

HydroDose Pro

16-Day Calibration Summary

First-party field dataset • Kaybi Beverage Industries • Published October 2026

Evidence disclosure. Kaybi Beverage Industries and HydroDose Pro are both owned by Kaybi Enterprises LLC.

This summary describes a first-party calibration dataset from an operating facility. It is not independent third-party validation and it does not establish results for other plants.

Dataset at a glance

The published model was calibrated from 16 consecutive days of operational data at a small-scale water treatment facility treating low-pH groundwater. The records include raw-water pH, treated-water pH, and daily chemical consumption. The model uses these observations to produce a documented starting estimate; it is not an operating instruction.

Parameter	Calibration value	Observed range or source
Raw-water pH	4.25 baseline	4.02–4.78 in the 16-day dataset
Treated-water pH	7.70 baseline	7.50–7.98 in the 16-day dataset
Daily flow	15,000 L/day	Constant during calibration
Base soda ash dose	150 mg/L	Back-calculated from consumption log
Base alkaline dose	50 mg/L	Back-calculated from consumption log

How the model uses the dataset

The calculator applies an **Acidity Factor** from the entered raw-water pH and a **Target Factor** from the entered treated-water pH. The published calibration baselines are 4.25 for raw water and 7.70 for treated water. Each estimate should be checked through site sampling, calibrated equipment, approved chemical specifications, and qualified engineering judgment before a chemical feed setting is changed.

What this summary does and does not show

Included

- Calibration duration and operating context
- Published pH baselines and observed ranges
- Published base-dose references
- Evidence ownership disclosure

Not established

- A universal dose for every plant
- Performance at independent facilities
- Results outside the observed pH range
- Control of alkalinity, hardness, CO₂, temperature, or transient events

Known limitations

The dataset comes from one facility and a narrow raw-water pH range. It does not model alkalinity, hardness, dissolved CO₂, temperature, source switching, or other transient changes. Operators using different equipment, chemicals, source water, or regulatory requirements must complete their own calibration and validation before relying on any output.

Supporting pages: hydrodosepro.com/methodology • hydrodosepro.com/case-study/kaybi-beverage