

Success Story

Food Industry

PRECISION MOISTURE CONTROL FOR CACAO BEANS

Fast and Accurate
Measurements Help Cacao
Processors Stay Below the
7.5% Moisture Threshold.





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In cacao beans process, keeping moisture levels below 7.5% is essential for flavor development, fermentation quality, and safe long-term storage or transportation.

THE CHALLENGE:

Exceeding this limit can lead to mold growth, spoilage, or any other disease. Traditional moisture measurement methods, such as laboratory testing, required manual sampling, sample preparation, and long waiting times (often 10–15 minutes per reading). These delays slowed quality check and limited the capacity to take corrective action in real time, increasing the risk of non-compliant batches or reducing product value.

THE APPROACH:

To overcome these challenges, a cacao producer sought to improve both product consistency and processing efficiency. For this, they implemented a TEWS moisture measurement process system, capable of delivering instant, highly accurate readings during normal production flow. Unlike traditional lab methods, TEWS Technology can analyze whole beans in seconds, within the product stream and without the need for sample prep. This technology enables operators to do moisture checks at multiple stages without delay: after silos storage, and during or after roasting the beans or the nibs. The real-time feedback supports better compliance, faster decision-making, and streamlined process optimization, all thanks to inline measurement capabilities.



RESULTS:

By integrating TEWS technology, the cacao producer significantly improved moisture monitoring. What once took 10–15 minutes per sample now takes just seconds, allowing for real-time adjustments and more frequent quality checks. As a result, moisture levels were reliably kept below the 7.5% threshold, ensuring compliance, quality check for preserving the flavor and aroma of the chocolate. Thanks to the TEWS microwave technology, the faster workflow and reduced manual effort contributed to a more agile, cost-effective, and high-quality production process.



SAVINGS

Reduce 10-15 minutes from lab sample preparation.

PRODUCTION

Streamline in-line moisture measurements.

PERFORMANCE

Keep product moisture consistently below 7.5%.

