Benefits of using the ABER PERFECTPITCH

*A **case study** assesing the functions and benefits of the ABER PERFECTPITCH based on trials at the **Meantime Brewery in London**.*

Introduction

Fermentations are highly dependent on how much yeast is delivered into the fermenter vessel.
It is common to estimate the amount of yeast required for pitching based on mass. However, the viable concentration of yeast is often incorrectly estimated, thus leading to highly varied fermentations.

Typically, under-pitching makes for slow, troubled fermentation, whilst over-pitching can lead to off flavours and haze. Either scenario leads to high wastage, poor yeast management and increased batch to batch variation.

"The PERFECTPITCH has helped to get a more uniform fermentation profile plan of yeast..."

For craft breweries, this problem is further complicated when pitching from cone to cone or yeast propagator to fermenter.

The Aber PerfectPitch is a mobile skid that is built for craft brewers to help pitch yeast more consistently.
The skid is comprised of the successful Aber Compact probe, a flow meter (See far right) and a V350 monitor (See right) that serves as a mini PLC .

The skid is designed to be easily connected to hoses, and can be wheeled around, making it ideal for use in a microbrewery with multiple fermenters. In addition, the Aber PerfectPitch is designed to undergo CIP and is IP65 rated.

Endress and Hauser flow meter

ABER
TRUSTED TECHNOLOGY

How does the Aber PerfectPitch work?

The Compact probe works on Aber Instruments' trusted principle of capacitance measurement, where only the viable cell concentration is measured in real time. The Compact and the flow meter communicate with the V350 to ensure the correct concentration of live yeast has been pitched. A beacon on the ABER PERFECTPITCH is activated when the pre-set target concentration is reached, which can be used as an indicator to switch off the pump.

Each beer can be stored as a pre-set program within the ABER PERFECTPITCH based upon yeast strain and wort volume. The PERFECTPITCH may be used to pitch into the first brew and then to re-seed from cone to cone. CIP may be performed inline without issue.

Objectives

The following case study was performed at Meantime Brewing Company in London to assess the functioning and benefits of the ABER PERFECTPITCH. Meantime was an ideal candidate for this work because of its outstanding reputation, quality products and imminent expansion plans. Most of the work was done on Brand A (brand name not revealed) and London Lager.

