



# APPLICATION REPORT Food & Beverage

## Custody transfer measurement of sugary syrup

- Measuring system as per MID MI-005
- Mass flow measurement of sugary syrup
- Space-saving installation with straight tube design



### 1. Background

UNIFERM is a domestic and international supplier of ingredients for bakeries. The company supplies the bakery trade and baking industry with a comprehensive range of products including baking yeast, baking agents for bread and rolls, baking agents for fine pastries and separating agents.

### 2. Measurement requirements

Sugary syrup is used as a raw material in the production of yeast. This syrup is subject to custody transfer in accordance with MID 2004/22/EC MI-005. Measurement of the liquid sugar must conform to these requirements. Local installation conditions are taken into account and the data is made available to regulatory authorities.

A Coriolis mass flowmeter was chosen due to limited space on-site and the required measuring range in which the system operates.

Measuring system	
Medium:	Sugar syrup
Measuring range:	1.7...7.0 t/h / 62.5...257.2 lb/min
Minimum measured quantity:	20 kg / 44 lb
Temperature:	+5...+25 °C / +41...+77 °F
Pressure:	2 barg / 29 psig

## 3. KROHNE solution

KROHNE provided a Coriolis mass flowmeter OPTIMASS 7300 C. It was supplied in a compact version featuring a Titanium measuring tube (DN 25). The OPTIMASS 7300 boasts a single straight measuring tube and was thus able to be installed very compactly in a confined space. The general requirements for measuring systems for liquids other than water were taken into account. The measuring system's compact design meant that having no inlet run was a possibility.

## 4. Customer benefits

The OPTIMASS 7300 C meets all custody transfer requirements according to OIML R117 and MI-005. The high linearity of the mass flowmeter as well as the associated maximum measuring accuracy allow for highly precise measurement in the specified measuring range while reducing costs for calibration.

## 5. Product used

### OPTIMASS 7300 C

- Coriolis mass flowmeter for liquids and gases
- Highest accuracy for CT (MID 2004/22/EC MI-005)  
Flow rates up to 430,000 kg/h / 15,800 lb/min
- Best in class for zero stability
- Tubes available in 4 materials  
(Stainless steel, Titanium, Hastelloy®, Tantalum)
- Modular electronics concept
- Optional heating jacket
- OIML R117, MI-005, Inmetro, NTEP
- HART®, FOUNDATION™ fieldbus, PROFIBUS® PA and DP etc.



### Contact

Would you like further information about these or other applications?  
Do you require technical advice for your application?  
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