

## **An Approach to Customizing AFB**

### **Palatants: Spray Drying**

Developing a successful palatant requires expertise in both formulations and processing conditions. It also involves collaboration to identify a customer's specific requirements.

A clear understanding of our customers' needs lays a firm foundation for success.

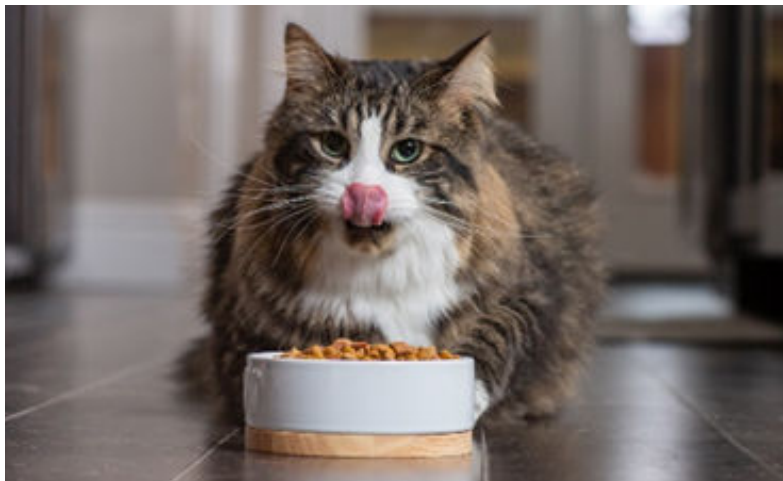
Working together, AFB International will

provide guidance on the best path forward to

deliver a palatant that meets a customer's

performance measures, attribute

requirements, label claims, regulatory requirements, and economic targets. A spray dried palatant may be one of those recommendations.

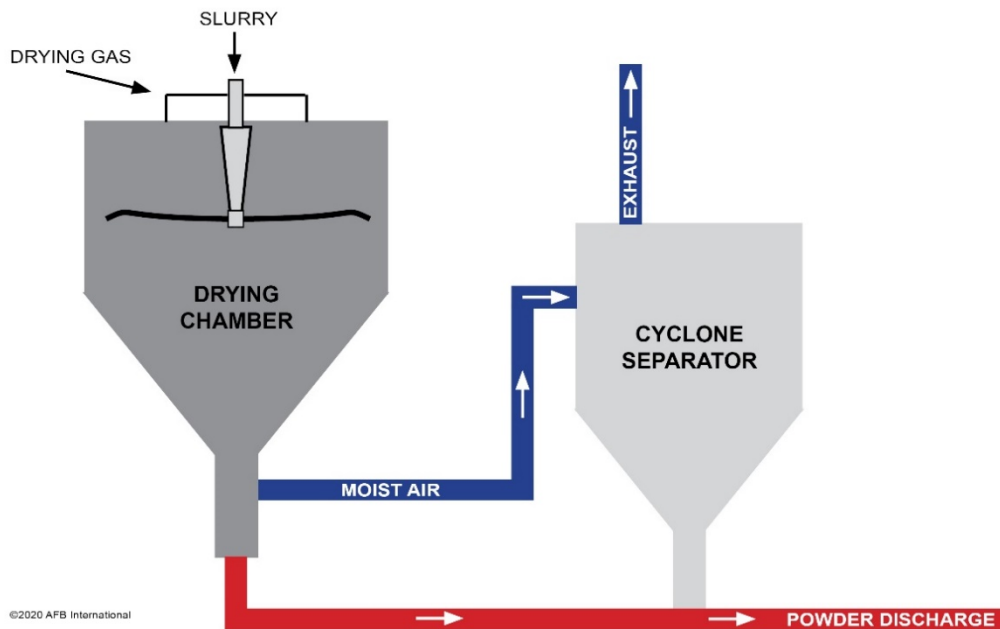


### **What is spray drying?**

The impact of technology plays an essential role in developing a successful palatant. Spray drying is a process technology that has widespread use in various industries from human food to pharmaceuticals. It is also used in the pet food industry and is one of the technologies AFB International uses to create palatants.

Spray drying is one of the many ways to microencapsulate an ingredient - usually via a carrier. The benefits of microencapsulation include improved ingredient stability, prevention of degradation and extending shelf life. Depending on the spray drying equipment, the liquid slurry can be composed of a solvent or water. The slurry is fed through the nozzle at the top of the dryer and the drying gas is injected into the chamber. Then, due to the temperature difference, the water (or a solvent) is removed as it falls through the drying chamber. The moist air moves from the drying chamber to the cyclone via the drying gas and the powder produced is discharged. (Figure 1.)

Figure 1. An overview of the spray drying process.



### Benefits of a spray dried palatant

Spray drying allows AFB to easily transform a liquid mix into a powder. Dry powder palatants provide customers with transportation savings and ease in product handling. Spray drying is a faster, more efficient technology for easier scale up in production, translating to quicker delivery times to the customer. Additional benefits include shelf stable ingredients, halting reactions between components, and minimizing flavor loss over time. Spray drying also allows for particle size, flow, and moisture control depending on the formulation.

Whether your needs include a spray dried powder, a liquid solution, or a specialty palatant, AFB scientists have extensive experience in addressing formulation challenges. Contact your AFB sales representative to learn how we can work with you to develop a palatant that meets your specific requirements.

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