Results & Discussion

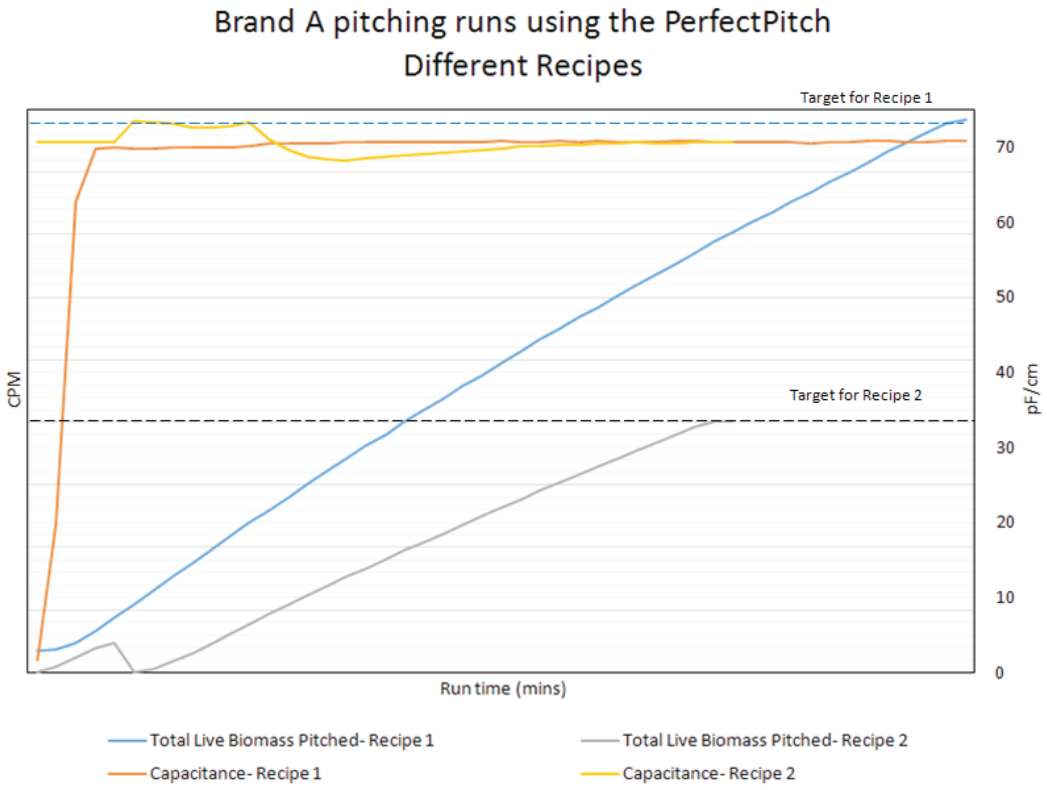

Figure 1

Shows pitching profiles for Brand A (Recipe 1 & 2), when the ABER PERFECTPITCH is used. Achieving different target concentrations accurately using the ABER PERFECTPITCH is demonstrated.

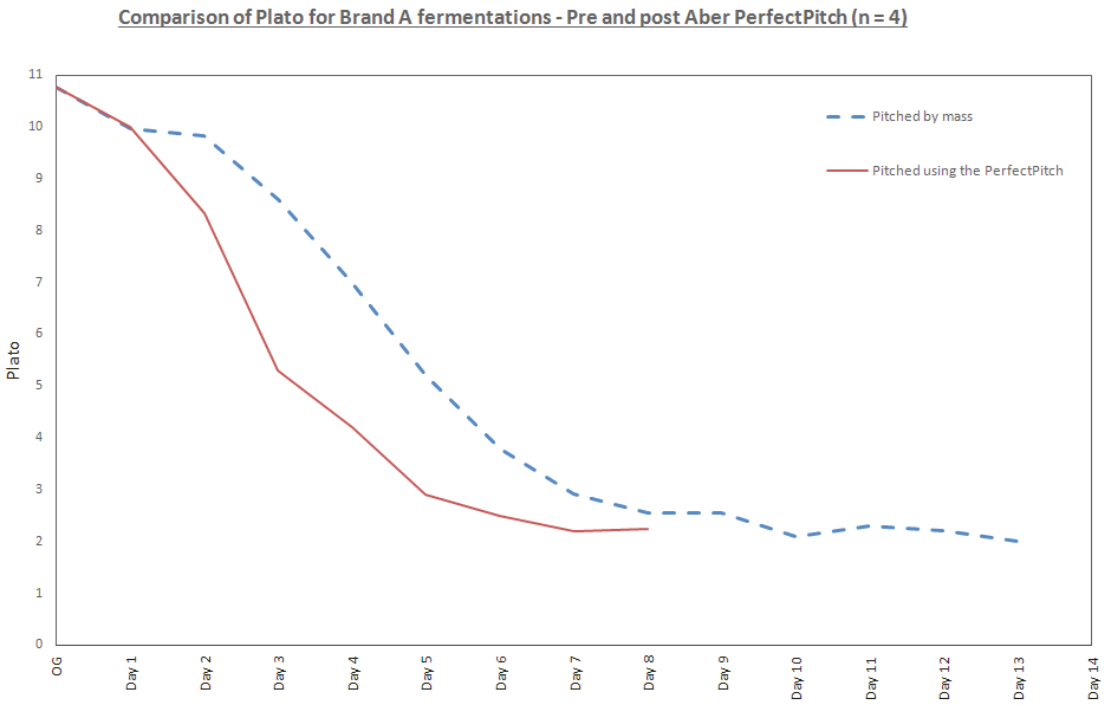

Figure 2 Shows the °Plato for Brand A fermentations over time, when pitched by mass and when the ABER PERFECTPITCH was used. Both curves represent an average of 4 fermentations. As can be seen, there is a vast improvement in the fermentation performance after using the ABER PERFECTPITCH, which can lead to time, energy and cost savings.

