kersia®
INVENTING A **FOOD SAFE WORLD**

DAIRY INDUSTRY

KERSIA GLOBAL
CAUSTIC SODA SWITCH APPROACH

Supporting sustainable solutions for sustainable business

CAUSTIC SODA SWITCH PROGRAM

SUPPORTING SUSTAINABLE SOLUTIONS
FOR SUSTAINABLE BUSINESS

CAUSTIC SODA SWITCH SOLUTIONS
DIFFERENT APPROACHES AT A GLANCE

At Kersia, our goal is to help our customers reduce their ecological footprint and mitigate the impact of unpredictable price increases of chemicals such as Caustic Soda. We are committed to maintaining, and even enhancing, hygiene standards while providing solutions that support both environmental sustainability and cost stability. To achieve these goals, Kersia proposes one, or a mix of the following actions:

1 PRODUCT MIX OPTIMIZATION
Optimizing current Product Mix with less concentrated in caustic soda while keeping efficiency high!
→ Same Cleaning & Disinfection method

2 OPTIMIZATION THROUGH ADDITIVES
Optimizing caustic soda consumption through additivation
→ Same Cleaning & Disinfection method

3 ALTERNATIVE METHODS
Building a value-added portfolio
- Sodium hydroxide additivation
- Alternating Single Phase
- Alkaline Single Phase

→ NEW Cleaning & Disinfection method

Depending on the optimization method, different results or impacts can be achieved:

Reduction of Sodium Hydroxide Consumption → Fewer Rinses and Lower Water Consumption → Optimized Cleaning Time → Reduction of Power Consumption → Economic Gain

1 PRODUCT MIX OPTIMIZATION

Optimizing the product mix with reduced caustic soda consumption while maintaining efficiency is a strategic approach to enhance cost-effectiveness and sustainability in manufacturing. By minimizing the use of this costly and environmentally challenging chemical, companies can lower operational costs, reduce environmental impact, and improve overall process sustainability.

The product mix optimization approach ensures that efficiency and product quality remain uncompromised, offering a competitive edge in an increasingly eco-conscious market. A big advantage is that cleaning and disinfection procedures typically remain consistent when switching between products while the caustic soda reduction is immediately measurable.

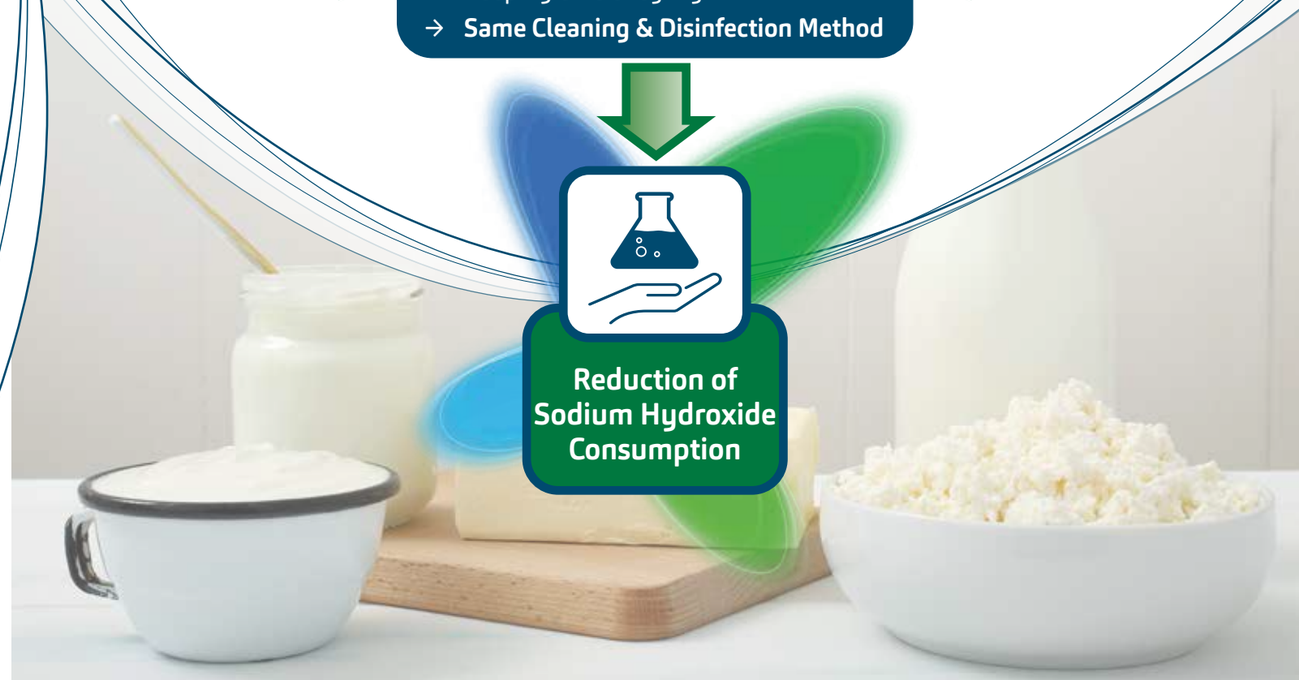
DOUBLE PHASE CLEANING PROGRAM
→ without complexing agent

