

Churchtown Dairy Pre-Milking Procedures

STEP	DESCRIPTION	CHEMICAL
CIP Sanitize Cycle	30 minutes prior to setting up the buckets, run the sanitizing cycle on the CIP system for the milking units. GENTLY turn dial until it activates the Sanitizer cycle. After water is filling the sink, manually add 8 oz of sanitizer to the sink. Watch to make sure sink fills to ¾.	EnviroGuard
Sanitize Cans, lids and associated equipment	30 minutes prior to setting up the buckets, turn the blue sanitizer hose on. Spray for 30 seconds or more onto the floor until it becomes obvious that sanitizer is moving through the hose. Spray the upside down cans with sanitizer. Spray the can lids, lid gaskets, hose springs, and the funnel/filter components. If the milk tank is empty, use sanitizer hose to spray the interior of the tank and the valve components. Be careful to NOT SPRAY the electrical outlets, tank motors, pulsators, or CIP control panel.	Sanitizer Hose
Wash Footwear	Wash your footwear with HOT water from the wall hose. Wash debris from boots towards the drain in the center of the room. Be aware to not spray so hard as to splash debris onto shelves.	Hose
Wash Hands	Wash your hands with hand soap at the hand wash sink.	Hand Soap
Assemble Milking Cans	After the sanitizer has dried off/become inactive, assemble the milking cans. Be careful to not allow the components to touch the ground while assembling, other than the milking can. Remember to drain any water from hoses before attaching.	
Preparing the Tank	Place the sanitized milk tank funnel in the tank. Assemble the filter components and place in the funnel. Attach the sanitized milk tank valve and related components.	
Prepare the milking cart	Move strip cups and plugs to the milking cart. Refill any cloth towels needed for the wash or drying of the teats/udder. Fill two 2.5 gallon stainless steel buckets 2/3rds full and add 2 ounces of iodine udder wash. Move the teat dip applicators to the cart. If winter, place in the warm buckets to warm up.	Iodine Udder Wash
Close CIP Ports	Put all black rubber caps back on open CIP ports.	
Turn Vacuum ON	Flip switch on bottom of CIP to MILK.	

Churchtown Dairy Post-Milking Protocols

STEP	DESCRIPTION	CHEMICAL
Break Down Equipment	<p>Bring each milking unit into the milkhouse.</p> <p>Remove the vacuum hose and air valve, place on table</p> <p>Remove pulsator hose and milk hose, place spring on table and hang claw on the wall rack. Unscrew the pulsator lock, remove the pulsator.</p> <p>Remove the pulsator adaptor, use pulsator to unlock adapter parts.</p> <p>Break adapter into 4 parts and place into white plastic basket. Place pulsator on the top shelf. Remove lids and place cans into a position that allows for easy movement through the milkhouse.</p> <p>Empty strip cups into the gutter. Place strip cups, plastic plugs, CMT paddle and dip cups in wash pail and bring into the milkhouse.</p>	
Turn Vacuum Off	Turn switch on bottom of CIP unit from MILK to OFF.	
Wash Hands and boots	<p>Wash hands and put on washing gloves.</p> <p>Turn on wall hose to HOT and COLD. Rinse boots towards floor drain</p>	Hand Soap and hose
Remove Bulk Tank Filter	Remove the filter and replace the tank cap. Disassemble the filter components and examine filter paper. Note if there is any residue. Throw paper out. Place funnel with filter components on table.	
Fill Sanitizer Sink	Place plug in left sink. Turn COLD water on in sink. Add 8 oz of sanitizer. Fill sink to $\frac{3}{4}$ mark.	EnviroGuard
Warm Rinse Equipment	With the wall hose on both HOT and COLD , rinse exterior of all equipment, including outside of tanks, cans, filter and components, claws and hoses, and items on the table. As you rinse equipment direct spray towards floor drain. Rinse interior of claws by placing hose nozzle directly at the end of the milk line, spray until bowl fills.	Hose
Wash Floor	Spray entire floor towards the drain. Make sure not to splash manure around the room.	Hose
Wash Vacuum Hoses, Valves and Springs	Place vacuum hoses, springs, air valves in wash sink, Take the hose in one hand and scrub the length of it with other hand. Place in sanitizer sink. Repeat for 3 remaining hoses. Taking the small brush, scrub exterior of air valves and place in sanitizer sink. Taking each spring, shake in chembrite sink then place in sanitizer sink. Place sanitized items on the shelf.	Chembrite & EnviroGuard

