Hygroscopicity Evaluation

Active pharmaceutical ingredients (APIs) and excipients in solid dosage forms absorb water vapor during manufacture and subsequent storage of the product. Ingesting an unacceptable amount of water will adversely affect the physical and chemical stability of the API and the functionality of the excipients. Determining the hygroscopicity is very important for selecting the most suitable solid form of the drug for development. Therefore, the hygroscopicity needs to be evaluated during the drug development process to optimize the formulation parameters, manufacturing process and determine the storage conditions of the drug substance or final product. In recent years, hygroscopicity has become one of the most important criteria for selecting solid drug forms for development.

CD Formulation laboratories can test products of any scale, and we can provide comprehensive hygroscopicity evaluation for APIs according to related standards. By determining whether APIs are sensitive to moisture, our scientists will help you to make a decision for operational and procedural conditions that can ensure the physical and chemical stability and pharmacological activity of the product to minimize potential formulation and stability issues.

Our Methods for Pharmaceutical Hygroscopicity Evaluation

- Gravimetric Sorption Analysis (GSA) Method
- Thermogravimetric Analysis (TA)
- Radio Frequency Based Method

- Halogen Drying

References

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2. Allada R. Hygroscopicity Categorization of Pharmaceutical Solids by Gravimetric Sorption Analysis: A Systematic Approach[J]. *Asian Journal of Pharmaceutics (AJP): Free Full Text Articles from Asian J Pharm*, 2016, 10(04).