



**BrewIQ**  
By Precision Fermentation

# BrewIQ at Mother Earth Brew Co.

*Real-time Fermentation Intelligence Provides Actionable Insights to Optimize Yeast and Increase Production.*

***Director of Brewing Operations Chris Baker was looking for a dissolved oxygen (DO) measurement tool. When he found BrewIQ, he opened up whole new opportunities to improve brewing process, efficiency, and profitability.***

Mother Earth Brewing Company was started in San Diego in 2010 as a family-owned and run craft brewery. With growth, they added production in Nampa, Idaho. Today Mother Earth operates production facilities and tap houses in California and Idaho, is sold in 20 US states, and is exported to the UK, Australia, and Mexico.

With rapid scaling of production, it was important to be able to standardize the processes needed for profitable, consistent production across batches for the brewery's flagship brands. Director of Brewing Operations Chris Baker was looking to add dissolved oxygen (DO) monitoring to the daily sampling process when he first looked at Precision Fermentation's BrewIQ. What he found was far more powerful than he expected.



## The Challenge

### Consistency Requires Data and Insights

Fermentation monitoring is typically a manual process. Often done once or twice per day at most, manual sampling is labor intensive and prone to operator errors. Data recording is often incomplete and is rarely consistent across fermentations. As one University of Northern Colorado study showed, even when following best practices, manual density measurements reveal biases and errors that occur during the actual measurement.

During Chris Baker's search for a DO monitor for his team, he learned about Precision Fermentation's BrewIQ. In addition to DO, BrewIQ monitors gravity, pH, conductivity, temperature, and pressure. BrewIQ takes measurements every 20 minutes, resulting in a detailed data profile for each fermentation, automatically measured, recorded, and analyzed.

"It would take a ton of time to measure what the BrewIQ measures. It's unrealistic for most breweries, including Mother Earth, to have the man-power to watch fermentations closely. As a brewery, we are a big proponent of consistency, but we pushed consistency as far as we could."

With BrewIQ in place, Chris found that he could use data well beyond his initial intent. First, with round-the-clock sampling, his team received alerts as soon as an issue occurred. Previously, when problems arose during a fermentation, it took a significant amount of time to problem solve—now with continuous, real-time data, Chris has been able to react more rapidly and make needed decisions. And with benchmarks, he's able to compare each batch of the same brand and fix variations batch-to-batch.

## The Solution

### BrewIQ Fills in the Gaps in Fermentations with Unparalleled Visibility

BrewIQ provides data most brewers never have access to. "I'm actually filling in a role in my brewery that I've never had before." Chris found the software to be intuitive and easy to use. He quickly realized that because the BrewIQ system is so powerful, he didn't need to download the data and analyze it on his own any longer. "When you think about the skill set needed to process data in Excel—you could be a blackbelt in Excel and wouldn't be able to build algorithms to this extent. I'm impressed with how powerful it made me."



With all this fermentation data at his fingertips, Chris put the information to good use. He gained a better understanding of DO uptake as he'd originally intended, but he also used the information for everything from yeast optimization to increased production volume. As yeast is transferred to the fermenter, pH is closely monitored to ensure yeast health. Using benchmark curves, he's been able to dial in his pitch rates to ensure consistency. And by being notified of issues sooner, there's been less production delays from things like sluggish fermentations. More consistent production schedules have led to an increase in production volumes.

But it's not just Chris watching the data. Every account at Precision Fermentation has a dedicated Customer Success Manager. For Mother Earth, Kristen Ewer has taken over that task. "She often noticed issues before my head brewer or I can even wrap our heads around it," notes Chris.

**"This is the best tool you can have for consistent fermentations."**

*Chris Baker, Director of Brewing Operations of Mother Earth Brew Co.*

## The Future

**BrewIQ is "important for future of craft beer industry and the quality that comes out of it."**

Chris notes that more breweries could benefit from knowing what is happening in their brewery with the data provided by BrewIQ. "If we could share more data, beer across the craft sector would improve." The industry is already known for information sharing, but fermentation remains an area largely unknown. BrewIQ takes a lot of the guesswork out of it.

"I think that BrewIQ is an important part of the future of the craft beer industry—and the quality of beer that comes out of it."