

Determination of Moisture in Sugar with the Microwave Resonance Method

Water in Food, Bruxelles , 27/03/2006

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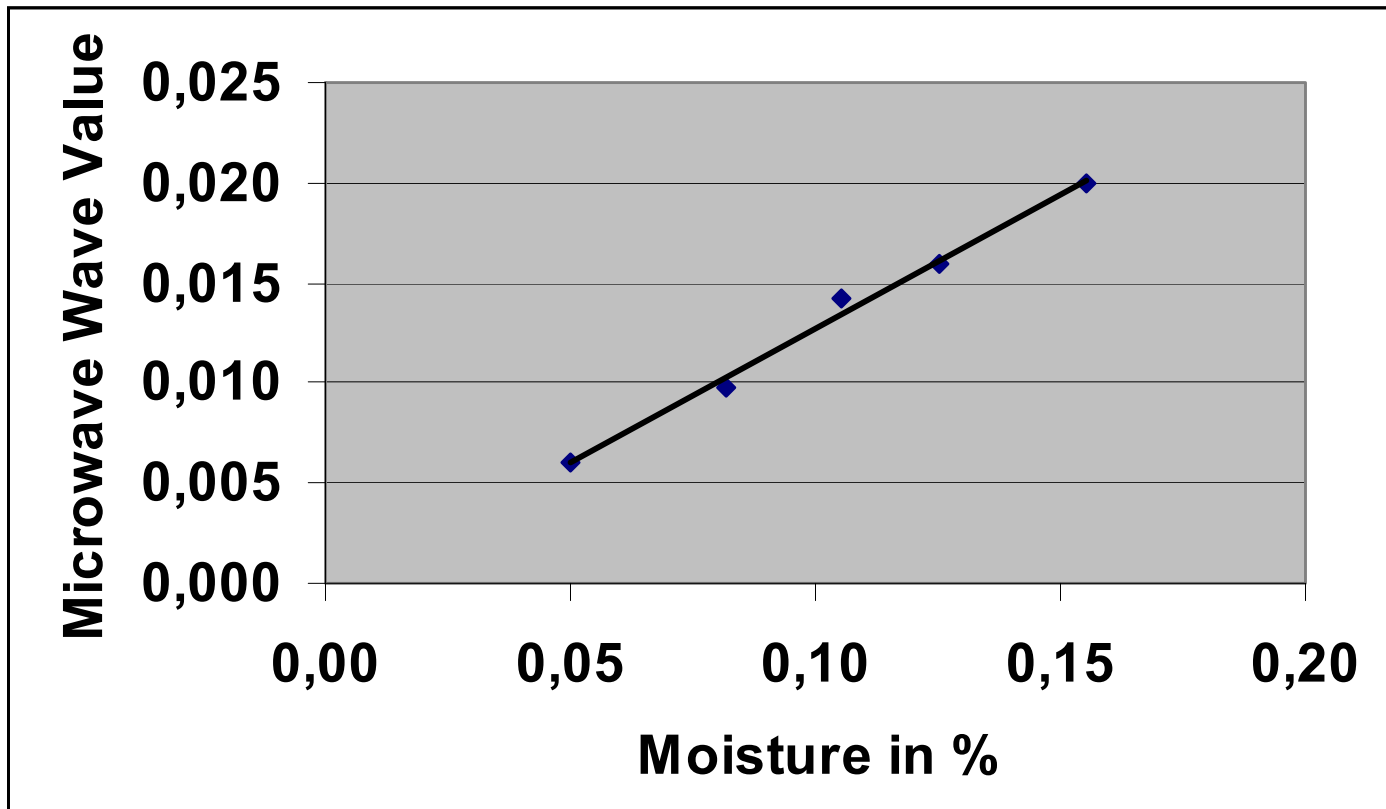
5 Applications

1 Results: Settings

- $m = 150\text{g}$
- $t_m = 1\text{ s (Lab)}, t_m = 1/20\text{ s (Proc)}$
- **Reference: Drying Oven**

