

Moisture Control During Honey Drying

Honey has been widely used in pharmaceutical industry for its healing properties and sweet taste. Honey is sensitive to moisture in the surrounding atmosphere. High moisture content can affect its state and its properties.

Effects of Uncontrolled humidity

Honey with high moisture content loses its curative properties and its quality. Thus, it is often rejected by pharmaceutical industry, where it is widely used.

Causes

When honey is dried conventionally, the HMF (Hydroxymethylfurfural) content in the Honey often goes up to 40% due to over heating.

Conventional Method and its drawback

The honey is kept inside a drum and continuously stirred. Hot water is circulated through a jacket surrounding the drum filled with honey. The Honey, thus, was heated indirectly to a temperature of 65°C to bring down the moisture content to 19% from the existing 25-30%.The problem was that the HMF content goes up to over 40% due to heating over 35°C.

General Recommendation

It is recommended that the honey is dried at 35°C to a moisture content of 19% and Hydroxymethylfurfural (HMF) content of 25%

Conventional Method Solution

The Airgineers at Bry-Air recommended that honey should be spread in trays with a maximum thickness of 4 inches inside a closed room. Dehumidified air is then circulated inside the room, which is maintained at temperature of 35°C. This allows reduction of moisture content without raising the HMF content. It is also suggested to pack the dried honey in containers inside the dehumidified room to avoid moisture regain.

Partial Reference List

- Kesriwal Enterprises
- Mirjanagar Gramoday Sahyog Samiti Limited

