

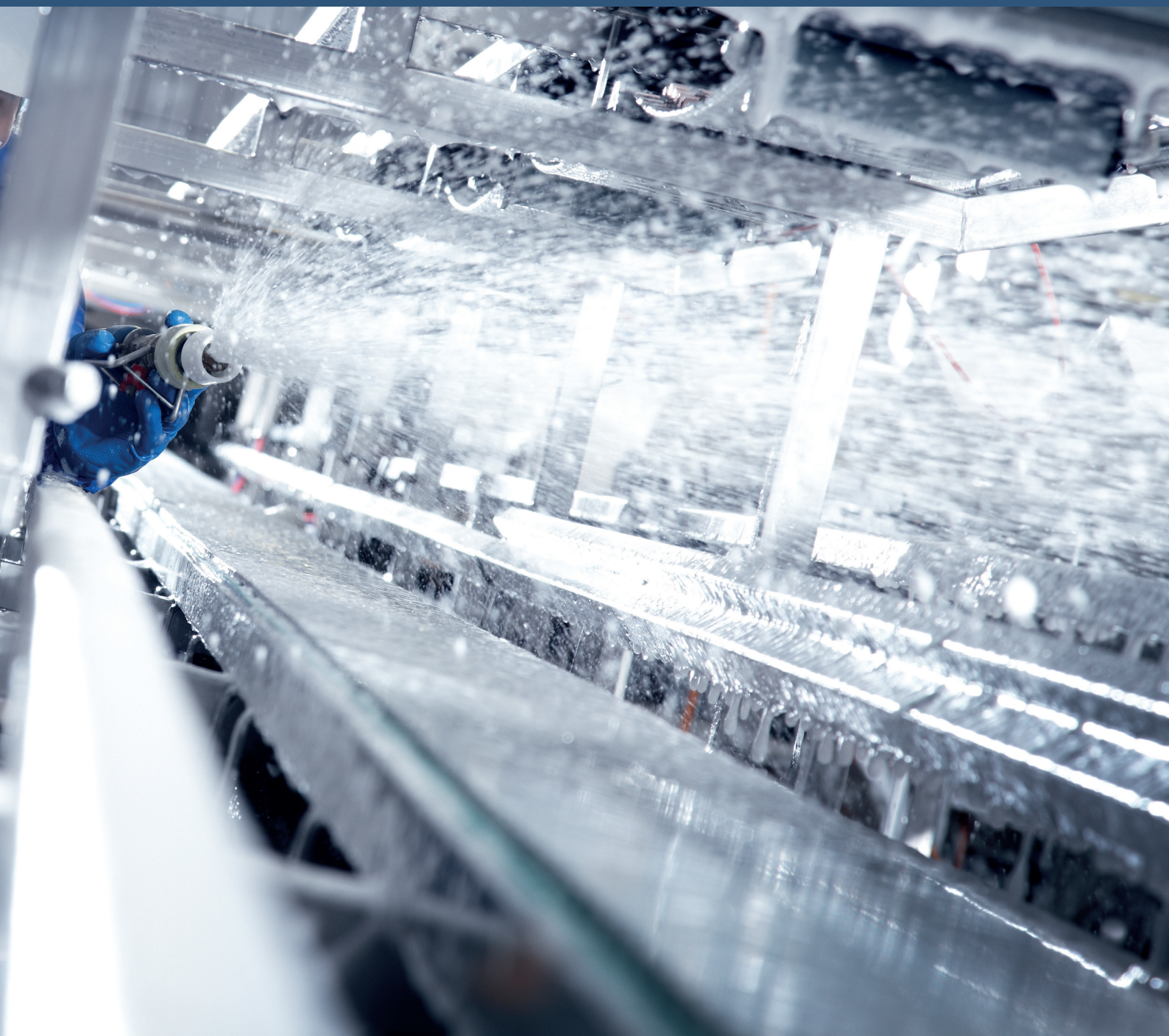
NOVADAN®

Innovators in Cleaning

Novadan - cleaning products & optimized cleaning

Scandinavian manufacturer of cleaning products and disinfection for food processing industries

