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Name:

RT Technology – High Level Dive

An innovative solution for customer engagement



Core Opportunities within Traditional Cleaning Programs

Fixed Parameter Limitations

Traditional CIP relies on fixed time, temperature, and chemicals, causing inefficiencies and risks due to assumptions.

Resource Overuse and Risk

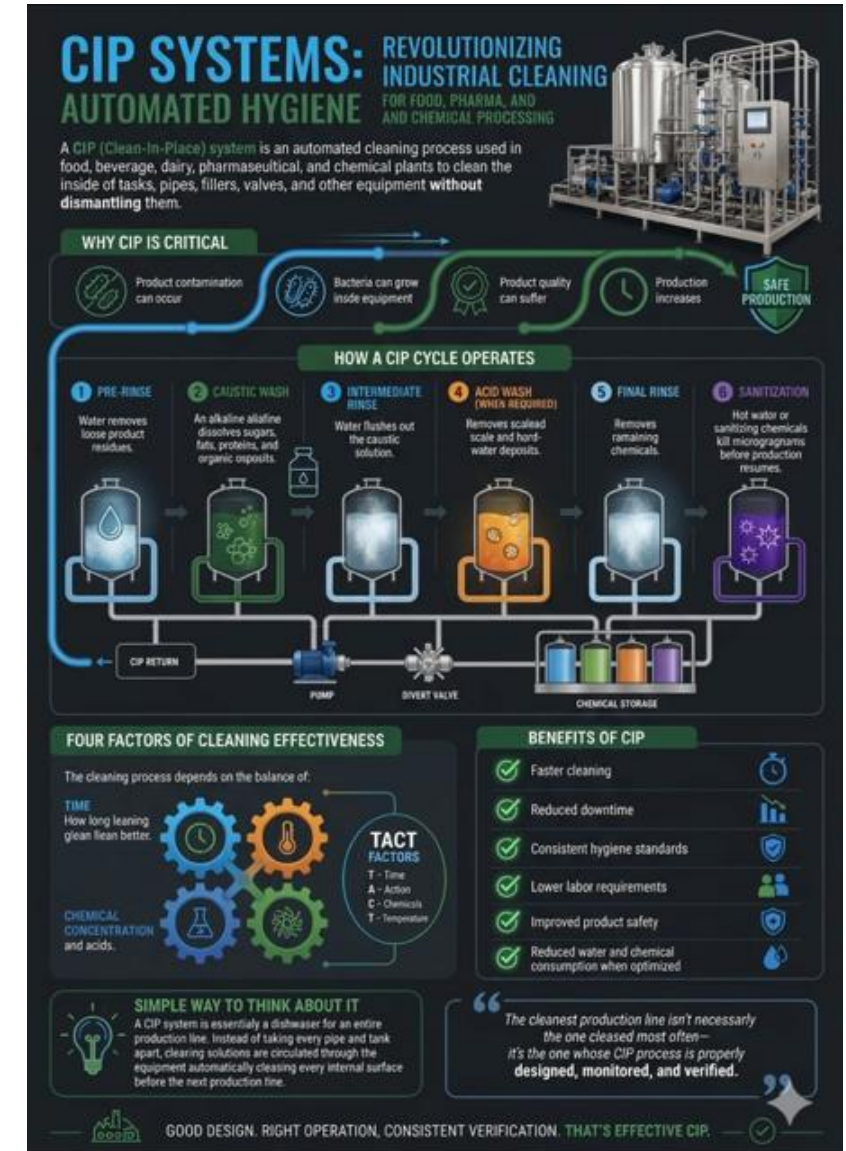
Over-cleaning wastes water, chemicals, and energy; under-cleaning risks contamination and quality issues.

Lack of Real-Time Feedback

Operators lack immediate feedback on cleaning effectiveness, leading to inconsistent results and reactive adjustments.

Benefits of RT Technology

Real-time visibility ensures efficient resource use and confirms system cleanliness for safety and performance.



What is RT Technology?

Continuous Real-Time Monitoring via UV/Vis Spectroscopy

RT Technology continuously measures key soil marker, chemistry and sanitizer concentrations using inline sensors for uninterrupted performance evaluation throughout any given wash cycle.

Eliminates Manual Sampling

The system removes the need for manual sampling, testing and titration by providing immediate feedback and insights.

Proactive Process Adjustments

Immediate feedback allows operators to adjust wash cycles in real time, improving efficiency and consistency.

User-Friendly Visualization

Results are presented in an intuitive format, enabling quick understanding and prompt decision-making by users.

Automated System Operation

The system operates fully automated, requiring minimal user interaction and eliminating manual sampling or lab testing.



