

Moisture Content in Chips & Snack Foods

MoistTech Instant NIR Online Moisture Sensors

Controlling the amount of moisture and oil in potato chips and snack foods is an important consideration for process operators. Too little or too much moisture or oil impacts production and quality. By installing MoistTech's IR3000 NIR Moisture Sensor in the processing area, manufacturers can continuously monitor the moisture and oil content to adjust as needed.



Chip manufacturers strive to have the best finish products. During potato chip manufacturing it is important to know the moisture and oil content after the fryer/oven outlet as they can affect quality and consistency, as well as the taste, appearance, stability and shelf life. Additionally, variation and excess moisture and oil in chips can result in discoloration and out of specification of product. Testing moisture during this time will allow adjustments to be made so that chip manufacturers have the highest quality.

Whether finished products have too much or too little moisture and oil is a main concern for snack food manufacturers as some food items are sold by weight, which reduces costs. Having too much moisture can affect the crunch by making the item taste stale or even worse contributing to bacteria/mold growth. Too much oil can make products greasy and higher in fat percentages.



Measuring moisture content throughout the process also provides snack food manufacturers cost savings in energy and fuel costs, as well as having less product waste. With continuous NIR online moisture testing, manufacturers can monitor moisture levels which they in-turn, can precisely control ovens and fryers to optimize the production process with minimum energy requirements as well as preventing over cooking.

We offer both online for the continuous readings of NIR moisture measurement and laboratory NIR moisture sensors for spot tests near lines or in your quality control labs. Offering a wide variety of instruments including sanitary food grade models that employ a food grade polymeric lens or sapphire window. The IR3000 has higher accuracy than any other system. Conveyor product gaps, random impurities and burnt product have no effect on the accuracy of the measurement readings.

We recommend installing sensor(s) at the exit of the ovens and fryers, close to packaging so that it will allow the food time to stabilize while cooling. The sensor should be installed several inches above the conveyor belt or screw conveyor so that it can continuously monitor the process and can control the moisture content either manually or automatically in the finished product.

For additional information or to discuss your application, please contact our headquarters.
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