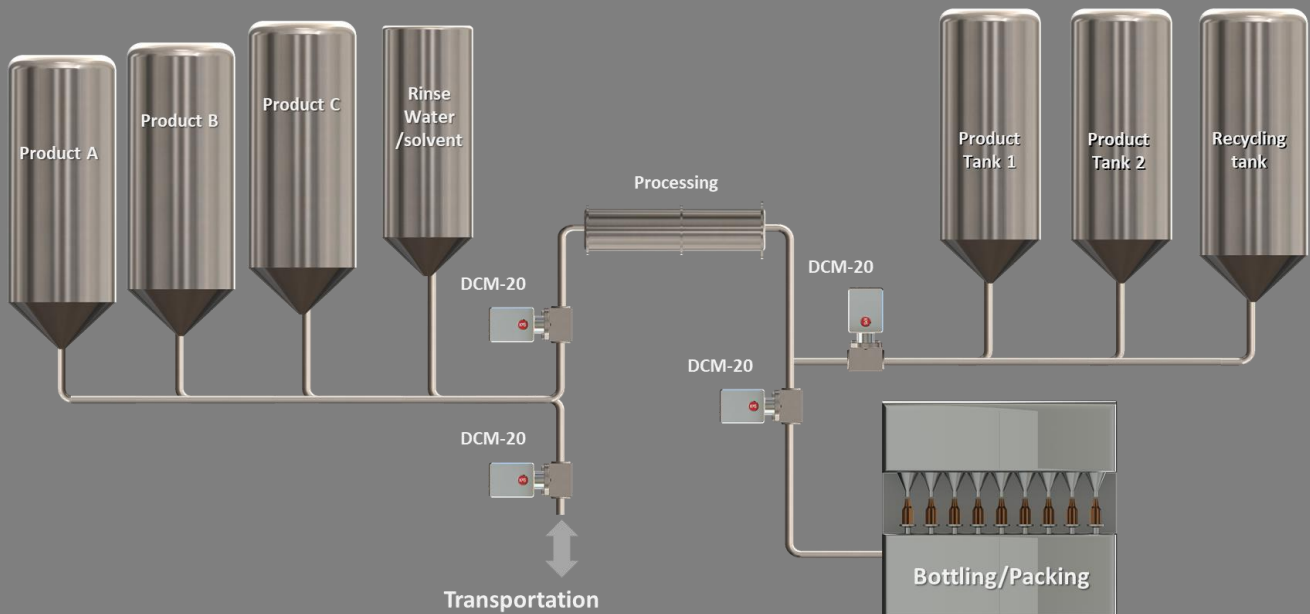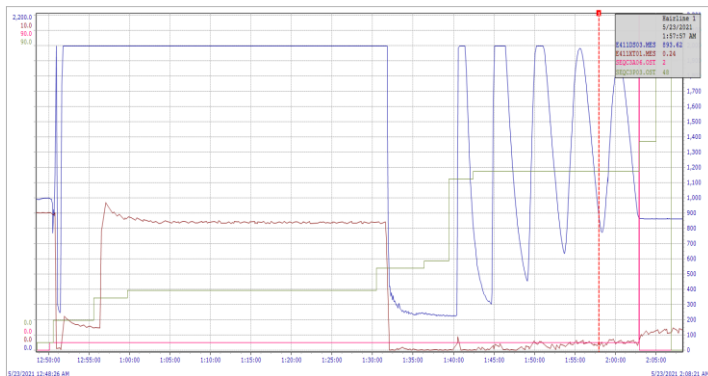# Inline optical Brix monitors balance cost, speed, versatility in beverage interface detection in filling lines

Applications

Inline refractive index provides beverage interface detection in**: Fruit juice, Milk, Beer, Wine**

Process

In high volume beverage filling lines, fast process control and downtime reduction whilst ensuring product quality are paramount. Waste or product overlap reduction is enabled by a precise optical Brix measurement.

KxS Technologies' inline optical Brix monitor based on refractometry is designed to provide a sharp interface detection of the product batch tails for optimization of the feed of product to either filling or recycling tank. The Brix monitor allows for product-to-rinse or product-to-product characterization.

Compared to conductivity or turbidity measurement technology, the optical refractometer DCM-20 uniquely provides real-time measurements in:
- product interface detection
- CIP sequences
- Brix measurements for continuous Quality Control

Installation notes

DCM-20 inline Brix monitor with its purpose-built instrument optics yields a **unique integration concept** with test reports presenting proof of cleanability of the entire mechanics as integrated in the process equipment.

The design meets 3-A design standards, is EHEDG certified and offers scalable integration configurations enabled by its proprietary single-piece (no weld joints) flow cell housing for a wide range of process pipe sizes, while also CIP clean compatible.

The compact optical Brix monitor is easily mounted without restrictions by pipe orientation. The DCM-20 is mounted in either vertical or horizontal pipe sections. Retrofits in existing pipe bend connections are also accommodated for, while not being the optimal mounting location. Pipe bends are subject to flow profile and dead space issues.

Product recommendation

The entire combination of the compact Inline Brix monitor DCM-20-H15 and single-piece flow cell housing SFC-H15-HPF is EHEDG certified and meets 3-A design standards with 3-A symbol authorization for scalable 1"…4" pipe size integration.

Measurement range: 0-100 Brix
Precision: +/-0.025 Brix
CIP compatible
Analog or digital signal communication protocols

Optional Modular Connection Unit MCU with electrical connections to the stand-alone DCM-20 Brix monitor.