How The Technology Works



Inline Sensor Monitoring

Sensors installed directly in the process stream (or via slip stream) continuously measure key parameters like chemical or sanitizer concentration and soil load.

Real-Time Data Collection

Data is automatically collected and analyzed in real time, offering immediate insights into process performance.

User-Friendly Visualization

Results are presented in an intuitive format, enabling quick understanding and prompt decision-making by users.

Automated System Operation

The system operates fully automated, requiring minimal user interaction and eliminating manual sampling or lab testing.

What RT Technology Measures



Chemical Concentration Monitoring

Ensures correct cleaning chemicals and sanitizers are present at optimal levels for effective sanitation performance.

Soil Load Measurement

Maps soil load removal during cleaning to determine when the system reaches cleanliness standards.

Fluid Composition Analysis

Analyzes fluid changes to provide context on the cleaning environment and process variations.

Inline Continuous Measurement

Measurements occur continuously within the system, eliminating manual sampling and ensuring current data.



What It Tells the User

Real-Time Operational Insights

RT Technology provides immediate answers about chemistry, cleaning status, and cleanliness to optimize operations.

Eliminating Uncertainty

The system removes guesswork by delivering clear, reliable information to operators for better decisions.

Enhanced Efficiency and Communication

Accurate data supports resource optimization, faster cleaning, consistent results, and improved team communication.

Key Takeaways



Data-Driven Cleaning & Change Management

RT Technology shifts cleaning from assumptions to data-driven processes improving efficiency and confidence.

Optimized Cleaning Performance

Real-time insights help identify when cleaning effectiveness plateaus to optimize process duration and reduce waste.

Increased Production Efficiency

Shortened cleaning cycles increase production uptime, enabling facilities to process more products within the same timeframe.

Support for Compliance and Safety

Reliable data enhances brand protection, product quality, safety, and risk management ensuring industry compliance.

RT Technology Enhancements

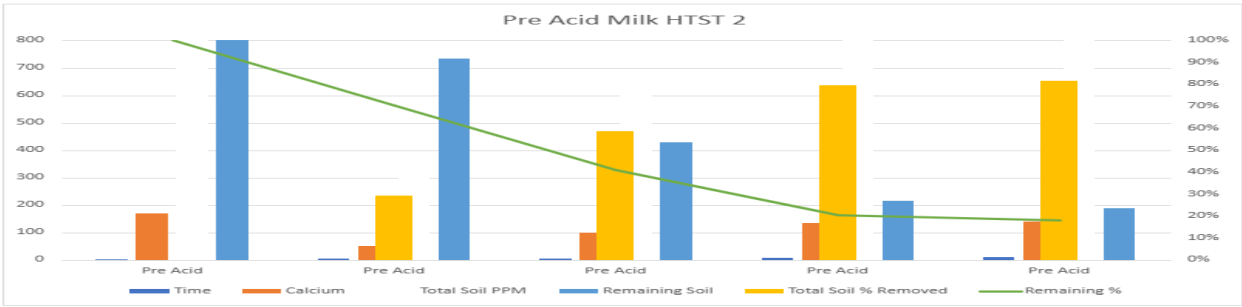
With historical insight per customer, using membrane systems, mapping protein pass through in permeate streams is a very likely possibility.



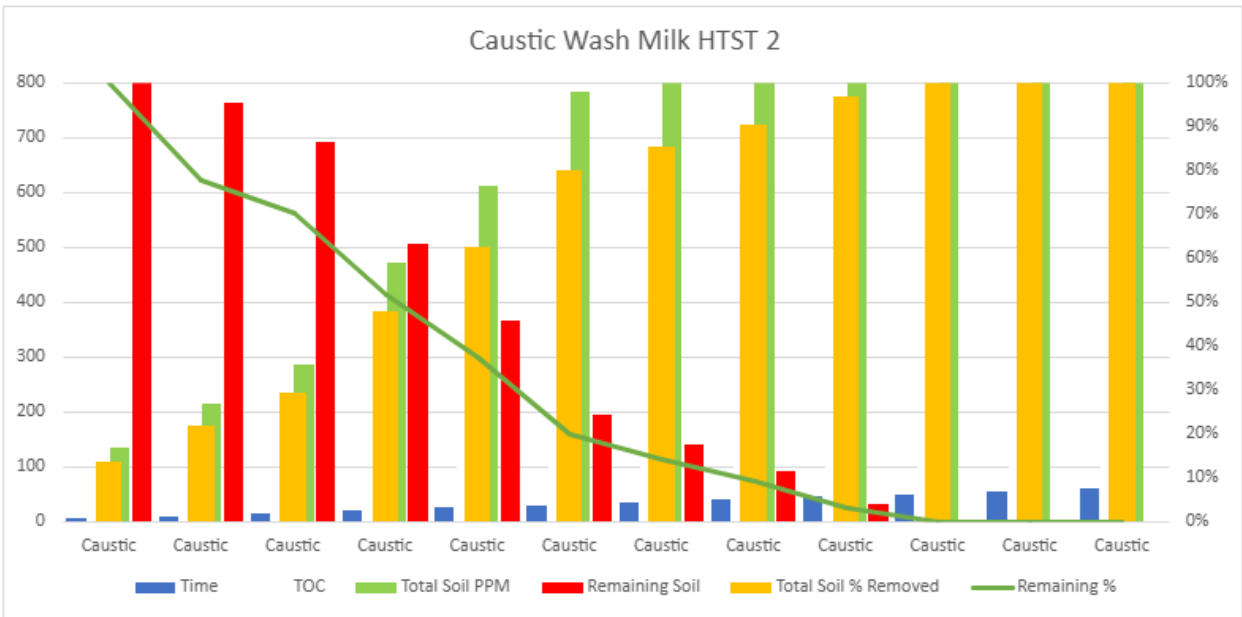
the **RITE Team®**
Real-time | Innovative | Technical | Expert

