

Shelf-life Monitoring: Chill Haze Tracking in Beer

INTRODUCTION

Chill haze occurs in beers due to proteins, flavonoids and tannoids (for example polyphenols) in beer, resulting in beer appearing cloudy (Figure 1) when served cold. Although this does not affect the taste of beer this can be unappealing to customers, and in some cases can result in customer complaints.

Working with a well-known brewery, Figura Analytics put our novel particle characterisation and counting technology, the Figura Analyser™, to the test. The customer challenge was to see if chill haze could be profiled over time and couple this information with shelf-life.



Figure 1: Image of two beers, with right showing chill haze.

SHELF-LIFE INFORMATION

Different batches of the same product were analysed, looking at the particle profile of beers over several years. Analysis of each sample was conducted rapidly (< 5 minutes per sample). The data showed significant differences in particles (likely tannoids), across batches (Figure 2). This followed the expected trend from the Brewery with tannoids reaching a high approximately

two years after manufacture, before reducing over time, which was confirmed with external validation.

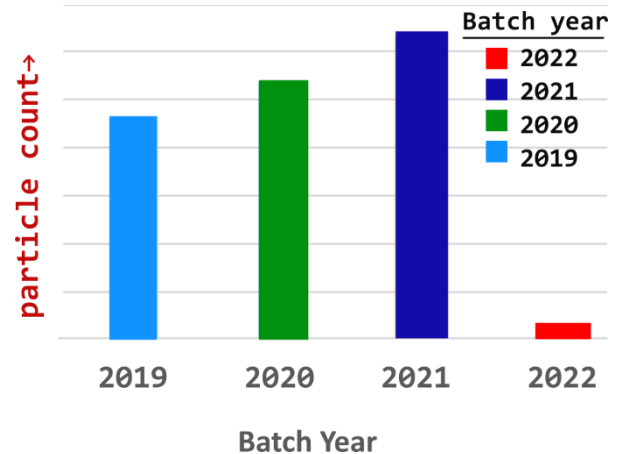


Figure 2: Particle count change over time over 4 years, showing a spike one year after brewing, before declining.

CONCLUSION

Analysis provided information on the likelihood of receiving customer complaints about chill haze for different batches, as well as knowledge that chill haze increases for the first few years. This was valuable information for the brewery, enabling them to anticipate possible complaints from beer already in circulation, and improve the speed of product distribution to ensure consumption before the peak in product chill haze.

The utility of the Figura Analyser for chill haze analysis has thus been demonstrated, enabling our customers to make informed decisions on batch quality.

FIGURA ANALYSIS AND TESTING (FAST)



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More information: figura-drinks.co.uk