



Est. 1911  
**DAVIESWAY**

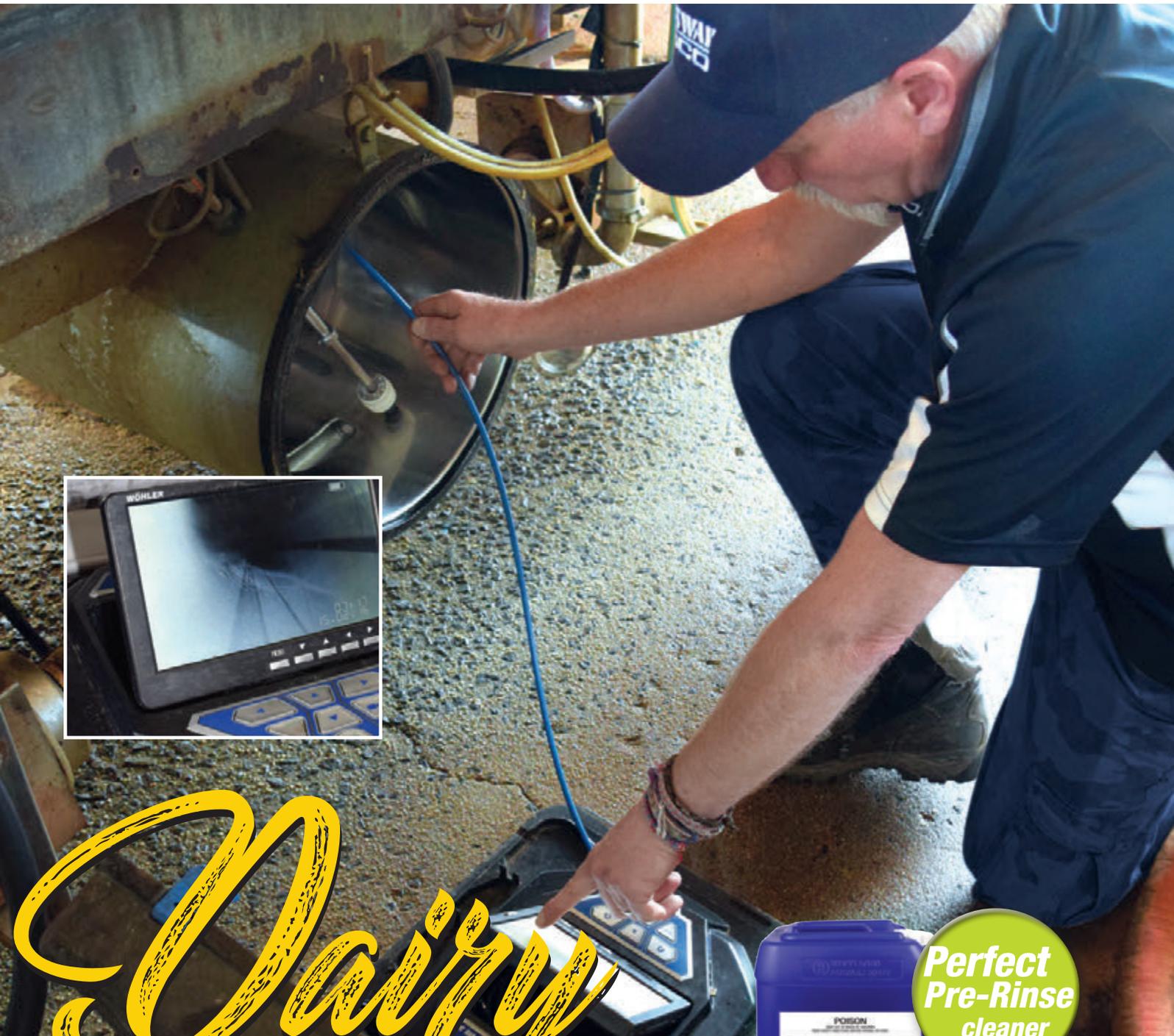
IDEAS TO FARM. EVERYDAY.



Est. 1960  
**DASCO**

HYGIENE • HEALTH • NUTRITION

home of world-class dairy equipment & innovation



*Dairy*



**Perfect  
Pre-Rinse  
cleaner**

**Hygiene & Health**





**SAVE TIME  
& MONEY**

DASCO's **FREE** in-line camera inspection service quickly identifies the source of your hygiene problems

Contact your local DASCO representative to book an appointment today.

**1800 666 269**

*Our experienced and skilled locally-based technicians take the hassle out of:*

- Milking machine servicing (All brands)
- Dry & dynamic testing
- Equipment installation & setup
- Bailing
- Rubberware & liner fitting
- Stainless TIG welding
- Feeding / water / effluent systems
- Dairy hygiene & chemicals



**DAVIESWAY**

**Dairy Services**

IDEAS TO FARM. EVERYDAY.

