



NOT ALL FRUIT IS THE SAME

DIFFERENT PROCESSING APPLICATIONS REQUIRE DIFFERENT DRYING SET POINTS

For food processors, dehydrating fruit is often a central part of production, but it's rarely straightforward. Inconsistent drying, high energy usage, & scalability issues can all complicate operations & affect product quality. Whether you're working with apples, mangoes, berries, or more exotic varieties, dialing in the right dehydration set points is crucial to ensure efficiency without compromising the final product.

At Nyle Dehydrators, we understand that not all fruit behaves the same in the drying chamber. That's why we don't believe in a one-size-fits-all approach. Our energy-efficient heat pump systems and modular dryer designs allow processors to fine-tune temperature, humidity, and airflow to match the unique requirements of different products. This flexibility not only supports product consistency but also reduces operating costs and improves throughput, especially as businesses scale.



OUR CASE STUDY

Lately, our test lab has been focused on one fruit that always keeps us on our toes: "infused" blueberries. Unlike frozen or fresh berries, blueberries soaked in sugar water (or similar brines) behave very differently in the drying process. They hold moisture longer, have varied textural outcomes, and respond to heat in unpredictable ways. It's challenging but fun to watch how these infused berries react in comparison to other fruits we've worked with. These hands-on trials are what help us continue refining our drying systems, ensuring our customers get consistently high-quality results no matter how their fruit is processed before it hits the chamber.



KEY CHALLENGES IN FRUIT DEHYDRATION

1.

Achieving Even Drying & Consistent Product Quality

Uniform moisture removal is critical in achieving consistent texture & shelf life. Without precise control over humidity and airflow, case-hardening can occur, where the outside dries too quickly and traps moisture inside.

2.

Retaining Natural Flavor, Color & Nutrients

Excessive heat can degrade natural nutrients, antioxidants, and fruit flavor, reducing both the nutritional value and visual appeal of your product.

3.

Reducing Energy Costs & Improving Efficiency

Traditional gas-fired or resistance drying systems often rely on high energy input and generate excessive waste heat, driving up operating costs.

4.

Scaling Up Without Disrupting Operations

Expanding your operation shouldn't mean replacing your entire system or compromising your floor plan. Many processors begin with multiple small dryers, only to find themselves battling space constraints, labor inefficiencies, and rising energy bills.

5.

Simplifying Operations with Recipe-Based Controls

When switching between products, manually resetting drying parameters can introduce errors and inconsistencies, especially in multi-fruit processing operations.



WHY PROCESSORS CHOOSE NYLE



Precision-Controlled Airflow & Moisture Management: Our PLC-based controls independently regulate relative humidity (RH) and airspeed, ensuring moisture is removed at the right time to prevent uneven drying.



Gentle Moisture Removal: Controlled, low-temp airflow removes moisture without harsh heat, helping maintain natural structure & preventing shrinkage or discoloration.



Lower Operating Costs with Controlled Drying: By controlling the drying environment precisely, we help processors use less energy per pound of product dried.



Modular Chambers for Scalable Growth: Our MD-Series Modular Dehydrators are built with growth in mind. Start with one chamber and expand as needed.



Easy Setup for Operators: Employees can quickly load a batch, choose a saved recipe, and begin the drying cycle with confidence.

CONCLUSION

If your operation is scaling up, struggling with batch inconsistencies, or looking to reduce energy costs, Nyle Dehydrators can help. Our flexible drying systems are engineered to support precision, consistency, and scalability, all while protecting your product's quality.

Let's build a more efficient future for your production, one perfectly dried fruit at a time.

