nounós creamery

Sanitation

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CONTROL OF MODIFICATIONS		
Edition	**Date**	**Modification**
0	12/10/2018	New document
1	03/20/2019	Cleaning records changed: F03/PRP2, F04/PRP2, F05/PRP2, F06/PRP2, F07/PRP2, F08/PRP2. Ed01 03/20/2019. Microbiological verifications weekly and visual verification daily.
2	04/02/2019	Typographical corrections. Change frequency of drains cleaning.
3	07/08/2019	New records: Milk totes, Fruit boxes and jar pallet cleaning record (F11/PRP2), Glass room cleaning record (F10/PRP2). Staging room cleaning (F09/PRP2). List of chemicals updated. Change straining cleaning record and filling room cleaning record (F04/PRP2, F05/PRP2). New blower SSOP. New pallets, totes and boxes SSOP
4	09/20/2019	Straining bag cleaning procedure and record changed (F04/PRP2). Records F03/PRP2, F05/PRP2, F07/PRP2, F09/PRP2, F10/PRP2 changed. New Blower Cleaning SSOP (SSOP12/PRP2) and Heat Exchanger SSOP (SSOP13/PRP2)

5	11/29/2019	Sanitation annual reassessment. SSOP2/PRP2 updated with the new straining bags sanitation step. New cleaning procedure: Heat exchanger (SSOP14/PRP2). Master sanitation schedule updated.
6	03/20/2020	Master sanitation schedule updated. List of chemicals updated.
7	01/13/2021	New Yogurt Filler (NOVA) Cleaning Procedure (SSOP15/PRP2)
8	04/15/2021	Quality Organization Chart updated (Manan Bhagat) and annual reassessment

Table of Contents

1. PURPOSE

The purpose of the Sanitation prerequisite is to establish a documented program that includes detailed procedures of all the sanitation activities carried out in Nounós Creamery.

2. SCOPE

This cleaning and sanitizing plan is carried out in the facilities of Nounós Creamery.

3. RESPONSIBILITY

Sanitation workers are responsible for following the SSOPs to properly cleaning and sanitizing the straining and filling room.

The Quality Assurance Manager or designee is responsible for supervising the cleaning and sanitization program, procedures, and records of all the activities.

The Plant Manager and Supervisor are responsible for ensuring the SSOP are followed by the sanitation crew to guarantee the correct cleaning condition of the facility.

The Quality Assurance Manager, Plant Manager and Supervisor are responsible for training the workers on proper technique.

4. DESCRIPTION

4.1. General

The aim of our sanitation plan is eliminating dirt and keeping the microbial load under minimum control. Unsanitary food processing provides an ideal environment for microorganisms to be transferred to the product.

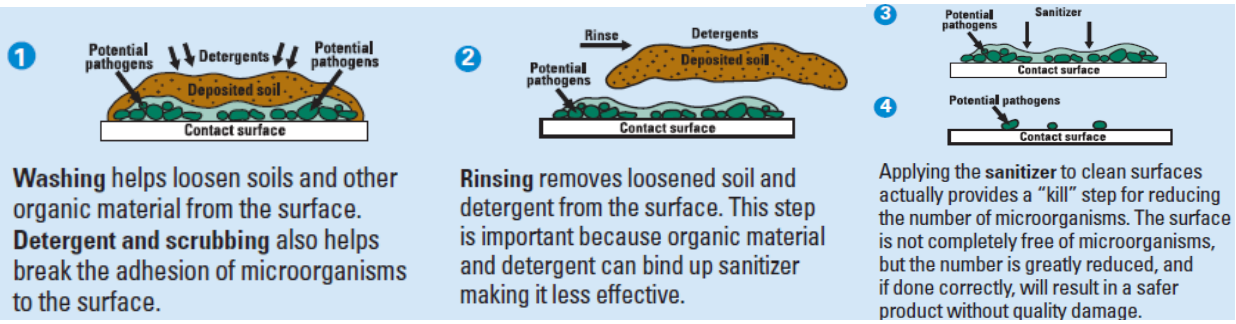
- The purpose of cleaning is to eliminate dirt, food residue including allergenic proteins, and any other materials from a surface, utensil, or equipment using

detergents or other cleaning aids and either mechanical or detergent scrubbing actions, followed by rinsing.