Soil Removal Over Time – Pre-Acid, Caustic & Acid Cycles

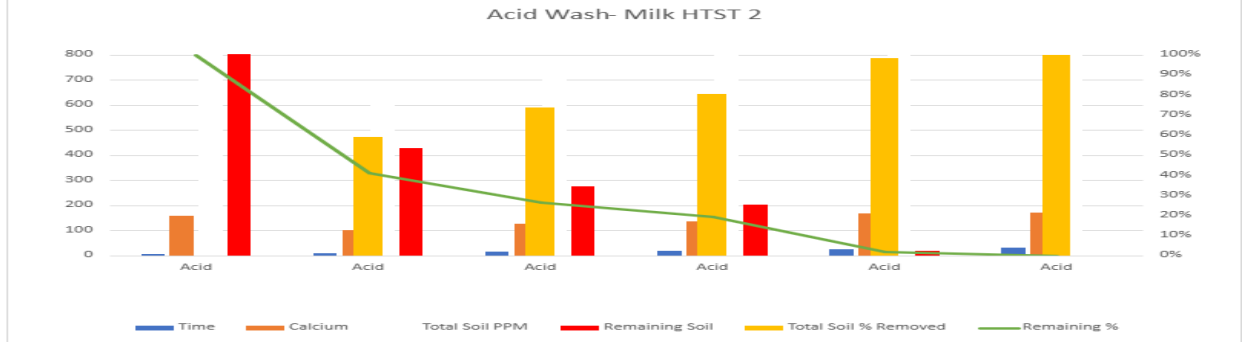
Sample	Time	Calcium	Total Soil PPM	Total Soil % Removed	Remaining Soil	Remaining %
Pre Acid	2	170	1040.4	0%	1040	100%
Pre Acid	4	50	306	29%	734	71%
Pre Acid	6	100	612	59%	428	41%
Pre Acid	8	135	826.2	79%	214	21%
Pre Acid	10	139	850.68	82%	190	18%



Sample	Time	TOC	Total Soil PPM	Total Soil % Removed	Remaining Soil	Remaining %
Caustic	5	22	134.64	14%	979	100%
Caustic	10	35	214.2	22%	765	78%
Caustic	15	47	287.64	29%	692	71%
Caustic	20	77	471.24	48%	508	52%
Caustic	25	100	612	63%	367	38%
Caustic	30	128	783.36	80%	196	20%
Caustic	35	137	838.44	86%	141	14%
Caustic	40	145	887.4	91%	92	9%
Caustic	45	155	948.6	97%	31	3%
Caustic	50	160	979.2	100%	0	0%
Caustic	55	160	979.2	100%	0	0%
Caustic	60	160	979.2	100%	0	0%



Sample	Time	Calcium	Total Soil PPM	Total Soil % Removed	Remaining Soil	Remaining %
Acid	5	157	960.84	0%	1040	100%
Acid	10	100	612	59%	428	41%
Acid	15	125	765	74%	275	26%
Acid	20	137	838.44	81%	202	19%
Acid	25	167	1022.04	98%	18	2%
Acid	30	170	1040.4	100%	0	0%



Real-Time SLM Data Collection

Captures a sample **every 1 second** – fully automated and continuous.

By comparison, manual SLM testing takes approximately **1 hour** to process up to **24 samples**.