"..the instrument is easy to use, pitching is accurate and we have seen significant improvements in batch to batch consistency." Ciaran Giblin, Q.A. Manager, Meantime Brewery

The PERFECTPITCH SKID is easily moved around the brewery

COMPACT ADAPT YEAST MONITOR & Flow Meter

USB output now available

ABER
TRUSTED TECHNOLOGY

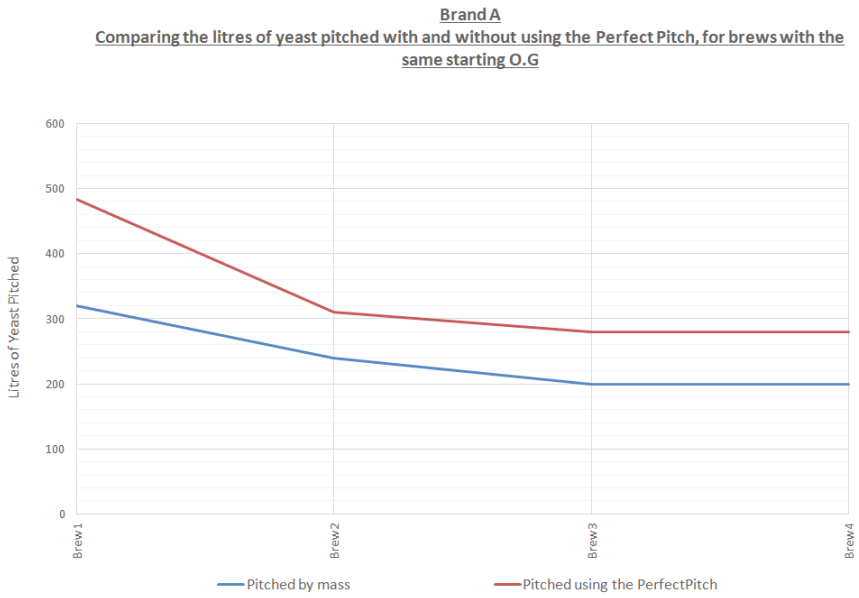

Figure 3 Shows how many litres of yeast were transferred to the fermenter when using mass and the ABER PERFECTPITCH for pitching for 4 brews (Brand A). It is evident that when using mass, the viable yeast concentration is overestimated, thus pitching fewer litres than necessary. This leads to slower fermentations and inadequate fermentation performance (Figure 2). In contrast, the ABER PERFECTPITCH estimates the right amount of live yeast, thus pitching the appropriate litres of yeast necessary for an improved fermentation performance.