SINGLE PHASE CLEANING PROGRAM
→ with complexing agent

- ✓ Optimized Product Mix
- ✓ Less concentrated Caustic Soda
- ✓ Keeping efficiency high

→ **Same Cleaning & Disinfection Method**

Reduction of Sodium Hydroxide Consumption



2 OPTIMIZATION THROUGH ADDITIVES

Optimizing Caustic Soda Consumption with Innovative Additives.

When using caustic soda for cleaning, optimizing its consumption can lead to significant cost and resource savings. By incorporating innovative additives that enhances the cleaning power of pure caustic soda, users can reduce their NaOH consumption while improving overall cleaning efficiency.

These advanced additive not only reduce the amount of caustic soda required but also allows for adjustments in cleaning cycles and procedures, resulting in lower water and energy consumption, shorter cleaning times, and overall cost savings.

ADDITIVATION TO SODIUM HYDROXIDE
Optimizing Alkaline Phase of Cleaning Procedure

One optimized CIP method involves the additivation of the cleaning solution with an additive such as ACTIV ADS or DEPTA + directly into the bulk of the sodium hydroxide (NaOH) solution or into the CIP solution.

The actual cleaning and disinfection method remains the same - but with measurable **Economic Gains**:

→ By cutting down on chemicals, water, and cleaning time, the operational costs decrease significantly, leading to economic savings.

ADDITIVES TO CAUSTIC SODA

ACTIV ADS

Improve the performance of the alkaline phase: degreasing, defoaming, dispersing properties