- WARRAGUL** (03) 5623 1834
- LEONGATHA** (03) 5662 3910
- SIMPSON** (03) 5594 3006
- KOROIT** (03) 5565 8738

- ✓ Scheduled service work at regular intervals
- ✓ Accredited technicians

# WELCOME

**It takes a certain type of personality to make changes when changes need to be made.**

John Davies, who owns Daviesway/DASCO, is firmly in that group. He introduced Ready-To-Use Teat Spray (RTU) to the Australian market nearly 20 years ago, in 2000.

At the time, many people – including some of our own team – thought no farmers would see the sense in buying water in a pre-mixed teat spray.

However, John was adamant that the quality of water on many Australian farms wasn't good enough to sanitise a cow's teats.

History has proven John was right.

RTU teat spray is today responsible for a major part of DASCO's business.



Continuing our industry leadership, in this edition we break the news that DASCO is now poised to release dairy chemicals that will lead the world in

biodegradability on-farm. Do not miss that story on page 9.

## DASCO EXPLAINED

For those who don't know the origins of DASCO (Dairy Detergents Australia Company), it is the chemical-manufacturing outlet and sister business to Daviesway. Both are owned and operated by John Davies.

DASCO's warehouse sits directly opposite Daviesway's head office at Heidelberg, Melbourne. From here, our team manufactures detergents and sanitisers right here in Australia for Australian conditions.

Importantly, DASCO is a dairy-chemical manufacturing company in Australia dedicated to Good Manufacturing Practice (GMP), accredited dairy hygiene chemicals, and mastitis control products for dairy farmers.

## TRAINED TECHNICAL SUPPORT IN AUSTRALIA

DASCO's national network of service chemical-hygiene technicians is trained to not only trouble-shoot in a crisis, but also to cut through the white noise around the mass of choices out there, and to help dairymen find the most effective and cost-effective solutions for cleaning dairies and protecting herd teat-health.

## SPOTLIGHTS THIS EDITION...

This edition we introduce a number of our team to encourage those readers who have not yet, to please feel confident in contacting them with any questions you may have.

We spend a day with one of our chemical-hygiene team, Peter Parniak, getting some great pointers about how he handles a high-count crisis. And, we highlight our other team members and how to find them.

We also visit with DASCO's industrial chemist, Hamish Hunt, who sheds some light on water quality, and how it impacts on Thermoduric and Bactoscan counts.

Bruce Treble explains why the Guardian II autowash system is worth its weight in gold, and why it's his personal choice for CIP washing.

Daviesway/DASCO's owner, John Davies, shares his thoughts about the value of RTU teat sprays and why they are as relevant today as they were when he introduced them.

## FIND US ANYWHERE AND EVERYWHERE

And, because Daviesway/DASCO is aligned with more than 700 dealers, resellers and trading stores throughout Australia, DASCO's detergents and sanitisers are as accessible in Malanda (Far North Queensland) as they are in Hobart (Tasmania), or Bunbury (Western Australia).



### NIKK TAYLOR

General Manager – Daviesway/DASCO  
Mobile: 0438 600 251  
Email: [nikk.taylor@daviesway.com.au](mailto:nikk.taylor@daviesway.com.au)

*Nikk Taylor has been with Daviesway/DASCO for 23 years, working across all aspects of the business, including expanding the family-owned Australian operation into East Asia.*

## WHO IS DAVIESWAY/DASCO?

*Daviesway is a family-owned Australian business, which is today home to a team of 70 staff located throughout the country. It has alliances with dealers, resellers and retail rural outlet stores across Australia. Its in-house manufacturing arm in Victoria includes a full service and technical team. Daviesway also includes a calf-rearing specialist department (including Australia's only dried colostrum for calves, kids and foals). Its in-house chemical manufacturing plant, DASCO, introduced pre-mixed teat sprays in Australia. Daviesway's strong networks with many of the industry's leading global industry players remains integral to it keeping step with technology and innovation.*

*Visit [www.daviesway.com.au](http://www.daviesway.com.au) for more information, videos, stories and feedback.*

**ALKA-RINSE**

*Post-milking rinse additive*

**REMOVES 90% PLUS**

*of milking residues prior to wash*

**DASCO HYGIENE SPECIALISTS – 1800 666 269**



If claws aren't clean, it points to a problem with water quality, water temperature, or chemical not dosing correctly.



One of the most common high-count problems is caused by aging rubberware.



Always check the receiver for residue

## THE POWER OF SHARED KNOWLEDGE

### DASCO HYGIENE SPECIALISTS

#### Western Victoria / SA

Robert Bowen – 0408 529 570

David Case – 0408 629 948

#### Northern Victoria

Mark Nichols – 0417 030 565

#### Gippsland

Paul Hurst – 0409 387 828

Peter Parniak – 0428 328 171

#### Tasmania

Rick Wilson – 0417 560 660

Wayne Harper – 0439 523 890

#### Queensland

Mark Giebels – 0428 879 265

Mark Payne – 0419 975 565

### Few things are as frustrating as high Thermoduric and Bactoscan counts.

That's when systematic searches and extreme knowledge of dairy chemical efficacy becomes critical.

