



Food Manufacturing Facility
Mexico City

Overview: Maintaining a clean food processing or packaging environment helps keep products healthy and wholesome for as long as possible.

Challenge: Moisture prompts the growth and spread of microorganisms, even in areas considered clean. Without temperature and humidity control, condensation may form on equipment and in storage areas. Proper airflow eliminates moisture-related contamination concerns.

Case: An optimal packaging environment requires 35% RH. Volume of space, cooling capacity, and fresh air requirements for people were factors considered in mitigating air changes.

Problem: The packaging facility registered 70% RH.

Solution: A dehumidification system with a 600cfm capacity, removing up to 6 kilograms of moisture per hour, proved the optimal environmental control solution required to reduce humidity in the packaging area of the Bimbo Colombia facility. Eliminating moisture and moisture-related problems also helped create a safe and comfortable environment for workers. In addition to the control of airborne contamination and humidity control, air distribution removed the heat imposed by the processes and people, providing sufficient fresh air, preventing the ingress of airborne contamination and avoiding regions of stagnant air.

Mitigation Strategy: Controlling moisture and ventilation reduces the costs of moisture-impervious food packaging. Environmental control solutions prevent the growth of organisms that decay food, while reducing the load placed on heating and cooling systems, reducing costs and prolonging the shelf life of the product, allowing Bimbo to store food at temperatures that maintain their nutritional value.

Bimbo is the most important Baking Company in the world on the basis of brand positioning, production volume and sales. Located in 22 countries, with over 10,000 products and over 100 brands, quality control is at the heart of Bimbo's commitment to its customers.

Engineering for the effects of relative humidity in a controlled manufacturing environment ensures accurate and repeatable measurement results. Fine-tuned industrial processes such as food processing require precise ambient relative humidity conditions to consistently produce the quality of product customers expect. This case study highlights the importance of measurement in determining product quality in product packaging.

