



## MOISTURE MEASUREMENT OF COFFEE BEANS

SAVE COSTS ON YOUR COFFEE PRODUCTION

Green coffee beans are having a typical moisture level of 10 – 13% when they arrive at the port. The first point of moisture measurement often takes place before the beans are stored in the warehouse. The measurement could be done in a lab, at-line or even inline to make sure that the green coffee beans can be stored for some time.

During the roasting of the coffee beans a high temperature of ~ 230 °C will be applied. The well known Maillard reaction will take place and therefore the coffee develops its typical aroma. At the same time the moisture is significantly reduced. In order to stop the roasting process at the desired level often the so-called quenching water will be applied. To assure that the legal limit of 5% moisture will not be exceeded, the roasted coffee is measured right after the cooling stage using a process measuring system.

### Microwave resonance main advantages



#### Moisture & Density

Independent measurement of moisture and bulk density of the beans or seeds in one step



#### High Accuracy

Penetration of product core independent of color, shape or the origins of the beans or seeds



#### Easy Operation

Free of wear and tear, low maintenance, easy integration in all sort of inclined chutes or conveyors



#### High Speed

Independent measurement of moisture and bulk density of the beans or seeds in one step

# Benefits



**Green coffee moisture measurement at-line or in lab**



**Inline moisture measurement of green or roasted coffee before storage and after roaster / cooler**

- Quality control for optimum storage
- Non-destructive / no sample preparation
- Save time as measuring result is available in a second
- Typical measuring accuracy +/- 0.2 – 0.3%

- 100% quality control
- High speed (up to 10.000 measurements/s)
- Optimize amount of quenching water
- Stays within legal limits
- Typical measuring accuracy +/- 0.1 – 0.2%

# Our sensor for your production processes



- Easy integration into PLC (analog as well as digital interfaces)
- Long-term stable
- Industry 4.0 ready
- Centralized data storage
- Repeatability +/- 0,2% moisture absolute

# Return on investment\*



**10 - 12 months**

\*according to our experience and estimation of costs with our partners.



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