

# KETT CASE STUDY:

## Plastic Strapping Company Found A Way To Instantly Measure Moisture Without Altering the Sample.



### QUOTES FROM CUSTOMER

"Within seconds, you can see how much moisture is in the plastic."

"Different colored plastics don't need to have different calibrations. As long as it has the same composition, you only need one calibration for different batches... Thank goodness!"

### **NEED:** Instant, non-destructive moisture measurement of plastic pellets and plastic flakes

Since 1975, this company has been making plastic strapping that had the ability to hold and secure heavy items without breaking. However, they never had a way to measure moisture content in the films and raw material since most moisture meters ruined the plastic, as well as slowed the production process. Unfortunately, this caused a significant amount of waste in their production line since some of the plastic strapping came out too moist or too dry to meet customer and internal performance specifications. Yet, when they heard about Kett's NIR moisture analyzers, they immediately saw the solution to their problem.

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

1. before the pre-dryer - to optimize drying time.
2. after the dryer - to ensure the pellets and flakes reached the target level of dryness.

### **PROBLEM WITH...**Traditional loss on drying (oven)

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 didn't want to alter the product as more tests were conducted on the same samples.
- They needed to do many tests as the recycled raw material was highly variable.
- They needed a simple to use instrument numerous plant personnel could successfully operate.



### **SOLUTION:** Kett's automated desktop instant moisture meter

To put it simply, they had not seen any other company that could offer this quality (measure down to 10 ppm) for the same price. Since they had never used an NIR analyzer before, they wanted to "put it to the test". Kett's rent-to-own program allowed them to not pay everything up-front in case it didn't give them the necessary results. Fortunately, if they decided to keep it, they could apply the purchase of the rental to their new instrument. Moreover, they liked the idea of calibrating an instrument one time since it's a time consuming process, and knew that the rent-to-own program gave them this option.

### **BENEFIT...** working with Kett

A Kett application engineer worked with the quality manager to calibrate the instrument and trained her to use the included computer software. After inputting moisture ranges into the instrument (too wet, too dry, just right), the manager saw how easy the instrument was to use, even for a non-technical individual. Finally, as an added bonus, the company got instant, accurate moisture readings, without touching the raw material or films and without product alteration. This helped the customer identify locations in their production line where the plastic had extra moisture. They could turn up their ovens without having to throw out an entire batch of films or pellets. In short, they were able to save time *and* money with Kett's KJT230 NIR moisture analyzer.