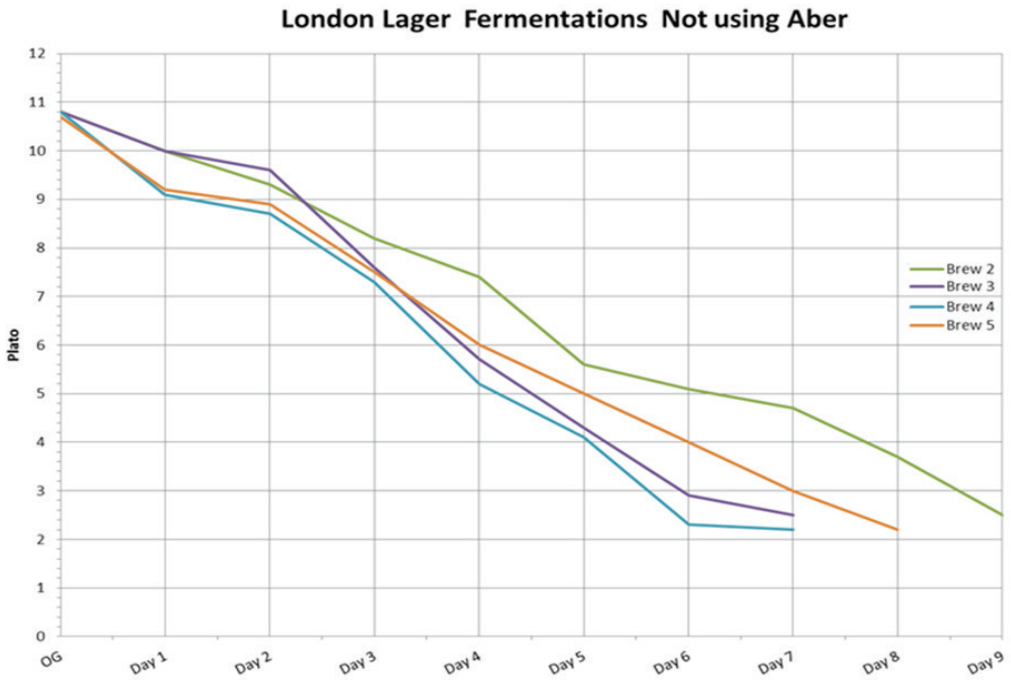

Figure 4 - Pitched by mass

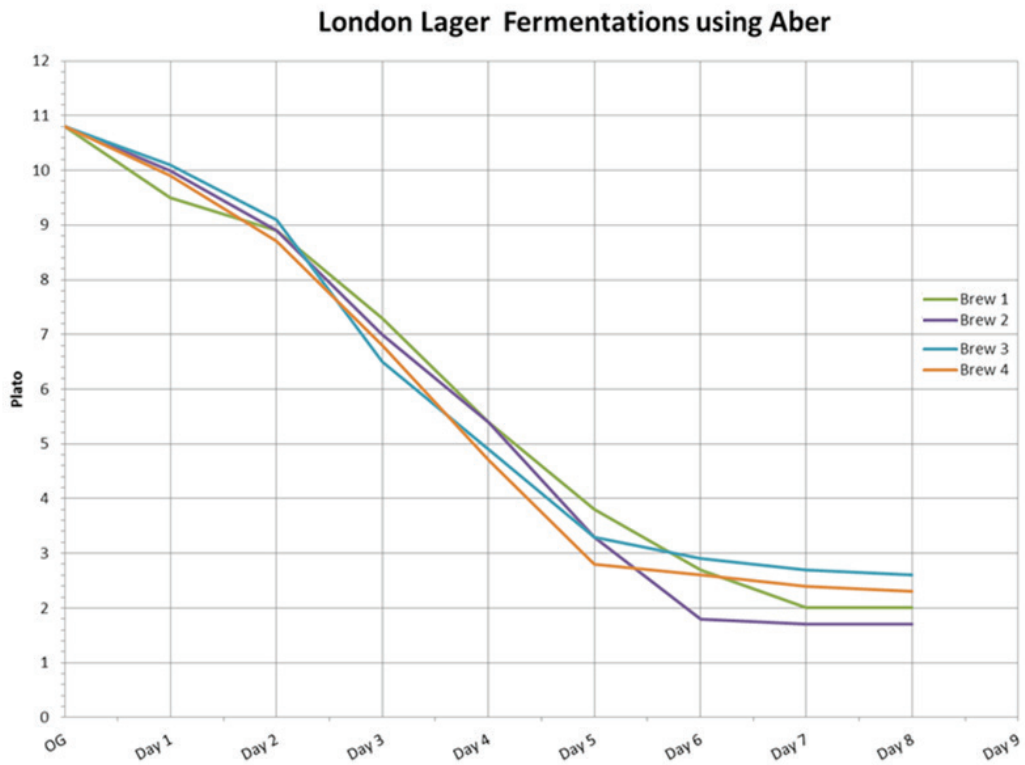

Figure 4.1 - Pitched with the PERFECTPITCH

Figure 4 & 4.1

Show the fermentation profile for the London Lager strain over four different brews, where the degree Plato is displayed over time, firstly when pitched by mass(Fig.4), and secondly by the ABER PERFECTPITCH (Fig.4.1). A significant improvement was seen in the performance and consistency of the fermentations following the use of the ABER PERFECTPITCH. The reduction in fermentation time could result in energy, cost and efficiency savings.

Conclusions

- The ABER PERFECTPITCH was an easy to use solution for pitching live yeast accurately.
- The accuracy and simplicity of achieving different target concentrations using the ABER PERFECTPITCH for different recipes were demonstrated.
- More consistent pitching was observed on using the ABER PERFECTPITCH.
- In a comparison study for Brand A, it was observed that fewer litres of viable yeast were transferred to the fermenter consistently when mass was used to pitch, whereas the ABER PERFECTPITCH adjusted the number of litres to pitch the correct number of live yeast in the fermenter.
- Fermentation performance and consistency was significantly improved when the ABER PERFECTPITCH was used and was demonstrated in this case study for two brands of Meantime beer.

We would like to thank Ciaran Giblin and Robert Smith of Meantime Brewery, London for providing the data for this case study.

To discuss the benefits of the PERFECTPITCH for your brewery please get in touch with our distributors via the details below:

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