



**PERACETIC ACID VAPOR
MONITORING TO ENHANCE
WORKPLACE SAFETY IN
POULTRY PROCESSING PLANTS:
A CASE STUDY**

[ChemDAQ.com](https://www.chemDAQ.com)



 300 Business Center Drive Pittsburgh, PA 15205

 412-787-0202

 @ChemDAQInc



CASE STUDY

Looking to identify an affordable, reliable, and accurate monitoring solution for Peracetic Acid, Wayne-Sanderson Farms discovered ChemDAQ nearly 10 years ago and has since rolled out ChemDAQ's monitoring solutions company-wide across the U.S.

OVERVIEW

In 2014, Peracetic Acid (PAA) was introduced as an emerging antimicrobial chemical for poultry processing operations. Wayne-Sanderson Farms was among the first in the industry to explore and implement PAA, and in doing so, quickly realized the need for vapor monitoring to ensure worker safety. Due to the lack of real-time, continuous monitoring solutions available, safety management sought a third-party industrial hygienist to conduct regularly scheduled air sampling to establish baselines and measure for acetic acid and hydrogen peroxide. Costs from subcontracting quickly added up, and Wayne-Sanderson Farms began to seek more accurate, cost-effective solutions.

Initial conversations with chemical monitoring manufacturers proved challenging, as companies could not explain or validate how they arrived at their calculation for the level of PAA in the air. Upon further research, Wayne-Sanderson Farms discovered that these companies did not measure the chemical itself, but rather used a formula to infer PAA levels based on percentages of other known chemicals, namely acetic acid and hydrogen peroxide.

CHEMDAQ'S SOLUTION

As part of Wayne-Sanderson Farms' continuous improvement operations model, corporate safety experts constantly research ways to improve chemical monitoring systems in order to enhance workplace safety. That's when they discovered ChemDAQ, Inc., a chemical monitoring manufacturer based out of Pittsburgh, PA with nearly 20 years of experience monitoring antimicrobial chemicals.

A discovery call with ChemDAQ Technical Support to understand the science behind the solution proved what Wayne-Sanderson Farms hoped would be true: ChemDAQ calibrated their sensors with PAA vapor, not a surrogate gas, which made measurements more accurate and reduced risk of cross-sensitivity. As such, Wayne-Sanderson Farms immediately purchased ChemDAQ equipment.



When asked what formula was used, ChemDAQ Subject Matter Experts quickly responded, 'We don't do calculations. The sensors we provide are calibrated with PAA.'

— **ENVIRONMENTAL, HEALTH & SAFETY MANAGER**
WAYNE-SANDERSON FARMS

IMPLEMENTATION

Wayne-Sanderson Farms initially implemented ChemDAQ's SafeCide™ monitoring system, a portable solution that allows you to easily and precisely detect and measure PAA levels on the plant floor, conduct spot checks and identify sources of possible leaks.

SafeCide is a simple, well thought-out product. It was easy to implement, and ChemDAQ's Technical Support team helped provide proper education and setup for rapid results.

Wayne-Sanderson Farms quickly realized the benefits of monitoring could be utilized with fixed applications as well, namely where PAA is stored and dispensed before it enters plant operations. Safety management has since expanded their inventory to include ChemDAQ's Steri-Trac® monitoring system, a fixed monitor that continuously and simultaneously measures PAA vapor levels in the air, generates audible and visual alarms and stores data.

RESULTS

Our return on investment was almost immediate.

The implementation of ChemDAQ monitoring systems allowed Wayne-Sanderson Farms to reduce third-party costs and enhance on-site safety operations. Facilities across the country now conduct regular testing for PAA vapor and can make adjustments, as needed, in real-time to ensure their employees are kept safe and operations remain up-and-running.

By expanding their monitoring suite to include both portable and fixed solutions, they are able to quickly detect problematic areas and identify prospective issues before hazards arise, protecting both employee health and workplace safety.



ChemDAQ has proven to me over the years that they are the premier company that monitors PAA.

The company has grown and continues to provide the highest quality of products. It's a joy to work with them, and I would recommend their products to anyone who uses PAA in the market.



ENVIRONMENTAL, HEALTH & SAFETY MANAGER
WAYNE-SANDERSON FARMS



Wayne-Sanderson Farms plants that use PAA are equipped with SafeCides™



Nearly 10 years as a ChemDAQ customer



Upgraded to SafeCide 2.0 and Steri-Trac 2/2+ to leverage latest technology



Exploring ChemDAQ's breakthrough abatement technology to control PAA levels

Connect with a ChemDAQ safety expert for a free safety consultation.



PRODUCT OVERVIEW

ChemDAQ monitoring technology is trusted by more than 600 customers across the globe. Read on to learn more about the products featured in the case study.

SAFECIDE™ 2.0

ChemDAQ's SafeCide 2.0 is a portable vapor monitoring system that can be used to identify hot spots throughout your plant. Available in both a handheld or tablet format, the device provides accurate, real-time measurements of PAA in parts per million (ppm) and offers both a real-time sampling mode and an industrial hygiene mode for time weighted averages (TWA).



STERI-TRAC® 2

ChemDAQ's Steri-Trac 2 area monitor can be installed as a stationary monitor in key locations throughout your plant, providing both visual and audible alerts and the ability to track and export exposure data for analysis over time. The Steri-Trac 2 can also connect to your air handling systems to control both ventilation and air extraction based on PAA exposure levels.



WHAT IS PERACETIC ACID?

Peracetic Acid is a disinfectant chemical used across the food processing industry. It is very effective for killing microscopic organisms hiding in and on surfaces.

Combining hydrogen peroxide, acetic acid and water will produce PAA. It is a colorless liquid, highly reactive and has a strong vinegar-like odor that you can smell at very low levels. It's most effective at high concentration levels, which produces a gas vapor that is hazardous with acute exposure.

Exposure to PAA can occur from inhalation or direct contact, and exceeding exposure limits can often cause irritation to the eyes, nose, throat, and skin and shortness of breath.

FIND YOUR SAFETY SOLUTION

ChemDAQ has been an industry leader in chemical monitoring for nearly 20 years. Our team of safety experts stands ready to offer a free safety assessment to identify the best technology based on your needs.

SCAN TO CONNECT →



300 Business Center Drive
Pittsburgh, PA 15205

 Sales@ChemDAQ.com

 ChemDAQ.com