

## Moisture Content in Dried Distiller's Grains

### MoistTech Instant NIR Online Moisture Sensors

During the distillation process of ethanol from crops such as corn, sorghum or barley, DDG – Dried Distiller's Grains - are produced as cereal byproducts. They are mainly used as fuel sources, animal/livestock feed, pet food or fishing bait.



Moisture content is an essential aspect when conditioning feeds. When conditioning the most common target moisture contents at conditioner discharge is between 15-17%. Too much moisture can plug the pellet mill. It is suggested that pellets need to achieve final moisture content below 13% to be safe for storage.

Proper conditioning prior to pelleting has several potential benefits, including increased pellet durability index, increased starch gelatinization and protein structures, which improves the binding of the ingredients, potential pasteurization, and the destruction of some insect eggs.

With the help of industry partners and 40 years of knowledge, MoistTech has developed the IR3000 Moisture Sensor, which is ideally suited to measure the moisture levels in the DDG production processes while improving the manufacturers' product quality and lowering their energy costs.



Unlike other instrumentation of this type, some of the unique features of the IR3000 is that it can monitor the product even with small gaps in product flow and is unaffected by ambient light without impacting the accuracy. Insensitive to material variations such as particle size, material height and color, our moisture sensors provide continuous, reliable readings with zero maintenance and a one-time calibration with a non-drift optical design allowing operations personnel to confidently make immediate process adjustments based on real-time measurements.

By installing the sensor on a screw conveyor or at the exit of the dryer, a manufacturer can continuously monitor the process and can control the moisture content either manually or automatically and instantaneously.

Typical accuracy is about  $\pm 0.1\%$  moisture. Typical analog range is 0-10% moisture and up to as much as 40%, subject to application. The outputs can be adjusted to optimize PLC or recording requirements.