Feel free to contact us.

What can we do for you?

DSM Resolve operates a state-of-the-art Dynamic Vapor Sorption analyzer that produces accurate and reproducible recordings of MSIs.

Our MSI recordings can help you:

- Determine shelf-life and storage stability of a product
- Determine monolayer moisture content
- Determine critical water activity or moisture content so that you can set limits for crispness, hardness and flow properties
- Simulate specific processing steps

Our advanced facilities and longstanding experience in traditional pharma, biomaterials, biomarkers and sports testing produce creative solutions for your most challenging pharmaceutical issues.



For further information:

P.O. Box 18, 6160 MD Geleen

The Netherlands

T +31 (0) 46 4760100

F +31 (0) 10 2644780

E info.dsm-resolve.com

www.dsm-resolve.com