

Beer Quality: Yeast Detection

INTRODUCTION

Removal of yeast to ensure no secondary fermentation takes place after bottling of beer is important for both beer quality and beer wastage.

Figura Analytics novel particle characterisation and counting technology, the Figura Analyser™, was put to the test, looking at real-world samples supplied by a large brewery chain. The company wanted to gain information on their products and understand the typical yeast concentrations batch-to-batch.



Figure 1: An Industrial beer brewing set up showing Krausen, the head formed at the peak of fermentation.

DETECTION AND QUANTIFICATION

Two beer samples were analysed, showing different yeast concentrations (Figure 2). Particles were determined to be as yeast using the Figura patented algorithm - a model using both size and shape for identification.

Using the Figura Analyser™ provided results for yeast content in <1 hour, a more rapid test than when compared with microbiology, which can take 5-7 days. This enabled faster, real-time decisions to be made about brew batches. Further, microbiology typically involves the use of many plastic plates, and keeping those plates at an elevated temperature for long periods, and thus the Figura Analyser offers a possible cost-saving solution.

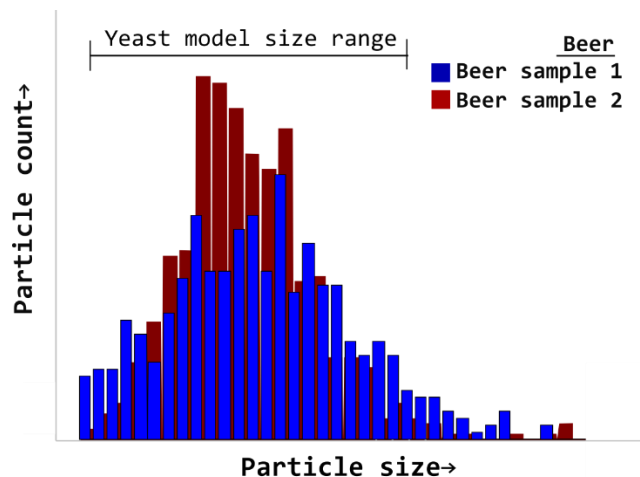


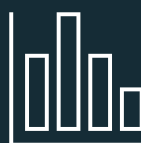
Figure 2: Two different beer samples containing different concentrations of yeast. Yeast is identified through our patented shape and size analysis (simplified for illustration above).

CONCLUSION

Yeast analysis provided information to our customers on concentrations of yeast left in beer batches before bottling, giving feedback on the efficacy of maturation times in bright beer tanks. This information was also used for quality control, comparing batches, to ensure the same product was being produced each time.

The utility of using the Figura Analyser™ for yeast detection has thus been demonstrated, enabling our customers to make rapid decisions based on the yeast content at different stages of the brewing and/or manufacturing process. This methodology can be applied to yeast monitoring in a range of drinks and liquid foodstuffs.

FIGURA ANALYSIS AND TESTING (FAST)



Interested in using our technology for one of your applications?

We now offer FAST consultation services to work with you and tailor to your specific application.

More information: figura-drinks.co.uk