DAIRY- BEVERAGE- FOOD PROCESSING



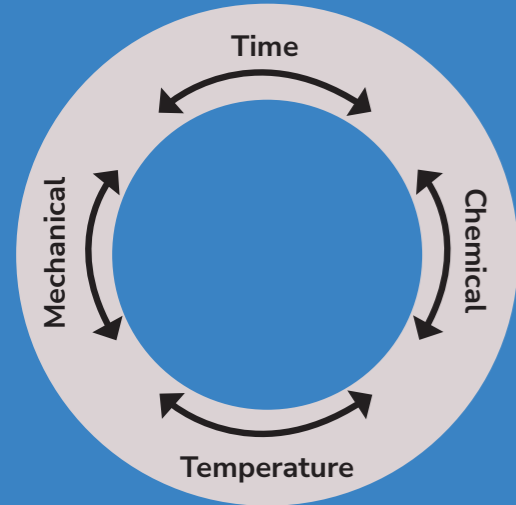
CIP (Cleaning in Place) OPC (Surface Cleaning) Membrane cleaning
Conveyor lubrication Crate washing Disinfection
Personal hygiene/ Technical equipment

Enhancing food safety while optimizing cleaning processes and productivity.
 Innovative solutions with quality products and technical competence.
 Tailored concepts to the food and beverage processing industry.

Food Safety

Ground Rules in Cleaning

Sinner's circle



Factors influencing the cleaning result are: Time, chemicals, temperature and mechanical impact. These factors are interdependent.

Whenever one of the factors is changed, it will have an effect on cleaning efficiency and result. And if a factor is changed, one or more of the others must compensate for the change.

This is why Sinner's Circle form the basis for optimising cleaning processes and is an important tool.



Novadan

Your innovative partner



If your focus is on:

- food safety and quality
- production efficiency and optimization
- plant protection
- environmental care

then we have at least one thing in common. We share the same focus.

With many years of experience within the food and beverage processing industry, you will find Novadan to be a committed and solution-oriented partner that strives to optimize your cleaning processes to the benefit of operational efficiency and with economical advantages.

We NEVER compromise on food safety and quality! In stead we use our highly skilled techical consultants and our thoroughly developed concepts to deliver world-class solutions to our customers.

Novadan has its own laboratory and production plant, where a wide quality selection of cleaning agents and disinfectants are developed and produced. In that field, Novadan is among the market leaders today. We are situated in Denmark and was established back in 1980. Through the years, we have grown to be a recognised and well established international partner with many satisfied customers in many countries.

We meet our customers with respect and a professional approach to the task. We work closely with our customers on start-ups and we visit our customers regularly to evaluate the obtained results. For Novadan it is very important that our customers are satisfied and that we help them with improvements.



Approved concepts

During more than 30 years, Novadan has been at the forefront of knowledge, development and cooperation with well known OEMs in membrane technology.

Therefore, we are one of the leaders in cleaning and problem solving solutions to membrane plants used in the manufacture of products within the food, pharma and biotechnology sectors.

Novadan's unique range of products for this segment ensures the customer a solution that at any time brings the plant back to the starting point.

We make a critical review of the process with focus on optimization of resources.

CIP (Cleaning in Place)

Structured guidelines and procedures

In the food and beverage processing industries, cleaning of production equipment without dismantling initially, is what we call CIP (Cleaning in Place).

Whether you operate in the dairy sector, soft drink sector or any other sector, you need cleaning efficiency in order ensure high product quality and effectivity. However, the chosen cleaning method varies according to the sector, you operate in.

In order to maintain a high product quality while optimizing your cleaning processes, Novadan carries out a survey and recommends adjustments according to your plant, products etc. The purpose of the optimization is to reduce downtime for CIP and obtain savings (water, energy and temperature).



Membrane cleaning

UF, RO, NF, and MF membranes

Ever since the first membranes were produced, market applications have grown explosively. Today, many different kinds of foods are undergoing a concentration process - with eg. UF, RO, NF og MF membranes in the dairy sector.

