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Experience report Rotary viscometer PCE RVI 2 V1L

Case Study Liquid yeast

Fresh backing yeast has been one of the basic ingredients for bread and confectionery for thousands of years. Since, as against to cereals or other foodstuffs, it goes about the living microorganisms of the genus *Saccharomyces cerevisiae*, the fast and highly efficient processes determine nowadays the production and distribution of the fresh products. We, as manufacturers and distributors of the fresh baking yeast, supply well-known bakery manufacturers in Europe and neighboring countries with liquid yeast in the tanker. Since 2014, we have been using the PCE rotary viscometer RVI 2 - V1L in the QS laboratory of the yeast factory.



Fig. 1: V1L connected to the temperature sensor

The arguments:

- High measuring accuracy due to temperature sensor and processor control
- Easy cleaning, since very few parts are in contact with the product – and they are easily accessible
- Staff costs very low – during the measurement, the device operates automatically
- Necessary manual interventions are recognized and signaled - if the measurement should be carried out physically at a different speed or even with a different spindle, a signal sounds and a recommendation appears on the display
- Warning message before the calibration interval expires
- Transportation case makes mobile use possible

To enable our customers to optimally use the product in their own tank and processing plants, we set the physical properties of the yeast cell suspension into comparatively narrow limits in order to make them, which are originally with the wide range of fluctuation, computable and predictable for modern bakery equipment. During the conveying and dosing of the liquid fresh yeast, its viscosity plays a decisive role in achieving a certain volume of baked goods with given recipes, and at the same time to meet the timings.

The approximate estimation of viscosity over the other physical analyzes fails – as well as in case of the other foodstuffs – because of the complicated material matrix. As a useful alternative to the viscosity measurement by means of an electronically controlled rotation method, a ball-bearing or flow cup viscometers may also be considered – if one can accept the time consumption and other disadvantages. After an in-house demonstration, our lab staff were immediately convinced by a simple performance of a measurement, and for already two years we have been using the reliable measurements received with the help of the V1L.



Fig. 2: PCE RVI 2 series is provided in a sturdy transportation case

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