Wash Milk Cans	Place milk can under wall mounted chembrite hose and fill to ⅓ mark. Using the tall, white scrub brush, scrub interior of can making sure to get the seams at the bottom and the neck and lip at the top. Place the brush into the next can and dump the chembrite into the next can. Place emptied can in wash sink and scrub exterior with the small white brush making sure to get the handles and bottom. Place in sanitizer sink and spin ensuring inside and outside gets sanitized. Invert and place on drying shelf. Repeat for remaining 5 cans.	Chembrite & EnviroGuard
Wash Can Lids and Gaskets	Place all 6 can lids in chembrite sink and scrub thoroughly. Be sure to scrub inside stem hole in lid with long thin scrub brush. Transfer to sanitizer sink.	Chembrite & EnviroGuard
Wash claws	Taking the claw off the wall rack, place in chembrite sink, ensuring that the interior of the double air hose remains dry! Scrub hoses, inflations, and the bowl with white brush. Holding both hose ends above the water, transfer claw to sanitizer sink. Submerge in sanitizer then bring to CIP sink. Hook up to the CIP wash port. Ensure inflations are hanging straight down and plungers are in the locked position. Repeat with 3 remaining claws.	Chembrite & EnviroGuard
Measure Soap for CIP Unit	Unscrew black detergent cup on CIP. Place 8oz. of undiluted chembrite in cup. MORNING SHIFT ONLY: add 8oz of HDA-2500 acid to the right cup of CIP.	Chembrite & HDA-2500
Start CIP for Claws	Flip switch on bottom of CIP controller to WASH position. Twist dial SLOWLY until it engages the WARM WATER RINSE. Watch to see that CIP sink fills to ⅔ mark.	
Wash Vacuum Hoses Valves & Springs	Place vacuum hoses, valves & springs in the wash sink. Grab the hose with one hand. Forming a grip around the hose with the other hand, scrub the length of the exterior of the vacuum hose with your gloved hand. Place hose in the sanitizer sink. Repeat for next 3 hoses. Taking a brush, scrub the exterior of each valve. Use a hose brush for the inside. Place in sanitizer. Grabbing each spring individually, shake in the detergent water and place in the sanitizing sink. Place sanitized items on the shelf.	Chembrite & EnviroGuard
Complete Deep Cleaning	Use chembrite sink water to complete deep cleaning tasks from log.	Chembrite
Rinse Floor	Using the wall hose, with both HOT and COLD water rinse table tops and floor towards the drain. Wrap hose on wall mounted hose holder.	Hose
Sanitize Surfaces	Using white plastic bucket, splash sanitizer water on table tops, sinks, the floor and the tank top. Use the RED squeegee to draw excess water towards the drain.	EnviroGuard

Sanitize Switches and Push Spots	Using a sanitizer wipe, sanitize all touch spots including: light switches, buttons, handles, knobs, push spots, the exterior of the pulsators. Assemble pulsator adaptors and place on shelf.	Sanitizer wipes
Empty Trash	Empty both small white trash cans	
Complete Log	Check to see that each item on the log is completed and initial appropriate box.	

Complete Udder Cleaning Protocol:

1. Before milking, visually inspect each quarter of the udder for any signs of abnormality, such as swelling, redness, or discharge.
2. Using gloved hands, remove any loose hair and gross contamination from each quarter. Pay particular attention to areas that may be difficult to clean, such as the base of the udder and the teat ends.
3. Strip four streams of milk from each quarter into a strip cup. Examine the milk for any abnormalities, such as clots or discoloration. If abnormalities are found, segregate the milk.
4. Wash the udder thoroughly with warm water and a mild iodine detergent using a clean cloth towel. Ensure that all areas of the udder are cleaned, paying particular attention to the teat ends.
5. Pre-dip each teat with the pre-dip solution. Allow the pre-dip to remain on the teats for at least 30 seconds to allow it to work effectively.
6. Using a clean, dry cloth towel, wipe the udder and each quarter dry. Ensure that all areas of the udder are dried thoroughly to prevent any moisture from accumulating.
7. After milking, hang the milking machine, ensuring that it is properly positioned and securely attached.
8. Dip each teat in the post-dip solution. Ensure that the entire teat is dipped.