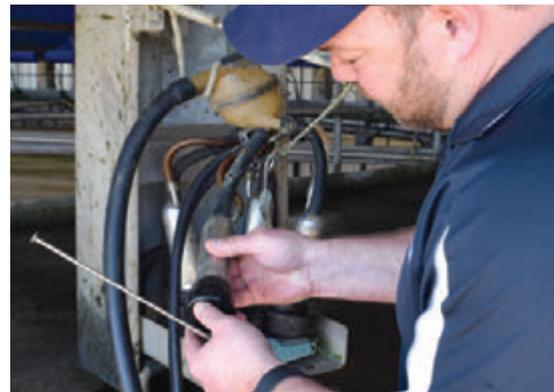
And, that's when Daviesway/DASCO steps up.

Daviesway/DASCO is the only manufacturer to supply dairy chemical, milking machines and a skilled network of trained chemical-hygiene specialists on-farm.

One of its national team, Peter Parniak, is based in Traralgon (Gippsland, Victoria).



The first thing Peter Parniak does with a high-count blowout is to check the vat.



Rubberware is always closely monitored during count checks.

# What does a day on the road trouble-shooting with Peter look like?

## MORE SPEED, LESS HASTE

Peter says when farmers get a high count, they automatically go to the known weak links in their dairy, with a typical approach of *“too much haste, resulting in less overall speed”*.

However, he recommends working through the possibilities methodically – because it ultimately often saves time.

Theromodurics take four days to incubate, and can be harder to pinpoint. Bactoscans spike immediately, and can usually be quickly pinned to a recent change in the dairy.

Peter’s first check-points in a count crisis are the simple things.

He begins with the vat. He checks that the agitator is working, that there isn’t a rainbow effect on the surface (indicating protein build-up). He checks the condition of the rubberware. He assesses water for quality (pH), and for temperature (which should be 80-85 degrees Celsius on the hot wash cycle).

*“If the claws aren’t clean, there has been a problem prior to that – whether it be water quality or the chemical not dosing correctly. If it’s the milk line and the claws are clean, I know it’s something else,”* he says.

After the obvious checks, Peter’s next go-to is an in-line camera.

*“With the camera, I can quite literally see inside the whole milk line within 10-15 minutes. It’s so valuable, and farmers can see the results on our TV screen, which they really appreciate.”*

Another high-count giveaway is if the vat isn’t cooling the milk to four degrees within 30-45 minutes post-milking.



Jettors are often forgotten, and they need to be regularly checked.

## RUBBERWARE THE BIGGEST CONCERN

Peter confirms that by far and away, the most common problem regarding high counts is aging rubberware.

*“It’s been tough in the last couple of years to justify spending money. We all appreciate changing the rubberware isn’t cheap, but not doing it can cost you a helluva lot more in counts, and it can negatively impact on production by up to 7%.”*

*“I just think it is so important to change liners – as recommended – every 2500 milkings.”*

## CHEMICAL CHOICE CRITICAL

Peter believes there are ways to save money without risking high counts.

With today’s current hot water services being rapid flow and holding their temperature throughout the day, Pete designs his wash programs based on the quantities of water and temperatures available at the time.

Alkalis dissolve fat and protein and acids remove milkstone and minerals.

*“I customise the farmers wash to make sure that we are removing as many of these residues as possible and if enough hot water is not available at times, chemical sanitation may be added to the process”*

As a handy tip, Peter recommended a warm pre-rinse (30-40°C) after milking with an alkaline wetting agent, which removes more than 90% of milk solids. Surprisingly, few dairies know about this easy step, and it’s not common practice.

## GOOD WATER QUALITY SAVES MONEY

Peter says high-powered chemicals aren’t always necessary.

*“If the water quality is really good – like in our area – where 95% of our farmers are on bore water, I’ve often seen other companies recommending the biggest, best and strongest acid that they stock. Farmers just don’t need it. It’s a waste of money.”*



An in-line camera allows DASCO’s Peter Parniak to check the inside the entire milk lines within minutes.

## TEAT CONDITION

And, when it comes to teat condition, Peter never underestimates the value of teat conditioner.

*“When water quality is in question, I just think Redene Ready-To-Use [RTU] has no peer. With 100 grams per litre of teat conditioner built into it – it’s double the amount compared to most concentrate teat sprays being mixed by hand.”*

*“And, the price difference isn’t much at all.”*

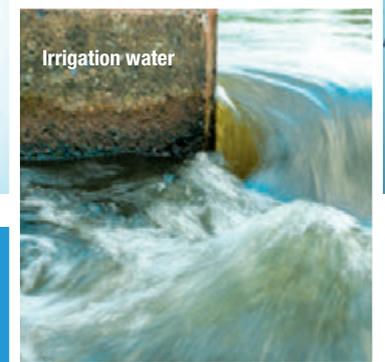
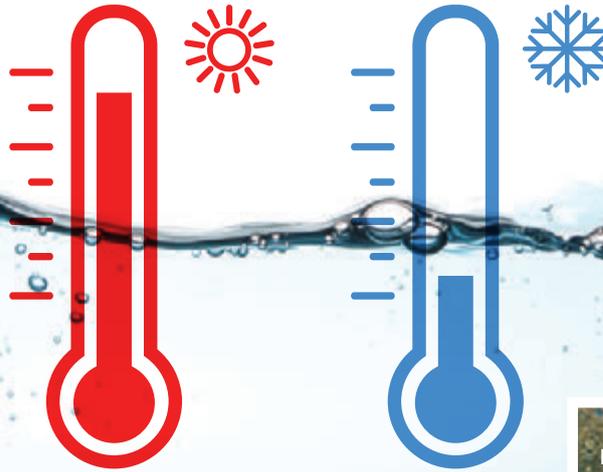
## SUMMARY

Chemical choices (including teat dip) and their application is a big subject.