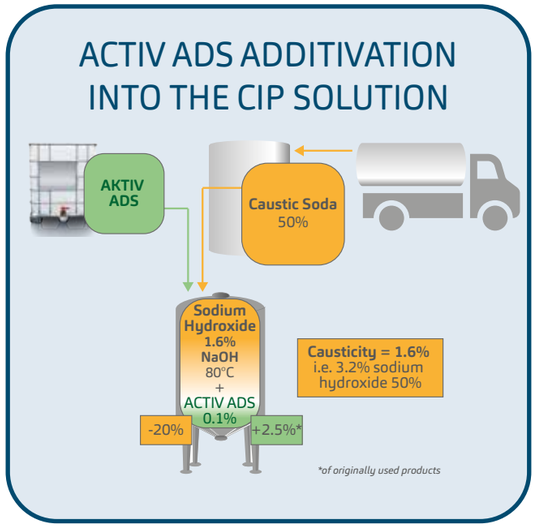
Suitable for hard water

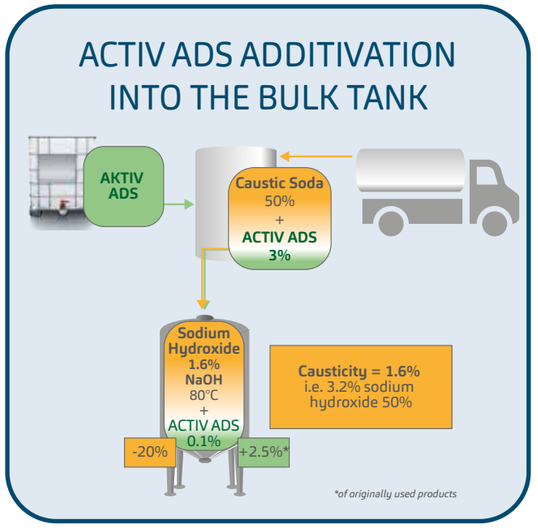
Miscible with 30% and 50% caustic soda

Use at >30°

Scale inhibition

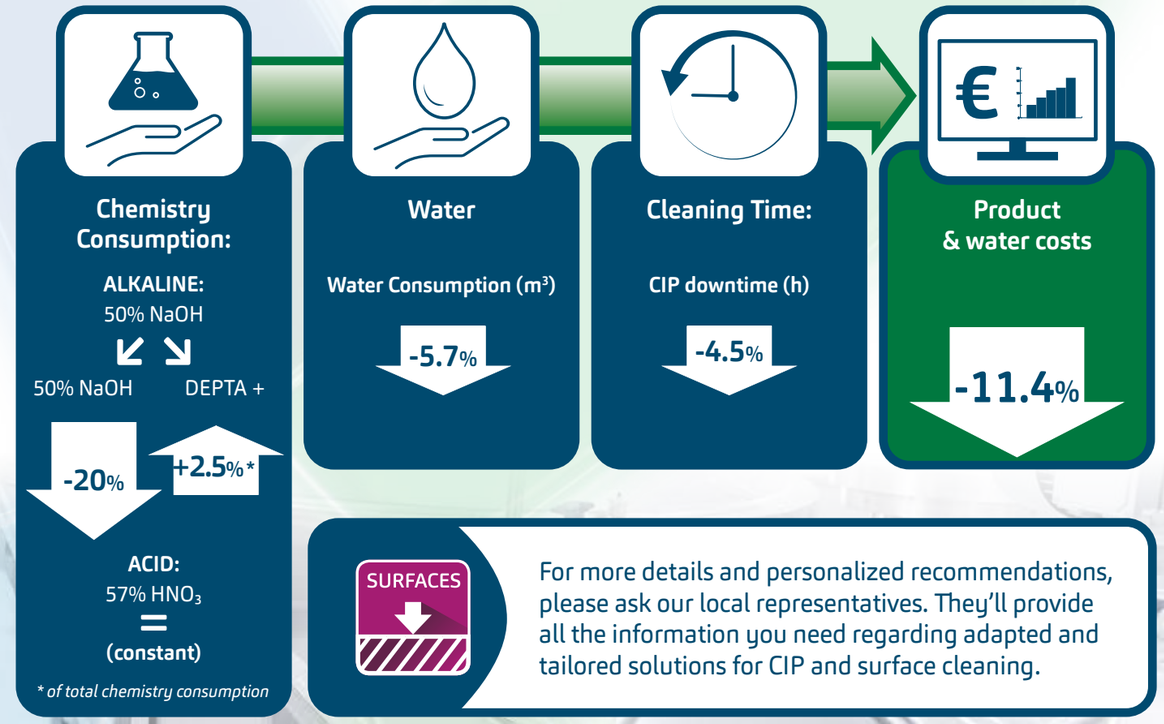
DEPTA +





Overall, the Sodium Hydroxide Additivation CIP method streamlines the cleaning process, conserves resources, and enhances cost-efficiency, making it highly advantageous for the dairy industry.

ECONOMIC RESULTS -
SODIUM HYDROXIDE ADDITIVATION



SURFACES

For more details and personalized recommendations, please ask our local representatives. They'll provide all the information you need regarding adapted and tailored solutions for CIP and surface cleaning.

Product availability may vary by country. For specific information, please reach out to your local Kersia support team.

