

MEASURING METHOD

Property	Near Infrared (NIR)	Capacitive	TEWS-Microwave Resonance
Mode of operation	Analysis of optical spectral lines	Measurement of permittivity	Measurement of resonance shift and attenuation
What can be measured	Moisture, fat, protein, sugar etc.	Moisture	Moisture
Contact with product	Non-touching	Touching	Touching
Depth of penetration	Surface only	Core	Core
Calibration	Complex (modelling)	Simple	Simple
Moisture range	Limited, depending on product	Limited, depending on product	Limited, depending on product

INTERFERING FACTORS

Moisture range	✔	⚠	⚠
Varying sensor filling level	✔	⚠	✔
Independent of salt content of product	✔	⚠	✔
Varying product density	✔	⚠	✔
Independent of small changes in composition and natural changes	⚠	⚠	✔
Varying product color	⚠	✔	✔
Varying product surface structure	⚠	✔	✔
Varying temperature	⚠	x	✔
Dust / dirty atmosphere	⚠	✔	✔
Black product (light absorbing)	⚠	✔	✔
Ambient light	⚠	✔	✔



Not affected



Potentially problematic



Compensation possible