*“There is such a fine balance in terms of the wash cycles, the flows you need to maintain, and the different configurations.”*

He says unless it’s rubberware or test buckets, everything in the high-count conversation comes back to either contact time, water temperature, chemical concentration, and/or water flow.

*“And, because milking machines are the most complicated machines on-farm from a food harvesting point of view, it does make sense to use technical support.”*



# WATER QUALITY & TEMPERATURE CAN BE THE ENEMY

**Two critical areas are often overlooked in the dairy washdown space.**

**One is super easy.**

It simply involves a post-milking rinse between 30-40 degrees Celsius – with an alkaline wetting agent, ALKA RINSE.

This simple action will remove more than 98% of milk solids from your dairy plant.

It sets your plant up for the most efficient clean, because it removes that fatty milk film.

Yes, that's right: you can achieve that high a percentage clean, even before you start your formal wash-down.

Right now you may be wondering why more people don't know about this?

I often wonder the same thing.

The positive feedback I get from dairymen when we share this simple piece of information always reminds me that I need to bring it up whenever I can. So here it is again:

After you finish milking, remove milk residues from the milk contact surfaces by using a warm, 30-40°C rinse containing ALKA RINSE to remove the milk film. Do not re-circulate.

A word of warning: the temperature of this step is critical. Too cold and milk fat solidifies, sticking on surfaces; too hot and milk protein denatures, also sticking to surfaces (and is then very hard to remove).

## WATER QUALITY

**The second step** is to assess your water quality. Quite bluntly: without a source of fresh, clean water for your dairy, you are being set up to fail. The minerals in your water can be a complex science to overcome. Our DASCO chemical hygiene team can certainly help you with that.

Water hardness is a measure of Calcium and Magnesium levels, and it is expressed as parts per million – or ppm. The dissolved inorganic salts of Calcium and Magnesium make water “harder”, particularly when significant amounts of Magnesium are involved.

For stock-drinking water, the cleanest pathogen-free water of <300ppm TH [Total Hardness] is recommended. Equally, the water used in teat sprays, milking machine, vat wash-rinse water and external plant wash-down, all need to meet the same criteria.

Of course, the higher water quality you have, it makes sense that the less chemical you will need overall. That, in itself, can save money.



DASCO has been manufacturing dairy chemical in Australia for more than half a century.

### HAMISH HUNT

Special Projects – Daviesway/DASCO  
Mobile: 0400 118 749  
Email: hamish.hunt@daviesway.com.au

*Hamish has worked with DASCO/Daviesway on special projects for 21 years. The Industrial Chemist graduated with a degree in Bachelor of Applied Science in Applied Chemistry from RMIT University in Melbourne in 1986 – before adding further study in Bio Science and Genetics.*

## POOR QUALITY WATER

However, what happens if your water quality is poor? This is common when conditions are dry.

When you heat poor quality water, it will precipitate sludge in water heaters, leading to both element fouling, and creating a haven for Thermophilic organisms.

Water that has dissolved metals (such as iron) is also likely to harbour extremophile-type organisms, which can attack equipment surfaces and drive localised corrosion.

The milking machine has multiple connection points and surfaces which act as potential hide-outs for a full range of micro-organisms. The highest risk points are those within the milking unit assembly – at rubberware connection points.

None of this is great news.

## WATER SOFTENERS

However, in acknowledging that, DASCO can help.

The percentage of water softeners needed in detergents depends on the water hardness, wash temperature, and wash time.

For the wash-down process to be successful, it is important to stop the water hardness salts from reacting with the various components of milk. In alkaline detergents this is done using complexing agents that soften the water by stopping Calcium, Magnesium, Iron and Copper interacting with the milk.

Acid detergents dissolve mineral deposits in your machine. They are not affected by water hardness unless it is extremely high – at which point a small increase in chemical is all that is required.

Water hardness may vary significantly from season to season, between states and countries, which naturally impacts on detergent formulations. Success and/or failure in any given situation is as easy as understanding it.

We are proud at Daviesway/DASCO to formulate chemicals in Australia for Australian conditions. So, please don't hesitate to ask our team how we can help tailor the chemical solution for your dairy.



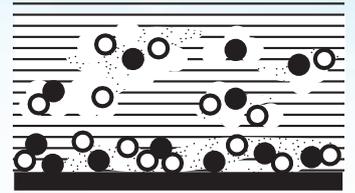
Water hardness can vary significantly, which impacts on detergent formulations.