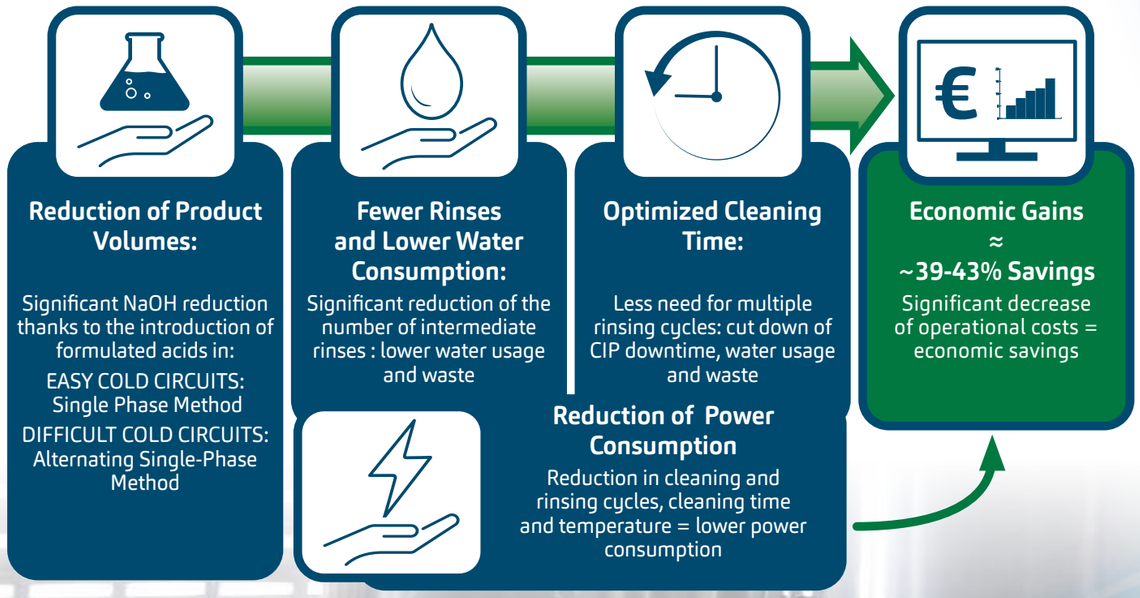
3 OPTIMIZATION - ALTERNATIVE METHODS

Driven by our commitment to reducing caustic soda consumption in the dairy industry, we have developed new and innovative cleaning solutions that redefine the standards of efficiency and sustainability. One of our key advancements is the Single & Alternating Single Phase Cleaning approach, designed specifically to minimize the reliance on traditional mineral chemicals.

Our single- and alternating single-phase approach significantly lowers the volume of caustic soda used by around 68% when using an additive such as DEPTA + or ACTIV ADS, while also reducing water consumption by nearly 17% and cleaning time by 11%. Furthermore, this method optimizes energy usage by lowering cleaning temperatures by 6°C to 10°C, ensuring a more environmentally friendly and cost-effective process.

OPTIMIZED CIP METHODOLOGY
SINGLE & ALTERNATING SINGLE PHASE METHOD IN EASY AND DIFFICULT COLD CIRCUITS

By cutting down onchemicals, water and cleaning time hence power consumption, the operational costs decrease significantly, leading to economical saving.



