

Humidity Control for Spices/Herbs

A spice is a seed, fruit, root, bark, or other plant substance primarily used for flavoring, coloring or preserving food. Spices are distinguished from herbs, which are the leaves, flowers, or stems from plants used for flavoring or as a garnish. Sometimes, spices may be ground into a powder for convenience. Many spices have antimicrobial properties.



Effects of Uncontrolled Humidity

Dried and powdered spices being highly hygroscopic absorb moisture from the surrounding air when humidity is high and become sticky. This inhibits their free flow through the packaging machine. The damp powder also sticks to the wrapping paper showing the process and creating hygiene problems. It also decreases the shelf life of the product.

Cardmom: Inadequately dried cardmom causes mould making it unfit for processing. Fresh cardmom capsule has a moisture content of 85% of it's total weight.

Cinnamon: Even leaves of cinnamon possess a substantial amount of volatile aroma which are lost if the leaves are dried at temperatures higher than 10°C.

Chilles: If not dried properly, fungus can grow while storage and hence reducing its taste and aroma.

Causes of Uncontrolled Humidity

The major source of moisture is atmosphere. The spices are hygroscopic in nature and hence can absorb moisture from the surroundings and human presence.

General Recommendation

Spice	RH(%)	Temperature °C
Cardamom	30 - 35%	28°C
Dry Garlic	65 - 70%	0°C
Dry Onion	50 - 55%	10 - 20°C
Cinnamon	40%	15°C
Chillies	18 - 20%	45 - 50°C

Bry-Air Solution

To retain the flavour, aroma, colour, freshness and to reduce product spoilage, spices have to be dried at low temperature. Bry-Air range of Dehumidifiers provide optimum drying at low temperatures for all spices.