# MILKING EQUIPMENT CLEANING PROCESS

Milking equipment can be cleaned manually or automatically.

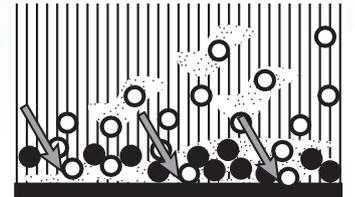
## PRE-RINSING

Milk residues are removed using plenty of warm 30-40°C water, and a wetting agent.



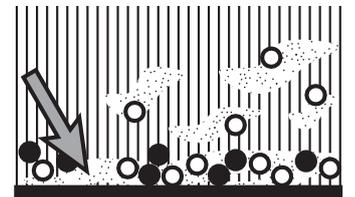
## WASHING

The wetting agent in the pre-rinsing solution allows the detergent to easily penetrate the film of adhered fat, protein, sugars and minerals.



## ALKALINE DETERGENT

Dissolves protein and fat.



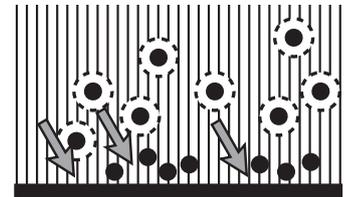
## ACID DETERGENT

Dissolves minerals deposited in the machine.



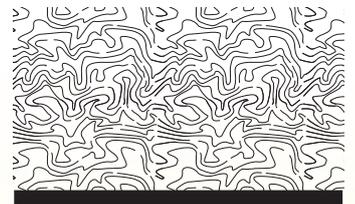
## COMPLEXING AGENTS

Soften wash water by keeping Calcium, Magnesium, Iron and Copper salts in solution



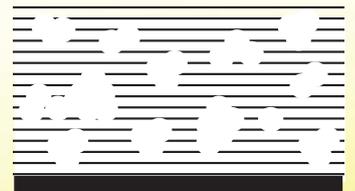
## SANITISING

Sanitising ensures that surfaces within the milking machine are more than 90% bacteria-free.



## RINSING

Completes the cycle, and makes sure the milking machine is free of chemicals before the next milking.



### KEY

|         |     |                     |             |                    |           |
|---------|-----|---------------------|-------------|--------------------|-----------|
|         |     |                     |             |                    |           |
| PROTEIN | FAT | WATER HARDNESS IONS | RINSE WATER | DETERGENT SOLUTION | SANITIZER |



An in-line camera shows significant milk stone build-up 25.3m into the line.



The combined build-up of iron in the water and milk solid residue in a milk receive can is hard to miss.



DASCO's Paul Hurst uses a torch to check for residue in a milk vat during a routine dairy check.

## ALKALINE DETERGENTS FOR CLEAN IN PLACE (CIP)

|                        | POWDER PRODUCTS |            | LIQUID PRODUCTS |          |              | SPECIAL    |
|------------------------|-----------------|------------|-----------------|----------|--------------|------------|
| Function               | Alka Klenz      | Supa Klenz | Alka Rinse      | Rev Wash | Alka Force   | Tank Klenz |
| Contains wetting agent | ✓               | ✓          | ✓               | ✓        | ✓            | ✓          |
| Removes butter fat     | ✓               | ✓          | ✓               | ✓        | ✓            | ✓          |
| Removes milk protein   |                 | ✓          |                 |          | ✓            |            |
| Phosphate free         | ✓               | ✓          | ✓               | ✓        | ✓            |            |
| Water tolerance        | <300ppm         | <400ppm    | ✓               | <300ppm  | <600ppm      | <600ppm    |
| Contains chlorine      |                 | ✓          |                 |          | Can be added |            |
| Sanitiser function     |                 | ✓          |                 |          |              | ✓          |

The purpose of dairy detergents is to solubilise residual fat that has been left in the milking machine after the post-milking rinse. Alkaline detergents play a major role in removing milk proteins.

## ACID DETERGENTS FOR CLEAN IN PLACE (CIP)

|                         | POWDER PRODUCTS |                    | LIQUID PRODUCTS |            |          | SPECIAL |
|-------------------------|-----------------|--------------------|-----------------|------------|----------|---------|
| Function                | Citra Klenz     | Citra Klenz Thermo | Eliminate       | Ultra Acid | Acid Flo | Iophos  |
| Contains wetting agent  | ✓               | ✓                  | ✓               |            | ✓        | ✓       |
| Removes milkstone       | ✓               | ✓                  | ✓               | ✓          | ✓        |         |
| Removes hardwater scale |                 | ✓                  | ✓               | ✓          | ✓        |         |
| Removes iron stain      |                 | ✓                  | ✓               |            |          |         |
| Low foaming             | ✓               | ✓                  | ✓               | ✓          | ✓        |         |
| Liner friendly          | ✓               | ✓                  | ✓               | ✓          | ✓        |         |
| Sanitiser function      |                 |                    | ✓               |            |          | ✓       |

Acid detergents are very effective at removing mineral deposits that have resulted from either water hardness or the use of an inappropriate detergent. Acid detergents also play a minor part removing milk proteins.



