

From **1st January 2020**
all Milk Bulk Tanks must use



Chlorine-Free Detergent



Chlorine residues are not permissible in dairy products. A small level of cross contamination will lead to very high levels of chlorates in milk.

The two main chlorine residues that the dairy industry is focusing on is Chlorates in powders which affects iodine metabolism in infants and Trichloromethane (TCM) which causes butter quality issues.



What are Chlorates?

Chlorates are formed by the degradation of chlorine in chlorine based detergents. Chlorates occur when drums of detergent that contain caustic and chlorine are stored on farm for long periods (> 6 months).

They can also occur if the detergent which contains chlorine is not fully rinsed from the milking machine and / or bulk tank after the wash cycle.

The maximum limit permitted in milk is < 0.00375 mg/kg.



What is Trichloromethane (TCM)?

TCM arises from residues of detergents (containing active chlorine), used to clean milking and milk storage equipment. To compete favourably in the German market TCM levels in butter need to be < 0.024 mg/kg effective from 1st January 2020.

When chlorine comes in contact with the fat in milk it binds to form TCM. Sufficient rinse water must be available for both the milking machine and bulk tank.

The 2020 permitted TCM limit in milk is < 0.00124 mg/kg.

TOP TIPS

One Best Way, Back To Basics Avoid Chlorine Residues



Ensure adequate hot water capacities and temperature are readily available. See wash programmes on page 4.



Make sure service technician calibrates equipment each year. Ensure auto washer is taking in correct volume of detergent and water. Check bulk tank with torch after each wash to ensure it is fully drained.



Ensure the detergent is Chlorine-Free, in date, and is on the Teagasc recommended list. Handle chemicals correctly and store off the ground in cool dark conditions. Do not bulk buy detergent.



Use properly marked measuring equipment and use the correct amount of detergent as directed.

DON'T USE EXTRA!



Measure and record the size of your wash troughs. 14 litres (3 gallons) of water per milking unit is required to remove milk/detergent residues. Adequate wash troughs capacity and final rinsing is vital.



Ensure adequate pre and post-rinsing with water through the plant after the milk is fully drained and after the detergent cycle. Main wash circulation time should at least be 8 to 10 minutes.

Chlorine-Free Dairy Hygiene

Product Name	Liquid/Powder	Available Sizes	Usage Rate	
			COLD	HOT
GOLD ASSURE UNIVERSAN CF	Liquid	20L/200L	450ml/45L	300ml/45L @ 70°C
CIRCODINE CF	Powder	10 Kg/20 Kg	227g/45L	180g/45L @ 60°C
AVALKSAN CF	Liquid	25L/205L/1000L	400ml/45L	350ml/45 L @ 70-75°C
DEOSAN OSA-N	Liquid	20L/200L	280ml/40L	280ml/40L @ 70-80°C
DEOSAN LIQUID CIP	Liquid	20L	200ml/40L	200ml/40L @ 70-80°C

Minimise the risk of chlorates & residues in your milk

LOOK OUT FOR THE CHLORINE-FREE STICKER



OUR RANGE OF CHLORINE-FREE DAIRY DETERGENTS HAVE BEEN APPROVED BY TEAGASC & OUR MILK ADVISORY TEAM.
(AVAILABLE IN A VARIETY OF SIZES)



Shop now at your local Co-Op Superstores or online
@ www.coopsuperstores.ie for delivery direct to your farm



HOT WATER SOLUTIONS

for your **Chlorine-Free Wash Programme**

CHOOSE FROM: ELECTRIC • HEAT RECOVERY • GAS • DIESEL • SOLAR*

Hot Water is Critical

- For the main detergent wash in the milking machine a minimum of 9 litres of hot water (75 – 80 °C) is required per unit with at least the first litre dumped prior to circulation to warm up the milking machine plant.
- Ask your bulk tank manufacture/technician for the required hot water volume for the bulk tank. Factory setting is 1% of the capacity of the tank per wash cycle.
- Follow detergent usage rates for both the milking machine and bulk tank.

Contact your bulk tank manufacturer for hot water heat recovery options.



- Instant & continuous hot water at 85°C
- Flowrate up to 37.5 litres per minute
- Suitable for LPG gas supplies
- BioLPG available
- Installation on farm within 28 days
- Suitable for all dairy wash systems
- Free on farm site survey and water test

ELIGIBLE FOR TAMS



*Solar options available in 2020

? Do you treat your well water with chlorine?

Pick up a carbon filter at your local Co-Op Superstores



- Instant & continuous hot water up to 80°C
- Flowrate up to 30 litres per minute
- Easy installation and service

ELIGIBLE FOR TAMS



- Instant hot water
- Easy to install
- Heats to 82°C
- Connected to water mains
- Protected against corrosion
- Works from single phase electricity supply
- Available in 100L, 150L, 200L & 300L

FROM
€399



Shop now at your local Co-Op Superstores or online
@ www.coopsuperstores.ie for delivery direct to your farm



Chlorine-Free Wash



DO's

- ▶ Ensure thermostat is working correctly.
- ▶ Ensure Bulk tank goes through all wash cycles post milk collection.
- ▶ Only buy from Teagasc recommended listing (www.teagasc.ie).
- ▶ Use a torch to inspect that the bulk tank rinses sufficiently post wash and that it is properly drained.
- ▶ When changing detergents – get service technician to inspect, flush out and clean detergent intake tubes, and re-calibrate the intake volume if a new detergent is used.
- ▶ Regularly check that the detergent intake tubes from auto washers are working correctly.
- ▶ Start each spring with a new drum of Chlorine-Free detergent.
- ▶ Change liners after 2,000 milking's per unit as residues can build up on cracked and damaged particles.



DON'Ts

- ▶ Avoid stock piling products.
- ▶ Never go back and use remnants of old detergent in a barrel or drum that has been in the dairy for a while!
- ▶ Don't buy in bulk and ensure that the choices are matching the quality issues on individual farms. (If in a purchasing group – ensure you are only looking at Chlorine-Free options for bulk tank).
- ▶ Never skip a wash cycle post milk collection.
- ▶ Never reuse detergent washes from milking machine to wash bulk tank.

The Dairygold Milk Advisory team is available to offer help and advice in relation to any and all aspects of the Chlorine-Free Wash Programmes for Chlorates and TCM.

IF YOU HAVE ANY QUERIES PLEASE CONTACT YOUR MILK ADVISOR



Mitchelstown/
Tipperary

William Ryan
Tel: 086 2461633
E: wryan@dairygold.ie



Limerick Region

Jack Cahill
Tel: 086 2628290
E: jcahill@dairygold.ie



Mid Cork Region

Ger Hennessy
Tel: 086 8520792
E: ghennessy@dairygold.ie



Mallow Region

Denis Guiry
Tel: 086 8098639
E: dguiry@dairygold.ie



East Cork/CMP/Carrigaline/
Ballinhassig/Killumney

Maeve O'Connor
Tel: 086 8354808
E: maeveoconnor@dairygold.ie

