## Liquid analysis solution saves £100,000 a year

Framptons avoids product waste and improves quality

## Framptons

Founded in 1898 and based in Somerset, UK, Framptons is a plant-based drinks manufacturer. Mainly known for its oat drink production, the company also manufactures beverages made with coconut, soya, chickpeas, peas, hemp, grains and pulses in a range of formats. Since 2023 Framptons has been owned by Provator, a wholly owned subsidiary of the Swedish investment company Profura.

"It's really straightforward and simple to maintain." Steve Turner Project Engineering Manager Framptons





Steve Turner

Framptons' plant in Shepton Mallet

The challenge Framptons produces oat milk and other plant-based drinks from its factory in Shepton Mallet, Somerset. The company identified an opportunity for improvement to prevent some batches of oat milk appearing too diluted. "When we were transitioning between tanks, we could end up with small slugs of water left in the line," explains Project Engineering Manager Steve Turner. "It was difficult for the operators to always ensure that the lines were purged correctly." As laboratory testing was not frequent enough to be of use in production, a real-time sensor was needed to ensure consistency of the suspended solids from batch to batch.

**The solution** Endress+Hauser proposed the OUSBT66 near-infrared (NIR) inline suspended solids sensor connected with a Liquiline CM44P field transmitter. The sensor provides reliable and precise measured values in real time to optimise processes and product yield. Its hygienic design is CIP/SIP resistant and allows autoclavation. A demonstration of the sensor in Framptons' laboratory clearly identified a shift in absorption between the diluted samples and neat samples, after which a site trial from February 2024 to the end of April 2024 produced good results. Being offered a trial was reassuring for Framptons, as Steve Turner explains: "We've used a different brand in the past and we weren't very successful with it, so we were a bit dubious about spending the money. But Endress+Hauser were kind enough to let us trial a unit, so that was definitely a plus."

After the trial Framptons immediately purchased one measurement loop, with the potential for more in future. If the solids sensor identifies a watery product based on a product-specific limit, it is automatically diverted away from the finished product tank and returned to the pasteuriser. "The operator can see on the screen if it's diverted and why - for a concentration reason, temperature or anything else," says Steve Turner. "It's really straightforward and simple to maintain as the sensor is also cleaned during routine CIP."



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OUSBT66 sensor in the process

**The benefits** As well as improving product guality. using the sensor has resulted in significant cost savings for Framptons of around £100,000 per year, far outweighing the initial purchase. This is down to less water being used for rinsing and less product being diverted away from the finished product tank. As Steve Turner says, "Before we installed the sensor we were routinely letting the product travel over 150 metres back to the pasteuriser. Now the operators are using it to switch over to the product tank a lot earlier, so we're not losing product."

The real-time monitoring and adjustment of the water/product mixture has improved product consistency, without the need for time-consuming offline sampling. All the data produced is fully accessible and traceable for compliance requirements.



Liquiline CM44P field transmitter

After the success of the first unit, plans have progressed to install the instrumentation on other product lines. The experience of working with Endress+Hauser has so far been positive and stress-free. "It's a good brand, and there's always someone there to help us," confirms Steve Turner. "We've never had an issue."

## OUSBT66 suspended solids sensor



- Real-time measurement for optimised processes and product yields
- Reliable, precise measured values with excellent laboratory correlation
- Easy, traceable verification and calibration
- Hygienic stainless steel body without seals or crevices
- Suitable for CIP/SIP and autoclaving
- Various path lengths and sensor lengths for perfect fit into every fermenter and bioreactor

Endress+Hauser Ltd Floats Road Manchester M23 9NF Tel: 0161 286 5000 Fax: 0161 998 1841 info@uk.endress.com www.uk.endress.com



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