- Sanitization aims at destroying or reducing the microorganisms present in the surfaces, to reduce the microbial load to levels considered safe from a public health viewpoint. Heat and chemicals are commonly used as methods for sanitizing.

Cleaning procedures must be performed strictly according to a carefully worked out procedure in order to attain the required degree of cleanliness. The cleaning cycle comprises the following stages:

1. **Collect the most abundant dirt to facilitate cleaning and to reduce the load on the sewage system.**
2. **Pre-rinse with potable water to remove loose dirt.**
3. **Clean with alkali or acid detergent and warm water, following the instructions of the manufacturer.**
4. **Rinse with potable water to remove all traces of detergent.**
5. **Sanitize. Apply the sanitizer, following the instructions of the manufacturer, to improve disinfection of the equipment and leave it free from bacteria. Use cold water for chlorine-based sanitizer since chlorine may evaporate at high temperatures.**
6. **Rinse with water: if the sanitization is done before processing, rinsing the area with water is not necessary. The production can begin as soon as all the sanitizer has been drained from the system. However, if the sanitization takes place at the end of the day, it must be flushed out with water to avoid leaving any residue that may attack the metal surfaces**.



We have 3 compartment sinks to carry out the cleaning and sanitation procedures.

- First compartment: WASH. The first compartment is used to wash with a clean detergent.
- Second compartment: RINSE. The second compartment is dedicated to rinse with clean water.
- Third compartment: SANITIZE. The third compartment is used to sanitize.

After each working day, all tools, surfaces and equipment that have been in contact with the product will be cleaned and sanitized.

The cleaning and sanitation activities are planned in the *Master Sanitation Schedule* (F01/PRP2). The Master Sanitation Schedule identifies all areas/equipment to be clean, frequency and responsibilities.

Cleaning and sanitation procedures of utensils, equipment, ceiling, walls, floors, etc. of our facility are recorded as **Sanitation Standard Operating Procedures (SSOP)** to serve as a guide for employees and management (attached documents). To develop these cleaning and disinfecting protocols we have considered:

1. *Type of surfaces:* easy to clean, non-porous materials and in good conditions. The right cleaning agent must be also selected depending on the food-contact surface material.
2. *Type of dirt:* important for the correct selection of the product and cleaning methodology.

3. *Time and frequency* with which the cleaning and disinfecting activities will be carried out depending on each area.

Sanitizer	Concentration	pH	Minimum Temp.
Chlorine	50 ppm 100 ppm Maximum 200 ppm for FCS	8 or less 10 or less	75°F (24°C) 55°F (13°C)
Iodine	12.5 to 25 ppm Maximum 25 ppm for FCS	5 or less	75°F or 24°C
Quats	Minimum concentration per manufacturer directions Maximum 200 ppm for FCS	Follow manufacturer directions. Water hardness must be 500 ppm or less	75°F or 24°C
Chlorine dioxide	100 to 200 ppm Maximum 200 ppm for FCS		
Peroxy Compounds	Minimum and Maximum amounts of hydrogen peroxide, acetic acid, peroxyacetic acid, peroxyoctanoic acid and other ingredients as specified for approved formulas in 21 CFR 178.1010		

Maximum and minimum concentration values for Food Contact Surfaces (FCS) are specified in approved sanitizer formulas in 21 CFR 178.1010, Sanitizing Solutions. pH and minimum temperatures are from the 2001 FDA Food Code. Contact time is at least 1 minute. *Table adapted from FDA Food Code and Sanitation Control Procedures Manual, National Seafood HACCP Alliance, Florida Sea Grant Report No. 119, Gainesville, FL, 2000.*

4. *Concentration, temperature, mechanical effect, and contact time* are also considered to ensure the effectiveness of the chemical used. The dosage of the chemical used is always according to the detergent supplier's instructions. The optimum temperature used is considered to have the highest effectiveness. The contact time of the chemicals is carefully calculated to obtain the optimum cleaning effect.

The following sanitizer concentration is used as reference:

A **rotational sanitizer program** must be done to avoid microbial resistance: Chlorine, Quat and Peroxyacetic sanitizer must be used as manager directions.