**PRE-RINSING**  
*Liquid product*



**ALKA-RINSE**

- Post milking rinse additive
- Increases wash efficiency
- Lifts milk solids from machine services
- Use in 30-40°C rinse water for maximum impact

**QUALITY DAIRY EQUIPMENT  
CLEANING & HYGIENE**

*Australian-made products available in a range of sizes*



**ALKALINE  
DETERGENT**  
*Liquid products*

*Powder products*

- Alka Klenz •
- Supa Klenz •



**REV-WASH**

- Liquid alkali – **heavy duty**
- For use in good – < 300 ppm TH water
- Ideal for automatic wash systems



**ALKAFORCE**

- Liquid alkali – **for super-tough water conditions**
- Powerful blend of two alkalis
- Ideal for automatic wash systems – plants with large line sizes

**ACID  
DETERGENT**  
*Liquid products*

*Powder products*

- Citra Klenz •
- Citra-Klenz Thermo •



**ELIMINATE**

- Liquid acid – **heavy duty**
- Ideal for hard & mineralised water
- Double acting acid / sanitiser
- Effective pre-milking sanitising
- Ideal for automatic wash systems



**ACID-FLO**

- Liquid acid – **tough**
- For use in good – > 300 ppm TH water
- Removes milkstone
- Ideal for heavily mineralised water
- Ideal for automatic wash systems



**ULTRA-ACID**

- Liquid acid – **super tough water conditions**
- Removes milkstone
- Hard water types
- Single acting acid
- Effective in waters with high levels of suspended solids



**POWERFUL**

**CITRA-KLENZ  
THERMO**

**ACID DAIRY POWDER DETERGENT FOR REMOVAL  
OF MILKSTONE AND CONTROLLING THERMODURIC  
BACTERIA IN MILKING MACHINES**

- Low foaming
- Ideal for cleaning all rubberware & stainless steel surfaces
- Economical to use – 15 grams per 10 litres hot water (85°C)
- Thermoduric control for hard and mineralised water
- Bisulphate boosted
- Available in 20kg, re-sealable plastic pails
- Pink colour for easy identification
- Two-year shelf life

# EASY, ACCURATE & REPEATABLE



## BRUCE TREBLE

Daviesway/DASCO – Mobile: 0418 549 494  
Email: bruce.treble@daviesway.com.au

*Sales Manager Bruce Treble has been with Daviesway for 25 years, and is one of the company's anchors. Having always specialised in milking machinery, today Bruce also oversees all capital equipment, quoting and technical information.*

## GUARDIAN II – CIP AUTO WASH SYSTEM



### The devil is always in the detail when it comes to achieving premium milk quality.

And, several key factors at the end of milking – during the wash cycle – drive a big part of that result.

Yet it doesn't have to be hard, complicated or time consuming, because technology makes it possible to achieve the sanitation and safety features that busy dairymen deserve. It's all in the Guardian II™ automatic wash system.

Bruce said the Guardian II™ has the jump on other automated inline wash systems in the market for several simple, logical reasons.

Among them is that the Guardian II™ is manufactured by global dairy manufacturing giant BouMatic. The US company has included unparalleled programmability within an easy-to-use system that also features temperature and time control systems with alarm feedback.

### 'SATURDAY MORNING FOOTY' WASH PROGRAMME

*"I think the biggest thing for me is that BouMatic got the design right from the start,"* Bruce said.

He said the functionality is a standout, while the interface is very simple from a day-to-day operator view.

*"At the front it's just got two buttons – an 'up', and a 'yes'. But its biggest feature is the customised programmability. "It's got five different customised wash cycles you can set up, and in each of those wash cycles you can have up to eight or nine different steps. So, you can almost make it so that wash cycle five is the 'running out the door on Saturday morning for footy sort of thing', and the Sunday morning is going to be the comprehensive wash. That's the flexibility of it."*

During washing, the system controls the hot and cold water valves, the recirculation valve, the dump valve, the peristaltic detergent pumps and the air injector. It also includes a safety switch at the wash return line so that it doesn't operate until that connection is made.

*"It's got auxiliary outputs, so it will turn all the components you want on or off. It adds the detergent at up to 600 millilitres per minute and it monitors temperatures. It will run the perfect wash every time."*

Bruce said almost without exception, every new Daviesway dairy build or retrofit includes the Guardian II™ auto-wash system.

*"The automatic checks and alarms are also really valuable. If it runs out of water, if the wash cycle is taking too long, if the water is too cold, it will trigger an alarm and you have to acknowledge that alarm before you operate the system again. At the end of the day, that's what it needs to be able to do."*

He said other systems are often too rigid in their programming.

