



Moisture Measurement in Bakery Dough

Maintaining the correct moisture content in dough can improve quality and consistency, as well as prevent processing difficulties, decrease waste and cut energy costs during the drying and baking process. Moisture levels in bakery dough can also effect the color, taste, appearance, stability and shelf life.

The consistency of dough is influenced by the water content and the flour's capacity to absorb it. This consistency evolves during mixing, indicating the development of the gluten structure. At a specific hydration level, dough consistency reflects its texture, which is determined by protein quantity and quality, starch damage level, and pentosans. Mixing consistency can be assessed during or after mixing, and it is feasible to individually measure the components affecting consistency: proteins, damaged starch, and pentosans.

NIR TECHNOLOGY

MoistTech utilizes near-infrared (NIR) technology that allows for a non-contact solution to provide accurate moisture content readings. Insensitive to material variations such as particle size, material height & color, the sensors provide a continuous, reliable reading with zero drift and no maintenance. There is a one-time calibration with a non-drift optical design allowing operational personnel to make immediate line adjustments based on real-time measurements.

INSTALL

The on-line sensors can be installed before/after the oven, into any hopper, silo, material line, belt or screw conveyor and the moisture results are displayed onto an external display or PC.

By installing MoistTech's IR-3000 NIR moisture sensor after the dough mixer or after the dough has been formed, manufacturers can continuously monitor the moisture content to adjust as needed.

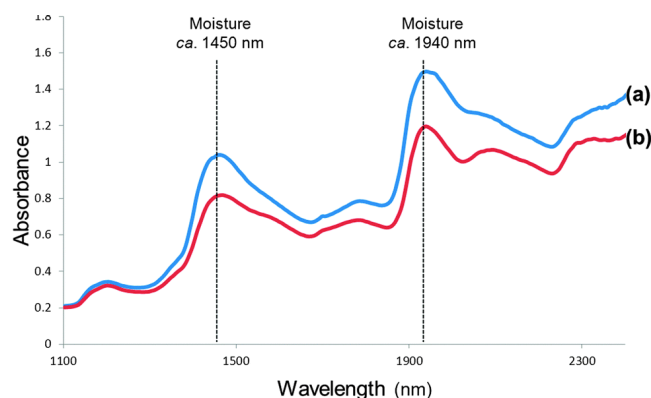
NON-CONTACT: Our equipment never comes in direct contact with the product

ZERO DRIFT: Our sensors are guaranteed to never drift over time

CLOSED-LOOP: Create a closed-loop process by connecting moisture rates to your PLC

NO RECALIBRATIONS: never recalibrate your sensor for the same product twice!

An ideal moisture control system accurately detects the moisture levels at different stages of the process, is easily maintained and has the ability to withstand even the harshest of manufacturing conditions. The IR-3000 series of sensors manufactured by MoistTech are specifically designed to be unaffected by ambient light or material variations to be able to provide continuous, repeatable, accurate readings to improve the manufacturing line and product.



“The addition of the MoistTech IR3000 has provided me with the ability to control our process by instantly increasing or decreasing material flow into the dryer. Prior to the MoistTech technology proved to be a guessing game and time consuming!”