

# Moisture Content in Minerals

## MoistTech Instant NIR Online Moisture Sensors

In the Mineral industry, moisture measurement is very important during mineral processing from mining to the final product. With the help of industry partners and 40 years of knowledge, MoistTech has thousands of installations worldwide in mineral applications. 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.



Moisture measurement is critical in all aspects of the mining process. Thus, mining companies are constantly adjusting moisture to maintain the quality of their product. Advances in real-time sensing, data collection, and data analysis and interpretation helps to determine the characteristics of the materials prior to processing providing process efficiency and optimization. Regular measurements of moisture in minerals remains a necessity for control of drying, thereby reducing treatment costs. Additionally, small variations and excess moisture in mixes can result clumping affecting quality and consistencies. Too dry of a product can result in excess dust. Measuring moisture prior to crushing can control particle size and provide dust suppression. During the drying stage, in-process measurements ensure optimization and elimination of over drying, which can lead to product that is out of specification, degradation, and an excess of dust.



Measuring and controlling moisture can reduce transportation costs due to shipping excess water. Additionally, moisture control stops products from freezing during shipping and transportation.

Testing moisture content throughout the process also provides mineral manufacturers cost savings in energy & 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 their

dryers to optimize the production process with minimum energy requirements.

MoistTech's NIR moisture sensors are easy to set-up and use which will provide instant and precise measurements due to no constituent losses in handling. We recommend installing sensor(s) in several locations though out the process. A sensor should be installed over the conveyor before the final crusher to enable elimination of impurities, as well as at the exit of the final crusher or dryer, to prevent over drying and dust. 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.