



Moisture Content Determination

The presence of moisture will affect the chemical and physical properties of the final product. Excessive moisture can cause the powder particles to agglomerate and make the tablets brittle. Too little moisture can cause tablets to scatter. Powdered excipients may not flow if they are too wet, and some active pharmaceutical ingredients (API) may crystallize or change form if there is too much moisture. The production method of solid dosage form includes freeze-drying, fluidized bed drying, compaction, granulation and extrusion. All of these operations depend on the amount of moisture present and the state, moisture also affects the chemical/physical properties of individual active ingredients and excipients. Therefore, accurate determination of moisture content is very important to ensure the quality of drugs.

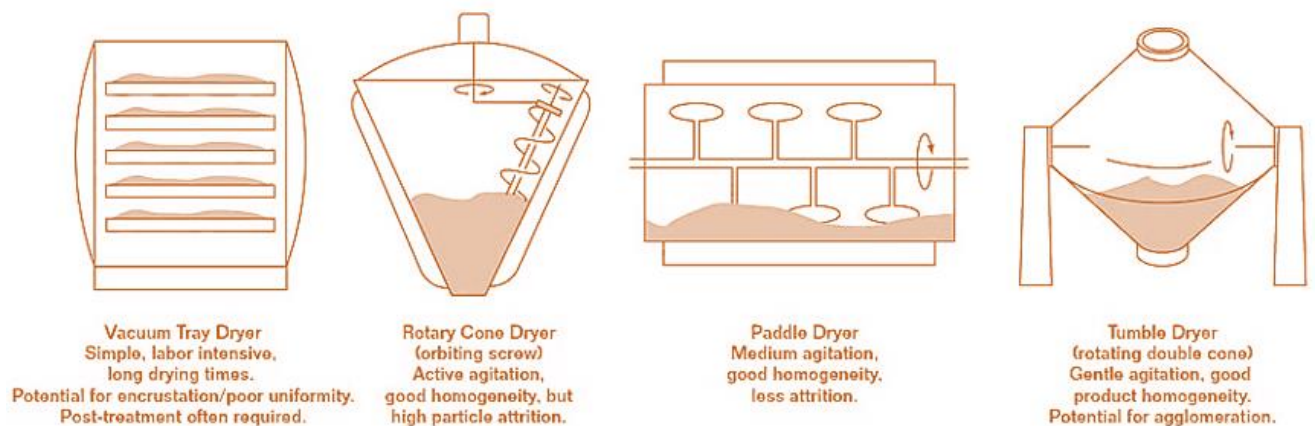


Fig.1 Common types of contact drying equipment.

Moisture Sources of Dosage Forms

- Bulk drug

- Manufacturing processes
- Inactive excipients
- Environmental conditions

Our Methods for Moisture Content Determination

	Methods
Drying methods	Direct determination
	Absorption of water in a suitable drying agent (desiccant is measured before and after absorption)
	Indirect determination - mass loss of the sample
	Drying of the samples under precisely defined conditions -, methods in an oven method
	Exposing the sample to dry atmosphere (as in a desiccator)
Routine methods	Method with NIR (Near Infrared Reflectance) analyzer
	Method with NIT (Near Infrared Transmission) analyzer

Deliverable

- Data analysis
- Provide full study report

Our Advantages

References

1. Mainali D, Li J, Yehl P, *et al.* Development of a Comprehensive Near Infrared Spectroscopy Calibration Model for Rapid Measurements of Moisture Content in Multiple Pharmaceutical Products[J]. *Journal of Pharmaceutical and Biomedical Analysis*, 2014, 95: 169-175.
2. Marjanović-Balaban Ž, Jelić D, Antunović V, *et al.* Determination of Water content in Pharmaceutical Substances[J]. *Journal of Hygienic Engineering and Design*, 2013.