By virtue of this, are the requirements for pH, oxidation and chemical exposure also tightened, as the least possible impact on the membrane is requested and - at the same time - the longest possible service life and a maximized production flow.

Novadan prepares specific cleaning solutions that are customized each production plant:

- with optimal respect for the membrane's service life,
- with optimal respect for production capacity,
- with the ability to get the plant back to the starting point at any time.
- with focus on energy optimization: Water, electricity, time

Novadan continuously works with all operating parameters and the products' impact on the environment and equipment in cooperation with the customer.



Surface cleaning

World-class foam adhesion power

Novadan has developed a complete product portfolio with very efficient solutions in surface cleaning in the food industry, which offers you time-saving as well as economic advantages.

In the product portfolio, you can find foam products which are especially developed for low pressure systems. This ensures optimal foam and cleaning performance.

You will experience world-class adhesion and wetting power, and the products can handle even the most difficult tasks with fat, blood and protein. Furthermore, the products are easy to rinse off when the cleaning procedure has ended.

Novadan's products leave the surfaces clean and without residues and guarantee a high level of food safety.



Crate washing

Satisfied customers

Your image and your customers' satisfaction are in question. But that is not all. Food safety and better hygiene are also dependent on a good washing result.

With Novadan's products you can live up to potential standards: HACCP, ISO, GMP, and it is easier to justify the price to your customers who use the crates.

Have you ever experienced having to rewash? Novadan can assist you in minimizing the degree of rewash and you will experience that it is easier to clean the crates when washing them next time. Among other things; You will not find residues of glue, labels, protein coatings and chemistry.

.... and that is not all – with Novadan's solution, the crates are drier after washing.



No matter which application in the food processing industry, Novadan offers a product range especially designed for the challenges in that specific application.

We have high quality solutions for all areas from smoke chambers to fish (red/white) and meat (red/white), poultry and sensitive surfaces.



Conveyor lubrication

Operational efficiency

When considering which soap / lubrication to choose, several aspects have to be part of the choice: Chain and packaging materials and product type.

Choosing the right soap is crucial for the conveyor's operational efficiency. Novadan has developed innovative lubrication solutions with regard to an optimization of conveyors and a complete range of products is provided.



Personal hygiene

Understanding the importance

Food safety is a major concern in the food and beverage processing industry and ineffective and improper hand hygiene and sole- and boot washing may have fatal consequences, such as cross-contamination.

High standards for personal hygiene prevent the spread of pathogens and Novadan has the knowledge and products to ensure not only a safe environment but also safe procedures for personal hygiene.



Technical equipment

Dosage systems for various cleaning applications



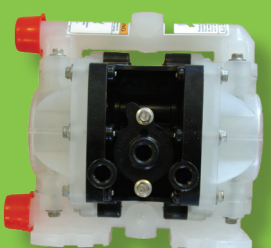
The right dosage equipment is an important parameter when dealing with chemicals and Novadan offers a selection of high quality equipment for this purpose.

We have focus on:

- Correct dosage
- High operational reliability
- Low pressure
- Alarm when empty can/drum or other dosage interruption

Novadan's service team takes care of start-up and maintenance of the technical equipment.

We can also offer a stock of spare parts for our high quality dosage equipment.



