



**STANDARD OPERATING PROCEDURE**  
**Milking Plant Cleaning**










**IMPORTANT NOTES**

- DO NOT proceed in this operation unless appropriately instructed and permission has been given.
- Ensure personal protective equipment and clothing is available and worn.
- Ensure you have undergone thorough practical training and have been signed off as competent to carry out this task.

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POTENTIAL HAZARDS AND INJURIES	
<ul style="list-style-type: none"> <li>Hot water burns</li> <li>Chemical burns</li> </ul>	<ul style="list-style-type: none"> <li>Dangerous gases given off from mixed chemicals</li> </ul>

PERSONAL PROTECTIVE EQUIPMENT (PPE) REQUIRED		
 Protective Clothing <input checked="" type="checkbox"/>	 Safety Footwear <input checked="" type="checkbox"/>	 Gloves or Gauntlets <input checked="" type="checkbox"/>
 Earmuffs <input type="checkbox"/>	 Hardhat <input type="checkbox"/>	 Safety Glasses or Goggles <input type="checkbox"/>
 Full Face-shield <input checked="" type="checkbox"/>	 Dust mask <input type="checkbox"/>	 Apron <input checked="" type="checkbox"/>

PRE-START CHECK
<ul style="list-style-type: none"> <li>Ensure milk silo is unhooked at the right time to not mix water with milk</li> <li>Ensure you are wearing the appropriate personal protective equipment and clothing.</li> <li>Check the hot water temperature is at 85°C</li> <li>Check pipe fittings tight and secure (no leaks)</li> </ul>

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<b>OPERATION</b>
Purge milk from plant into silo avoiding contamination of silo milk with water
<p><b>Cold Water Rinse</b></p> <p>The post milking rinse needs to be completed immediately after milking as it rinses most of the residual milk from the milking system.</p> <p>Greater than 10 litres of good quality fresh water/set of cups. Recommend using 1000ltrs for 50 sets of cups.</p>
<p><b>Hot Water Alkaline / Acid Wash</b></p> <p>Ensure all appropriate PPE is used according to the wash being done.</p> <p>The milking system should be hot washed as least once a day and twice a day during high-risk periods (e.g. when grading, calving). The purpose of the hot detergent wash is to remove any adhered non-rinsing milk residue.</p> <ul style="list-style-type: none"> <li>• Fat - use Alkali detergent to remove</li> <li>• Protein - add Chlorine to the Alkali</li> <li>• Minerals - use Acid base Detergent to remove</li> <li>• Bacteria - use an Acid Sanitiser to remove</li> </ul> <p>This process should alternate between acid and alkaline in some systematic way to ensure all residues are removed on a routine basis.</p>
<p><b>Morning Alkaline Detergent Wash</b></p> <p>A hot water alkaline wash should be carried out at least twice weekly on the milking system. The wash water should be recycled for 5-7 minutes once water discharging the plant/tank is hot. Wash water must not drop below 60°C before dumping. Always follow an alkali wash with an acid sanitiser to neutralise the alkali to prevent rubber ware breakdown</p> <p>Use gloves, apron and face shield when decanting and handling Alkali detergents</p>
<p><b>Cold Water Acid Wash</b></p> <p>The cold-water acid wash is normally carried out after the evening milking.</p>

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OPERATION
<p><b>Hot Acid Sanitiser Detergent Wash</b></p> <ul style="list-style-type: none"> <li>• This should always be the final wash through the milking system.</li> <li>• Dump recirculating water before it drops below 60°C</li> <li>• To achieve good contact, ensure air injectors are operating and aim for 7-10 minutes recirculation</li> </ul> <p>Make sure correct PPE is used when decanting and handling Acid detergent</p> <p><b>Note:</b></p> <p><i>Two times a week as a minimum give the milking plant an Alkali Wash.</i></p> <p><a href="https://www.dairynz.co.nz/milking/the-milking-plant/plant-cleaning-systems/">https://www.dairynz.co.nz/milking/the-milking-plant/plant-cleaning-systems/</a></p>
<p><b>Flushing Lines</b></p> <p>You must ensure all dairy detergents (acid and alkali) are thoroughly rinsed from the milking plant to prevent residual chemical contamination of the milk.</p>

*This SOP does not necessarily cover all possible hazards associated with the machine and should be used in conjunction with other references. It is designed to be used as an adjunct to teach Safety Procedures and to act as a reminder to users prior to machine use.*

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