*"What you actually end up doing with those systems is struggling to find the closest wash cycle to what you actually want."*

*"So, it's always a compromise. With the Guardian II™, you tell us how you want to wash your dairy, and we'll make it wash."*

## CHEMICAL SAFETY

Another advantage in the Guardian II™ system is that it features an electrical module and a pump module. *"Which means you can put the pump module out with the chemicals, and then it's stored and out of the way."*

*"You're not then trying to put two modules in the one area or sucking chemical a long way. Because as soon as you start sucking chemicals from a long way, it deteriorates pumps."*

*"It also means that employees are not working around high temperatures, acids or alkalis. The automation is taking care of all that sanitation cycle, and a staff member's time can be better used somewhere else."*

Bruce does caution that – as with all automation – operator observation is still important.

*"I think the mistake everyone makes with an auto-wash system is that because it's a push-button – and you can walk away – that it doesn't need to be checked regularly. You do still need to make sure all the jetters are working, and that all the clusters are getting water through them. It doesn't have to be every milking, but you do need to do it."*

Price is always a consideration when it comes to a new addition to any dairy.

*"My answer to that, is 'what are you actually trying to do?'. If you're trying to wash your investment correctly every time, an auto-wash system can be pretty cheap when you consider the potential counts and subsequent penalties. You're investing in something to look after the hygiene in your plant, and you've got to know that it's working the way you want it to."*

*"If I owned a dairy, the game-changing advantage of the Guardian II™ for me would be that I could wash the plant the way I wanted to, rather than the way the manufacturer believed that I should."*

The Guardian II features an electrical module and a pump module - making it safer for employees around chemical, whilst saving wear on pumps.



# PREDICTING THE FUTURE



**DASCO led the way when it introduced Ready-To-Use Redene (RTU) teat spray to Australia's dairy community back in 2000.**

And it's still leading the way forward, developing biodegradable chemicals on-farm.

The team has been working on the next generation of dairy chemicals since 2012. With the work now endorsed, the Melbourne-based family business is close to completing its accreditation process.

## ANSWERS FOR FARMERS

DASCO's Industrial Chemist, Hamish Hunt, said the initiative means DASCO continues to keep up with the answers farmers need leading into 2020.

*"We are the first company to do this, and we're the first team to say if chemical ends up in the manure pond it's now going to be fertiliser, so it had better have a positive impact on-farm,"* Hamish said.

*"We had to have products that would not only leave no residue in food, but which would also show no on-farm residue accumulation over time. And, ideally it would be fully biodegradable within close to 45 days on-farm, so there was no potential for run-off into waterways."*



## ORGANIC NOT FAR ENOUGH

Hamish said organic farming was the start, and sustainable agriculture simply maintained a status quo, but didn't go far enough.

The future, he said, was in full regenerative agricultural practice, with DASCO more than pleased it's been possible to do this with products that are non-GMO, non-palm oil and not detrimental to the farm.

*"In fact, we can add value. So, the biodegradable components are themselves a food source to different levels of organisms within the system,"* he said.

*"We want to lead the world in understanding what biodegradability on-farm actually means."*

*"I think it's pretty exciting. It's been a huge task."*

*"But DASCO is about dairy, and dairy is about food, so we've committed to following the organic line because that is where the future is."*

## WHY DASCO INTRODUCED RTU

DASCO's owner John Davies confirmed that when he introduced Redene RTU teat spray, everyone in the industry told him it was a fool-hardy move.

But being first cab off the rank has never bothered him.

*"At that time, we were just entering the grip of that very long, 10-year drought and the water quality on farms was getting more and more questionable,"* John said.

*"It just made complete sense to me because of the ongoing problems with water quality and supply around the country."*

The first year they moved a very small amount of product. Today, pre-mixed teat spray is a major part of DASCO's business.

*"Most of the industry said we were crazy, and that we'd never sell water. But we never saw it as 'selling water'. The price of the RTU had to be pretty much exactly the same as the concentrate product that farmers had to mix themselves anyway."*

*"What we were actually selling was a consistent product that was mixed in a factory under GMP [Good Manufacturing Practice] conditions with high-quality drinking water – something you rarely find teat dip mixed with on-farm."*

*"So, when the RTU arrived on-farm, our customers had complete peace of mind about what was going on their cows' teats."*

## HISTORY SHAPES FUTURE

John said using RTU formulations in the dairy industry was inspired by other agricultural industries. The US dairy industry had picked up on it, with John adopting it in turn, after seeing its impact on agriculture's global big-picture.

*"Pre-mixed teat spray has been a great product for us, and ultimately most of the other companies all copied it after a few years,"* he mused.

*"Mixing teat dip is a mundane, repetitive task. Heavens above, farmers have better things to do than to be mixing teat dip on a daily basis! I can't imagine why anyone would want to mix teat dip these days."*

*For more information, don't hesitate to contact any of our skilled team. Their names, areas and phone numbers are listed on the bottom left-hand side of page 2.*

# TEAT HYGIENE HAS NEVER BEEN MORE CRITICAL



Melissa Brewer, of Shady Creek, Victoria recently completed a routine shed check with DASCO's Paul Hurst. The result left her smiling for the rest of the day.