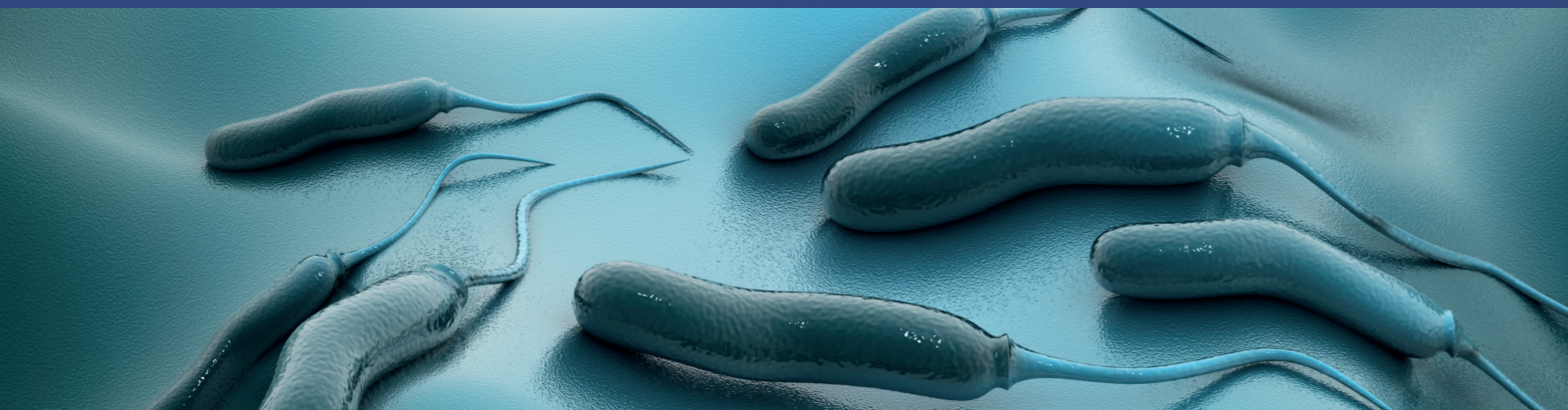


Disinfection

Peracetic acid - the choice of the future

Disinfection is required in order to produce high quality products. Disinfection is a process, which takes place after cleaning the machinery/equipment. In order to ensure the disinfectant optimal conditions, it must be applied a clean surface. These are the preconditions for succeeding in any disinfection process. A properly carried out disinfection is achieved using the correct dosage and working under the right temperature conditions. Only thereby we ensure that:

- Microbiological contamination is avoided
- Production efficiency is maintained
- Internal and external quality requirements are being complied
- Beneficial effect to the company image



Through time, Novadan has with great success changed the solutions from conventional disinfection to peracetic acid disinfection with the associated savings and environmental advantages which our customers appreciate.

There is a great effect on the bacteriological results and the production department can consequently use its resources optimally by focusing on production.

Peracetic acid is a disinfectant which is effective against bacteria, virus, yeast and mould. The advantages for the food producers using peracetic acid are obvious:

- An environmentally green profile
- Peracetic acid is used cold for CIP systems as well

as surface disinfection which results in savings on time and energy.

Novadan's product range in peracetic acid covers all needs in the food processing industry.

Novadan is registered on ECHA's Article 95-list for substances:

- Peracetic acid
- Iodine & PVP-Iodine (agriculture)

Novadan - your partner in food safety

because you take cleaning seriously



High quality products and image mean everything in the food industries.

Protect your brand, your image and your customers by choosing a partner that takes cleaning seriously. Not many industries are as fragile as the food industry and improper cleaning processes and lack of the right expertise can damage a company's image overnight.

When choosing Novadan as your cleaning partner, you will feel safe as we hold your hand from the very beginning and throughout our partnership.

We start by carrying out a thorough survey of all cleaning processes and guide you to optimize your cleaning processes with safety in mind. Our technical consultants are with you all the way and take pride in pulling up the sleeves and getting down to work!

All for the sake of your customers' safety and economically beneficial for you.



Novadan is an innovative Danish production and service company, which was established back in 1980 with a background in the Danish dairy industry. Novadan is the largest manufacturer on the B-t-B market in Scandinavia and has its own production and R&D department in Kolding, where a wide range of high-quality cleaning agents, washing powders and disinfectants are manufactured.

Novadan is certified according to the standards DS/ISO 9001 in the quality area and DS/ISO 14001 in the environmental area.

Novadan is a supplier of cleaning and hygiene solutions to both the Danish and the international pharmaceutical and food industries, e.g. slaughterhouse, food processing companies, dairies and breweries. In short, Novadan is a competent partner in the solution of any cleaning task.