

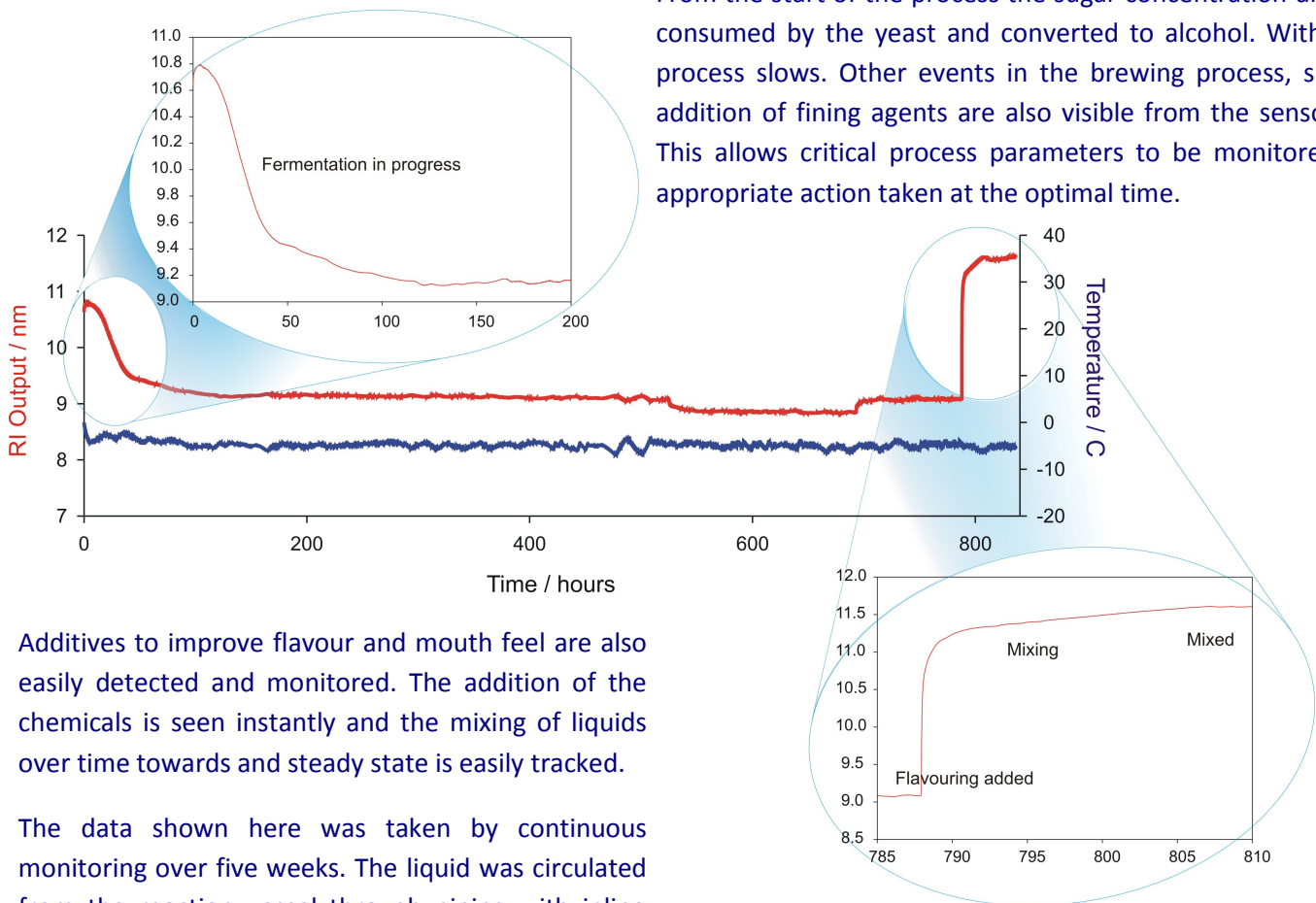


Real Time Monitoring of Fermentation Processes

Using the inline sensor technology, Stratophase SpectroSens chips are capable of monitoring many aspects of process evolution over many weeks.

Available in both insertion probe format and in-pipeline the sensor technology can monitor a variety of properties whilst a process is running. One example of this is the tracking of brewing processes where the concentration of sugars, yeasts and alcohol vary over time due to fermentation.

From the start of the process the sugar concentration drops as it is consumed by the yeast and converted to alcohol. With time, the process slows. Other events in the brewing process, such as the addition of fining agents are also visible from the sensor outputs. This allows critical process parameters to be monitored and the appropriate action taken at the optimal time.



Additives to improve flavour and mouth feel are also easily detected and monitored. The addition of the chemicals is seen instantly and the mixing of liquids over time towards and steady state is easily tracked.

The data shown here was taken by continuous monitoring over five weeks. The liquid was circulated from the reaction vessel through piping with inline sensors fitted to record the process evolution.