FORMULATED ACID

SOPURCLEAN OP-N
Strong acid product for CIP cleaning & disinfection

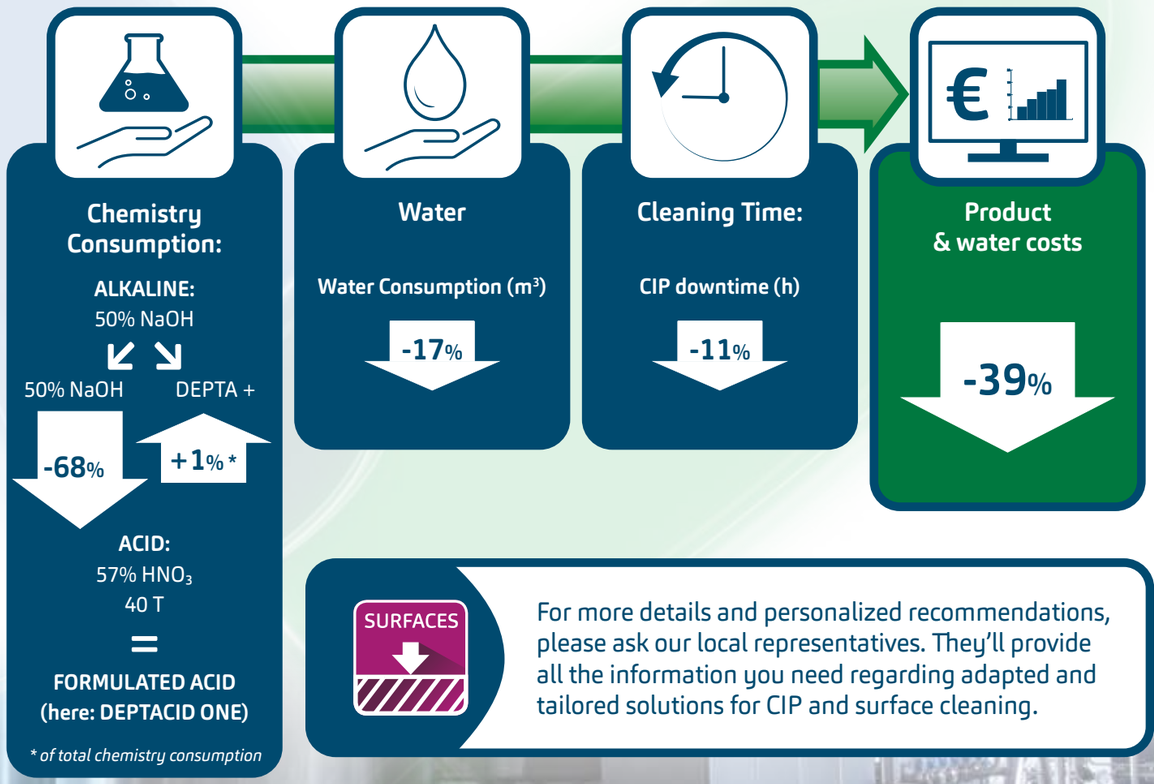
Strong acid product for simultaneous cleaning and disinfection, particularly suitable for use in CIP systems with recovery facilities

For an effect on bacteria and on yeasts

Instructions :

- Concentration: 1.5 %v/v
- Temperature: 4 - 25°C.
- Contact time: 15 - 45 minutes

ECONOMIC RESULTS -
ALTERNATING SINGLE PHASE



SURFACES

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Note: Economic results are based on the Alternating Single Phase Method using DEPTA + and DEPTACID ONE

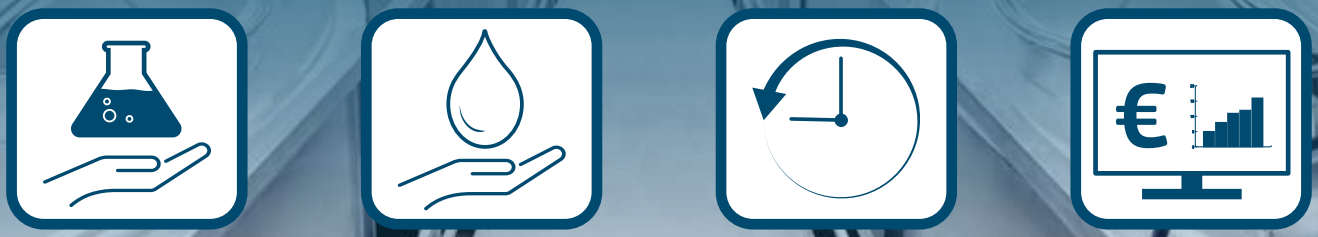
CAUSTIC SODA SWITCH PROGRAM

AT YOUR SERVICE – PREDICTING OUTCOMES, MAXIMIZING SAVINGS THROUGH DIGITALIZATION!

At Kersia, we are committed to offering sustainable solutions that support our customers throughout the food and beverage production process. Our goal is to reduce the use of chemicals while enhancing food safety through innovation.

To achieve this, we've developed an internal digital tool that integrates our market expertise with your process data. By simulating various solutions and methods, we can predict outcomes and evaluate them without real time implementation. This enables precise calculations of economic gains, including savings on products, water, and time—helping you optimizing efficiency, sustainability and economic results.

SUPPORTING SUSTAINABLE SOLUTIONS FOR SUSTAINABLE BUSINESS!



For more information, contact our local Kersia representatives.

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Contact your local Kersia representatives to discuss optimized solutions!

contact@kersia-group.com

www.kersia-group.com