



Rosie



Proven Robotic Sanitation for Food Processing Facilities

September 10, 2025

Executive Summary

Food safety failures remain one of the most expensive and damaging risks for processors. In 2024, food recalls in North America alone cost the industry nearly \$2B, primarily due to bacterial and allergen contamination, stemming from sanitation issues. At the same time, processors face **labor shortages, high turnover (200–300%), and escalating regulatory scrutiny.**

CleanBotix's Rosie sanitation robot directly addresses these challenges. Controlled A:B testing against human cleaners showed that ROSIE consistently achieved **lower ATP readings, fewer re-cleans, and equivalent total cleaning time.**

With ROSIE, processors gain consistency, safety, and ROI equivalent to or greater than a full-time sanitation worker.

The Challenge: Inconsistent Sanitation Drives Risk and Cost

- **Brand Risk:** Consumers assume food is safe. One high-profile recall can erode trust for years.
- **Labor Instability:** Sanitation roles see up to 300% turnover, creating ongoing training and performance gaps.
- **Rising Recalls:** U.S. recalls rose 20% (2020–2023); EU +12%; UK +10%.
- **Downtime Costs:** Large plants lose ~\$10M annually to sanitation-driven downtime.
- **Worker Safety:** Sanitation staff face 60% higher injury rates than the U.S. average.

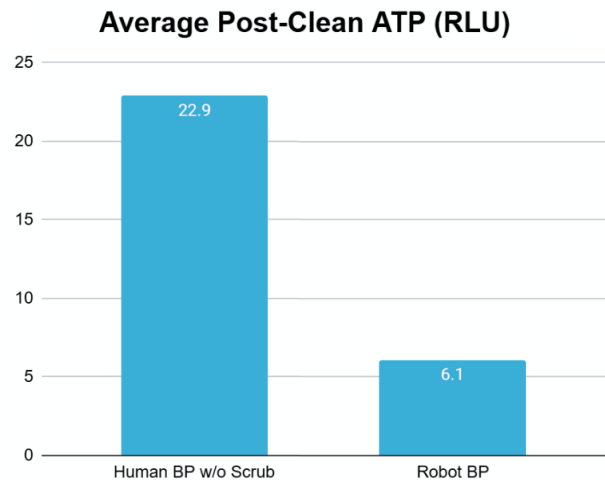
Consistent and reliable sanitation is extremely challenging to achieve with manual cleaning. Even with good SSOPs, human variation, error, and injuries cause failures.

Rosie vs. Human Sanitation: Testing Methods

A scientific A:B comparison test validates that Rosie outperforms manual cleaning. Timed testing analyzed the cleaning performance of Rosie and a human sanitation worker. Conveyors (A and B) soiled with chicken meat (2 lbs. 95% lean ground) and chicken fat (0.75 lbs.) were cleaned using both methods. Each cleaning test was repeated 5 times on both conveyors (A and B) in both soiled and unsoiled scenarios using boosted pressure cleaning methods (120°F at 363 PSI). Cleaning performance was measured using ATP swap testing at 4 zones (top belt, wear strip, drive cog, frame/side rail) with a passing threshold of ≤ 10 RLU along with visual inspection. Control tests were performed to ensure no false positives in the cleaning process.

Test Results

- **Cleaning Consistency:** Rosie Wins! Rosie's average RLU was 6.1 vs. 22.9 for the average manual clean. RLU values over 10 require re-cleaning.
- **Need for Re-cleaning:** Rosie Wins! No recleans needed for Rosie. The manual cleaning required re-cleaning 4 out of 10 times (ATP swab locations with $RLU > 10$).
- **Cleaning Time:** Rosie cleaned at 80% of human speed (37 vs 30 minutes) and can be optimized for further speed gains!



Conclusion: Robotic Cleaning is the Solution

Sanitation has long been the bottleneck of food production—costly, inconsistent, and labor-intensive. CleanBotix ROSIE transforms sanitation into a repeatable, auditable, and efficient process, ensuring safer food, lower costs, and stronger brand protection.

CleanBotix Rosie brings the advantages of automation to the highly manual food production sanitation process. CleanBotix Rosie improves:

- Consistency by following SSOPs exactly, doesn't get sick, injured, or quit
- Safety by reducing chemical exposure risk for staff
- Compliance by auto-logging cleaning cycles (time stamp, area cleaned, water pressure, dwell time, etc.)
- Costs are reduced by cutting downtime and labor expenses

Sources

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