

KETT CASE STUDY:

Innovative food company implements real-time measurement – before the product recipe is completed



QUOTES FROM CUSTOMER

"This instrument is removing the art and making the process scientific."

"Today we can see the problem or deviation as soon as it happens instead of waiting until the product is finished and then having to scrap it all"

NEED: Instant moisture measurement during the product development cycle

A food manufacturing company was developing a new product. They were trying to optimize both the product *and* the process. The interesting point was that they were only making small samples of the product and didn't even have a defined manufacturing process. However, they felt that measuring and controlling the moisture content during this development process would help them immensely.

The customer had four discrete measurement points in their batch process:

1. where the base raw food ingredient was pre-treated,
2. where it was blended with other ingredients,
3. where the mixture was baked,
4. where the final product steps had been completed and the consumable was being packaged.

PROBLEM WITH...Traditional loss on drying (moisture balance)

The customer had several reasons for looking beyond this type of testing:

- They couldn't wait for the test results as the product progressed.
- They were concerned with product variability as this was a batch product.
- They wanted to simulate online continuous analyzers – to help with process line development.
- They didn't want to use a large number of man-hours just to perform extensive testing.



SOLUTION: Kett's unique handheld moisture meter

The customer selected Kett because of their full line of models and measurement technologies. Kett had a unique handheld moisture meter, the KJT130, that allowed them to obtain instant, non-contact, non-destructive moisture readings at all four stages of the process. In addition, Kett had both desktop and online systems that could be used during the ramp-up and full-time production. This meant that knowledge gained with the instrumentation and process during the development cycle could easily be shifted to the full-time measurement instrumentation needed when product volume grew exponentially.

BENEFIT... working with Kett

The Kett staff worked with the customer to help them calibrate the instrument to agree with their referee lab method. The instrument then easily helped the development staff determine the setpoints needed at each stage of the process to optimize product quality and yields. Test results also gave the production staff the information needed to immediately correct process drift, minimizing differences between batches. Where a problem still existed, the company was able to identify and quantify product that was marginal or out of spec, scrapping it as needed. This capability helped ensure a successful product launch.