MILK BOTTLE WASHING PROTOCOL

1. Returned bottles in labeled crates transported from Farm Store to Bottling Room.
2. Left Hand Sink filled with HOT water. Add 4oz powdered detergent.
3. Right Hand sink filled with COLD water. Add 4oz Acidoxy San. Check sanitizer with Peracetic Acid test strip to ensure a concentration of 200ppm or higher.
4. Power on the Hobart sanitizing washing machine.
5. Soak returned bottles thoroughly in left-hand sink soapy mix.
6. Scrub interior and exterior of bottles thoroughly with yellow bottle brush. Be sure to get bottoms, corners and shoulders and check interior surfaces closely for stuck-on residue.
7. Empty bottle completely, then submerge in right-hand sink sanitizer, filling bottles.
8. Pour out sanitizer from bottle, then place bottles upside-down in a clean bottle crate.
9. If Hobart says "READY", place crate full of clean bottles in machine, close, and start the machine.
10. While cycle is running, take bottle transportation cart and clean with Synthesis acid solution, rinsing with hot water from hose.
11. When cycle is done, remove crate with sanitized bottles and place on the CLEAN bottle transportation cart.
- 12. These bottles are now ready for filling.**

RAW MILK BOTTLING PROTOCOL

1. Take one bucket of sanitizer from right-hand sink and pour it all over Milk Bottling tank to sanitize it.
2. Remove the cap from the valve. Rinse the entire valve assembly with hot water.
3. Take Nipple Valve, gasket and clamp and submerge in sanitizer completely.
4. Attach Nipple Valve to bottling tank valve.
5. Take one bucket of sanitizer from right-hand sink and pour it on floor around bottling tank to create a safe working space.
6. Place stainless bucket under valve to catch spillage, and release milk briefly to clear sanitizer from the valve.
7. Wheel cart of clean bottles next to the Milk Bottling Tank.
8. Take plastic tub of bottling lids (either Half Gallon or 32oz), and submerge bottom of tub in right-hand sanitizer sink, then place it on top of the Milk Bottling Tank.
9. Take one tsp. of sanitizer in a small container, and dilute with 2 cups of cold water from tap to create a mild sanitizer solution. Place on Milk Bottling Tank next to lids.
10. Place chair if desired in front of Milk Bottling Tank.
11. CHANGE GLOVES.
12. Begin filling bottles carefully through the valve and nipple. Make sure the bottle is full to the top, no bubbles.
13. Place full bottle in its space in the crate. Dip the appropriate lid, (64 or 32 oz) briefly in the sanitizer, shake off excess water carefully, and press firmly onto filled bottle of milk.
14. Continue until all bottles are filled.
15. When all bottles are full and capped, carefully rinse spilled milk off outside of bottle with hose.
16. Wheel wagon with full bottles into fridge area. Dry bottles and apply date label to cap.
17. "Sell By" date should be set to 7 days from day of bottling.
18. Place bottles in Refrigerator.
19. Remove any milk more than 3 days old from the refrigerator.
20. Continue process with next sized bottles.
21. When finished, remove valve nipple from tank valve and rinse all the buckets with cold water and leave on the floor to the right of the main dairy sinks for cleaning at the next milking.
22. Rinse tank valve until clean with hose.
23. Take one cup sanitizer from right-hand sink and splash into valve to sanitize, before recapping the valve.
24. Clean the Nipple Valve, gasket and clamp in the left-hand soapy sink, submerge in sanitizer sink completely, and then place on the counter to the right of the Main Dairy Sink.
25. Put away seat.

26. Take excess sanitizer from right-hand sink and pour all over floor around Milk Bottling Tank, on the floor of the bottling room, and in drains (and anywhere else that might need it, until sink is empty). Squeegee into drains.
27. BOTTLING COMPLETE!