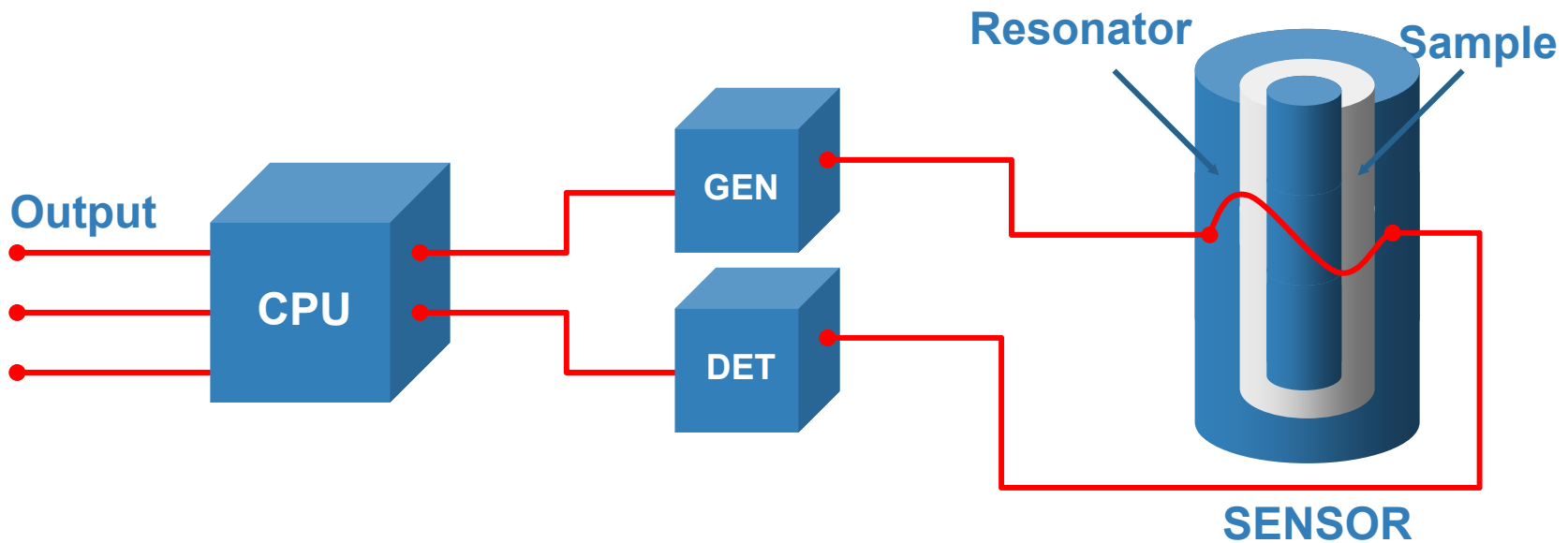
1 Results: Calibration

$R^2 = 0,9155$



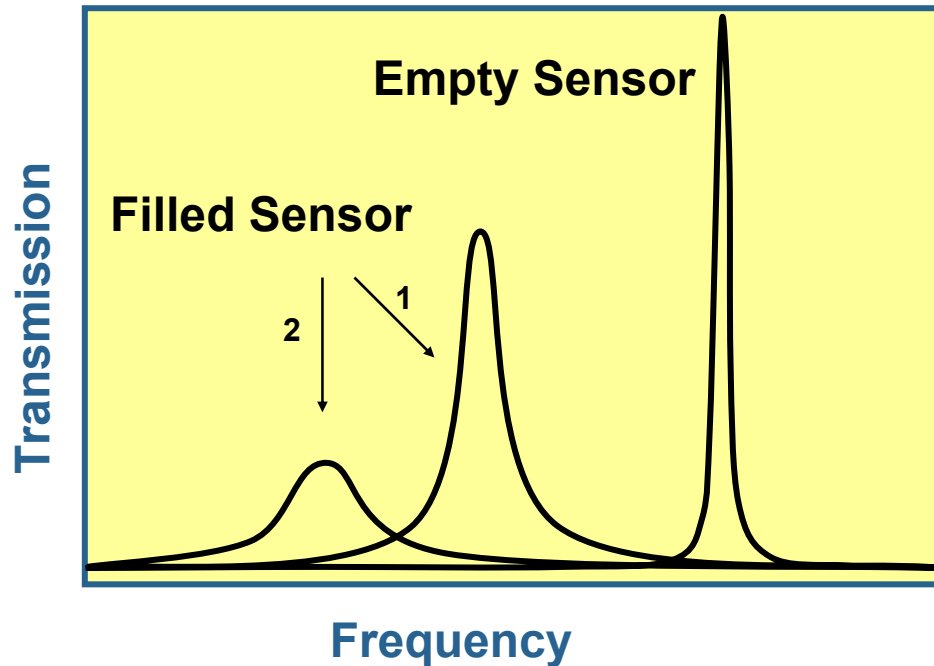
2 Resonance Method: Basics

- Resonance Wave
- Dipole of H₂O



2 Resonance Method: Parameters

- Δ Frequency
- Δ Bandwidth



3 Advantages

- **Fast**
- **Accurate**
- **Independent of Density and Color**
- **Determination of Core Moisture**
- **Long Term Stable Calibrations**

4 Instruments: Laboratory

MW 3310



MW 3150



Lab Sensors



4 Instruments: Process Control

MW 3200



MW 3260



Planar Sensors



5 Applications

- **Natural Products**
- **Chemistry and Pharmacy**
- **Tobacco**
- **Wood**
- **Building Material**

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