World leaders in dehumidification.

DST

Dehumidification of FOOD PRODUCTS

MOISTURE PROBLEMS

Condensation

Mold

Clumps

Varying drying

Frost

Bacteria

FOOD INDUSTRY

Air humidity is an essential quality factor for the food production all the way from producing the ingredients to the display in the shop. A controlled humidity ensures a high level of hygiene and presents a clean and fresh product to the consumer. A sorption dehumidifier can in many cases also increase the production capacity, especially during the warmer months of the year.

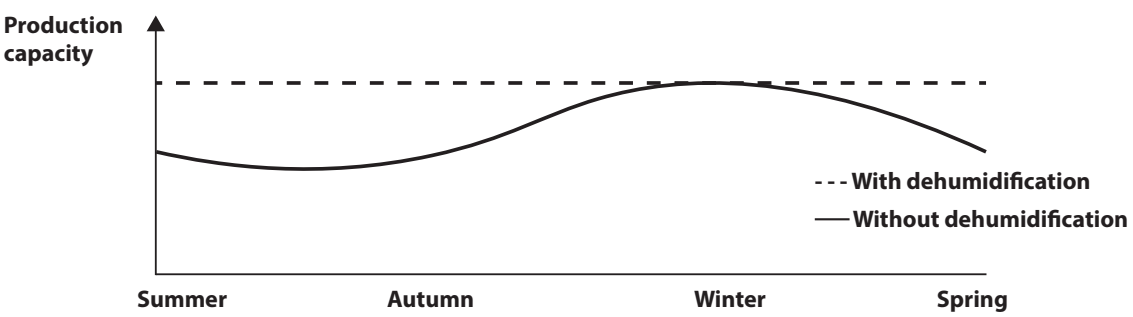
Moisture problems

Bacteria thrives in high humidity, therefore it is essential to dry out quickly after washing and keep a controlled humidity in the production areas. Condensation and even frost can be stopped by sorption dehumidifying, keeping the raw food fresh and making it easier to put on labels on the packaged food. Mould will also be prevented in a dehumidified area. A dehumidifier can also create a problem free pneumatic conveying without clogging in corners or cold spaces.

Advantage with dehumidification

When a production room is dehumidified, the quality of the products is not affected by seasonal variations in the weather. Instead, the ultimate temperature and humidity are kept for production all year round. Which means that production and quality are increasing and that the maximum production level is achievable year-round.

PRODUCTION CAPACITY OVER THE YEAR



APPLICATIONS

WHOSE PROBLEMS CAN BE AVOIDED WITH DEHUMIDIFICATION

Brewery
When beverage is made, it is first heated then cooled. When the liquid goes from hot to cold, condensation forms outside the tank, which can drip down on the floor as well as form bacteria, in the brewery. Therefore, it is important to control the moisture in the room.

Pneumatic transport
In pneumatic transport, a lot of powder is transported with the help of air. However, if the transport air is too moist, the powder will stick to the pipe, causing the product to be destroyed and the machine must be stopped and cleaned.

Fluidized bed
In many cases the capacity of fluidized beds can be increased with a sorption dehumidifier. A dehumidifier will also be able to control to a constant production output, regardless of outdoor weather and seasons.

Spray drying
Sorption dehumidifying creates warm and dry air which is perfect for spray driers and it also improves the production capacity significantly on many installations.

Ice cream
Frost on the ice cream or its' package does not look good for the consumer. Luckily this can be prevented by controlling the humidity all the way from the freezer to the packaging area.

Dairy
If it is too damp on a dairy factory, labels that are placed on packages may fall of due to the fact that the glue is not sticking. Also, cheese stored in waxed envelopes can start to grow mold on the outside which can destroy the cheese inside.

Mixing
Low humidity is essential for mixing dry ingredients, e.g. flour. If the humidity is too high the ingredients will lump together and the quality will deteriorate and it can also be difficult to have an accurate mixing ratio.

Coating
In order for the coating on products to be as even as possible, it is required that there is a low moisture content in the room. If the air is too saturated, it does not absorb the moisture from the product as quickly and production quality will deteriorate.

Packaging
To prevent the finished and packed food products from soaking up moisture and losing quality, the relative humidity in the room can be controlled. That also eliminates the risk of cartons being destroyed by condensation and moisture.

Raw materials
When dry raw materials are stored, they are exposed to ambient air and hence temperature changes. The moisture in the raw materials is drawn to the cold environment, which causes moisture to form in the container. The moisture in turn will cause the raw materials to clump and stick.

Meat production
In meat production, large amounts of water are used for cleaning, which can create undesirable moisture in the premises that may turn into condensation. Dehumidifying the room will improve hygiene and safety, and prevent the formation of mold and bacteria.

Drying of food
A finished food product that is dried is often temperature sensitive to keep flavours. To come to a quick drying process without excessive temperatures a sorption dehumidifier is perfect as it can create a very low relative humidity at low temperatures.

Cold storage
A common problem in cold storages is that the doors open and close often so warm moist air enters the cold air where it is condensates or form ice. This makes the floors slippery and frost and ice can form on both ceilings and walls, but also on the products that can be destroyed.

Freezers
Frost inside the spiral-freezer or other types of freezers can be minimized with a desiccant dehumidifier controlling the inlet and outlet of the freezer. The frozen product will look much fresher and will not be destroyed by melting frost when it is thawed again.

Seibu Giken DST AB has representatives
in more than 40 countries worldwide.

Seibu Giken DST AB
Avestagatan 33 | 163 53 Spånga, Sweden

Phone: +46 8 445 77 20 | Fax: +46 8 445 77 39
info@dst-sg.com | www.dst-sg.com

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