MILK BOTTLE WASHING PROTOCOL

1. Transport returned bottles in crates on dolly from Farm Store to Bottling Room and place on DIRTY dunnage rack.
2. Power on the bottle washing machine. Go into the mechanical room and ensure the chembrite and peracetic acid pails which feed the bottler are full enough to perform bottle washing.
3. Run one cycle of the bottle washer with heat boost OFF and set to SINGLE CYCLE. This primes the bottle washer and prepares it for full cycles. (this step is not necessary if bottle washing machine was already on and primed when you began.)
4. Spray bottle cart with sanitizer from the hose. Clean the required number of milk bottle crates two at a time in the bottle washer and stack on sanitized cart. Once all crates have been cleaned, switch out the sprayer and the rack inside the bottle washer to accept bottles.
5. Put on gloves.
6. Inspect bottles: any that are excessively dirty, scrub interior and exterior of bottles with bottle brush. Be sure to get bottoms, corners and shoulders and check interior surfaces closely for stuck-on residue. *Inspect each bottle for chips and/or heavy soiling. Discard any chipped bottles and set aside any heavily soiled bottles for soaking overnight.*
7. Place bottles upside-down in bottle washing machine rack.
8. Close the bottle washing machine, and if needed switch the heat boost ON and the cycles to THREE. Press the big green START button. Remove gloves.
9. When cycle is done, remove sanitized bottles and place in the clean crates on the transportation cart.
10. Load the next round of bottles into the bottle washer as needed.
- 11. These bottles are now ready for filling immediately upon cooling.**

RAW MILK BOTTLING PROTOCOL

1. Put on single-use gloves.
2. Put on clean apron.
3. Sanitize the blue bottling cart and gather:
 - a. One gallon container of cold water with 5ml of peracetic acid, this is for sanitization of milk caps.
 - b. Appropriate number and type of lids in labeled rubbermaid boxes
 - c. All gooseneck parts, run in the bottle washer on cycle 2
4. Wheel tool cart and cart of clean bottles into bottling room and put next to bottling tank.
5. Use sanitizer sprayer to sanitize Milk Bottling tank.
6. Remove the cap from the valve. Use sanitizer hose to sanitize inside of the valve.

7. Attach Goose Neck to bottling tank valve.
8. Use sanitizer sprayer on floor around bottling tank to create a safe working space.
9. Place steel bucket under valve to catch spillage, purge a small volume of milk to clear sanitizer.
10. Place chair if desired in front of Milk Bottling Tank. (*chair is a plastic cleanable chair and will be left in bottling room.*)
11. CHANGE GLOVES.
12. Begin filling bottles carefully through the gooseneck valve. Make sure the bottle is full to the ½" from top, lined up with glass seam on neck.
13. Place full bottle in its space in the crate. (*Dip the appropriate lid, (64 or 32 oz) briefly in the sanitizer, shake off excess water carefully*), and press firmly onto filled bottle of milk. When crate is full, put in sanitized transport wagon.
14. Continue until all bottles (quarts and half-gallons) are filled.
15. When all bottles are full and capped, carefully rinse spilled milk off outside of bottle with remaining sanitizer.
16. Load dolly with milk crates and transport bottles into farm store. Remove any milk left in the refrigerator and place in the staff refrigerator.
17. Dry bottles and apply date label to cap. "Sell By" date should be set to 7 days from day of bottling.
18. Place new bottles in refrigerator. Inspect bottles as you place them in the refrigerator, keeping an eye out for dirty spots inside the bottles or other concerns.
19. When finished, park dolly to the right of the refrigerator and return to milk room.
20. If tank is empty, remove gooseneck and valve assembly from bottling tank. Put rinsed gooseneck, valve, clamp, strip cup and buckets on bottom shelf of cart.
21. If there is milk remaining to be stored in the bottling tank, rinse tank valve until clean with cold-water hose, cap with a clean and sanitized cap and gasket. Spray out valve with the sanitizer hose. Spray bottling seat with sanitizer from the hose.
22. Wheel tool cart into bottle wash room
23. Switch the sprayer and rack in the bottle washer back to the general purpose setup. Load the goose neck, valves, gaskets and anything else that needs cleaning into the bottle washer and run a cycle.
24. Clean and sanitize bottle carts and tool cart.
25. To clean the room and bottling tank, use F364 foaming chlorinated cleaner dispensed with the foaming attachment and cold water. Spray liberally in and around the tank and on the floor surrounding the tank. Clean the bottling room and tank in this order: Using the blue brush, scrub the inside of the bottling tank, use the green brush to scrub the outside, and scrub the floor with the red brush. Starting with the bottling tank, begin rinsing with hot water, move through the zones in the same order as washing, complete by using the red squeegee to push all the water down the floor drain. Spray all surfaces and the tank with sanitizer from the hose, be sure to close the bottling tank, cap the milk port on the lid with the clean and sanitized cover.
26. BOTTLING COMPLETE!