In each Standard Operation Procedure, the following sections are considered:

- Purpose of the SSOP.
- Scope.
- Responsibilities.
- Safety and environmental considerations.
- Frequency of the activity.
- Materials: tools and elements needed to carry out the cleaning and sanitization activity.
- The periodicity or frequency with which the operations are performed.
- Procedure: methodology and method of cleaning and sanitizing.
- Monitoring to ensure the effectiveness of the cleaning activity.
- Verification method.
- Corrective actions if a deviation occurs.
- Records.

All cleaning operations performed will be recorded in the *Cleaning Records* of each room *(F03/PRP2, F04/PRP2, F05/PRP2, F06/PRP2, F07/PRP2, F08/PRP2, F09/PRP2, F10/PRP2, F11/PRP2)*. The person responsible for carrying out the cleaning operations leaves evidence in that record by initial and/or signature. Visual verifications are done and recorded daily in every cleaned item. Microbiological verifications are done randomly and on a weekly basis. For further details, see the Laboratory Program (LAB).

4.2. Chemicals

Chemicals used during the cleaning and sanitation procedure will be used at the appropriate dosage and stored in a controlled manner, avoiding any contact with the products so that they cannot be contaminated.

No pesticides are stored onsite. These are provided and used by the contracted pest control provider.

Only food grade products (USDA approved), including lubricants, are acceptable for use on or around food contact surface areas.

The Safety Data Sheets (SDS) and the list of updated used products is keeping by the Quality Manager (*List of Chemicals F02/PRP2*) with the following information:

- Product name.
- Description of the product.
- Uses of the chemical.
- Concentration and dosage.
- Contact time needed.
- Observations.
- Food grade certification.

When a new cleaning product is used, it must be verified to be used for intended use and validated to ensure that it will not affect the safety of the product. In these cases, the Quality Manager performs and records the appropriate tests.

4.3. Operator safety

- When handling cleaning elements, and especially in the case of strongly corrosive substances, operators must use rubber gloves, protective goggles, and mask when necessary.

- Select the correct sanitizer or cleaning medium according to the intended purpose.
- Never mix different detergent and/or sanitizer products with each other.
- Dilute in full and complete accordance with the manufacturer's instructions for use.
- Apply the cleaning solutions to the temperatures and concentrations recommended by the manufacturer and during the prescribed time.
- The storage of the chemicals must take place in a clean, dry, and specific place.
- Detergent and sanitizer products must not be exposed to the sun or frost.
- Ensure that the containers that can deteriorate are closed, more in the hottest seasons of the year.

4.4. Work tools and machinery

Only food grade 3A Standard tools and utensils are allowed in production areas.

The tools used for the cleaning and sanitation process must be clean and in perfect conditions.

The products will never be in contact with the floor or walls, or along with rubbish, waste, cleaning products or toxics. Any utensil that falls to the ground should be washed and disinfected before proceeding with its use.

Utensils in general should be of simple design that can be cleaned in an easy, comfortable, and efficient way. They will be in turn unchanged by humidity, high temperatures and disinfectants.

All equipment and tools needed in each cleaning and sanitizing activity are included in each Standard Operation Procedure.

Cleaning and disinfecting products and tools are always stored in specific places for this purpose. Wet brushes shall be hung up and allowed to dry in their natural shape and are

segregated by color to prevent cross contamination. The following color code is used in nounós creamery according to the parts of the plant where they are used:

- **Blue:** for cleaning equipment surfaces, except vat pasteurizer.
- **White:** for cleaning Vat pasteurizer only.
- **Green:** for cleaning straining room walls and ceiling only.
- **Yellow:** for cleaning floors and walls processing areas.
- **Red:** for cleaning floors and walls in non-processing areas (refrigerator), racks, equipment support legs.
- **Black:** for cleaning drains only.

Each day prior to use, brushes should be checked for integrity. Poor quality brushes, i.e., loose bristles, cracked blocks or handles, should be discarded, and replaced.

5. MONITORING AND VERIFICATION

Nounós Creamery evaluates the effectiveness of the SSOP and reviews the procedures annually to prevent product contamination.

- The Food Safety Team must review the Standard Sanitation Operation Procedures at least annually and when necessary if they are not effective.
- The Quality Assurance Manager, Plant Manager or designee employee reviews the performance of the described cleaning and sanitizing operations. Visual control to ensure that there are not visible traces of dirt after cleaning and disinfecting is performed daily. Direct observation of the sanitation task: SSOP must be followed, use of correct chemicals and concentration, use of correct color-coded tools, use of correct PPE, etc.
  Note: the validation of the effectiveness of the sanitizers to kill pathogens is conducted by the chemical manufacturer, however, Nounos shall follow the label instruction to ensure it.

- Before operation begins, inspect the cleanliness of the item. Record any finding in the *Preoperational Checklist Form* (F01/PRP6)
- The concentration of the chemicals used for the cleaning operations are monitored and recorded in the *Chemical Concentration Record (F01/LAB)*. No rinse sanitizers MUST be verified each day used.
- The quality department performs microbiological controls/ ATP tests on a regular basis to evaluate the population of microorganisms that remain in the surfaces after the cleaning and disinfecting process. The periodicity of these controls is weekly. If after five consecutive analyses, the results are correct, the sampling of specific areas/items can be spaced. The surfaces to be checked are all those that are susceptible to contact with our product, including the hands or gloves of the handlers or those that can be a source of contamination.

6. CORRECTIVE ACTIONS

If any deviation is found, it is recorded in the *Corrective Action Form (F01.SOP1/FSM)*. Depending on the deviation, the following corrective actions may be:

- Revise and even modify the cleaning and disinfecting plan/SSOP, applying the following corrective actions: change of disinfectant, dosage, water temperature, frequency, etc. revalidate the new cleaning procedure.
- Assess equipment for upgrades or replacement
- Train or retrain any employees who are unable to comply with the cleaning and sanitation program.
- Change or add any tool or chemical needed.
- If the Sanitation Supervisor determines that the surface does not pass the examination, the cleaning procedure and inspections are repeated.

- Hold any equipment/area/product from continuing production if clean-ups are not completed.See *Hold/Release Program* (PRP9) for further details. Dispose contaminated products if necessary.

7. DOCUMENTS

- Technical data sheets of chemicals.
- Chemical concentration kits procedures.
- SSOP1/ PRP2. Ed03 09/20/2019. Bazooka cleaning procedure.
- SSOP2/ PRP2. Ed04 11/29/2019. Straining bag cleaning procedure.
- SSOP3/ PRP2. Ed03 09/20/2019. Straining COP tub cleaning procedure.
- SSOP4/ PRP2. Ed04 09/20/2019. Yogurt filler cleaning procedure.
- SSOP5/ PRP2. Ed04 09/20/2019. VAT pasteurizer cleaning procedure.
- SSOP6/ PRP2. Ed04 09/20/2019. Floor, wall and ceiling cleaning procedure.
- SSOP7/ PRP2. Ed04 09/20/2019. Drain cleaning procedure.
- SSOP8/ PRP2. Ed04 09/20/2019. Fogging Procedure.
- SSOP9/ PRP2. Ed04 09/20/2019. Machine, straining racks, parts and utensils cleaning procedure.
- SSOP10/ PRP2. Ed04 09/20/2019. Yogurt jars Cleaning Procedure.
- SSOP11/PRP2. Ed00 07/08/2019. Totes, pallets and boxes cleaning procedure.
- SSOP12/PRP2. Ed00 09/20/2019. Blower cleaning procedure
- SSOP13/PRP2. Ed00 11/29/2019. Pump and flow meter cleaning procedure.
- SSOP14/PRP2. Ed00 11/29/2019. Heat Exchanger cleaning procedure.
- SSOP15/PRP2. Ed00 01/13/2021. Yogurt filler (NOVA) cleaning procedure.

8. RECORDS

Code	Name
F01/PRP2	*Master Sanitation Schedule*
F02/PRP2	*List of Chemicals*
F03/PRP2	*Pasteurization room cleaning*
F04/PRP2	*Straining room cleaning*
F05/PRP2	*Filling room and box room cleaning*
F06/PRP2	*Warehouse and cooler cleaning*
F07/PRP2	*Milk storage cooler cleaning*
F08/PRP2	*Office, bathrooms, and kitchen cleaning*
F09/PRP2	*Staging room cleaning*
F10/PRP2	*Glass loading room cleaning*
F11/PRP2	*Milk totes, jar pallets and fruit boxes cleaning*