## PAUL HURST

DASCO – Chemical Hygiene Specialist  
Mobile: 0409 387 828  
Email: paul.hurst@daviesway.com.au

*Paul graduated with a Bachelor of Science degree (Chemistry major) from Melbourne University in 1992. He has worked in the dairy hygiene space for 20 years – specialising in technical support, trouble-shooting, and protocol*

## The hidden cost of skipping annual shed checks can be a false economy.

While the tough season has understandably made everyone tighten their belts – DASCO's Paul Hurst says routine shed tests expose the triggers that threaten teat hygiene and health.

Compromised teat hygiene is a short step away from teat-end damage, rising somatic cell counts (SCC), temperament issues and more manure in the dairy as a result of teat discomfort.

*"Skipping that annual shed test can often come down to a lot of farmers trying to save money - so we totally get why they're doing it," Paul said.*

*"But the impact on herd health, milk quality and production can be significantly affected when things aren't right. And it often costs more money to fix the problem than it would have done if the shed check had been done on time."*



DDS Koroit team member – Glenn Wright  
Annual shed tests can expose potential problems before they impact on herd health.



Changing liners every 2500 milkings is the best way to avoid hyperkeratosis.

## VACUUM LEVELS CAN COST MORE

One of the first offenders is vacuum level.

Paul said these naturally change over time in every dairy, because of wear and tear.

*“But, in the last 12 months, I’ve seen more variation in vacuum levels causing more problems than ever before, purely because the vacuum is too high or too low – which would have been picked up in a routine shed test,”* Paul said.

## CHANGE INFLATIONS EVERY 2500 MILKINGS

*Changing the inflations every 2500 milkings is one of the first and most consistent pieces of advice any dairy technician worth their weight would offer,* he said.

*“Because the inflations are the contact point between the cow and the plant, they are the most important part of the process.”*

## RTU SAFER TO USE IN WATER SHORTAGES

He also said decisions around teat sprays have been heightened this season because of the water shortage and subsequent quality-control issues.

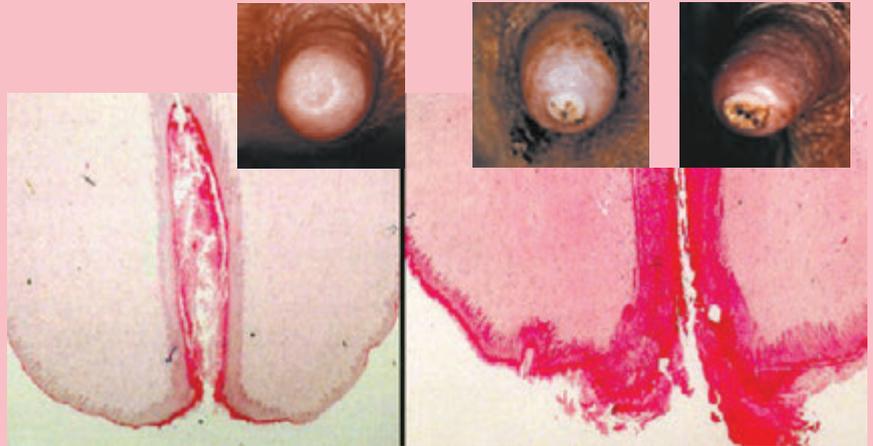
The reality is that after the cups are removed, the teat orifice takes about three minutes to close. An effective teat spray is the first, second, third, and best barrier against pathogens during that window.

The most commonly used teat sprays in Australia are Iodophors (manufactured from naturally occurring iodine), Chlorhexidine (a man-made compound) and DDBSA (a man-made product).

He said the differences come down to personal choice, but his recommendation is a Ready-To-Use option – simply because of its consistency, high levels of emollient and world-standard drinking water used during manufacture.

## HYPERKERATOSIS

*Teat-end hyperkeratosis is a thickening of the skin that lines the teat canal and surrounds the external teat orifice. Ensuring the teat skin is in good condition, maintaining skin moisture and natural elasticity, will help the teat restrict the development of hyperkeratosis. Using a high quality teat disinfectant and changing liners every 2500 milkings is essential for teat health.*



Healthy teat canal

Damaged teat canal

## IODOPHORS THE YARD STICK

Using products derived from seawater and seaweed is well understood to control skin infections and injuries. This is because seawater includes both chlorine and iodine in sufficient quantities to promote healing and infection control. Seawater would be an ideal teat dip – except for the fact that the drying salt concentrates chlorine against skin, resulting in drying and cracking.

From a dairy farmer’s perspective, Paul said iodine is the only product that kills all bacteria in the same way at the same rate. However, emollient levels remain critical within that conversation for cow comfort.

*“Iodine-based teat sprays cope better with poorer water as they are acidic and strong oxidants. Quality iodides are buffered to reduce the skin-irritation potential, and the right levels of emollient are important to stop irritating a cow’s teat,”* Paul said.

*“In saying that, iodine is the world-standard sanitiser and the chemical all other teat sprays are measured against.”*

## RTU SO EASY

Paul said the RTU Redene was a hard product to pass by.

*“It’s always my preferred option, because the emollient levels are already elevated, the chemical is precisely measured, and the on-farm water quality is taken out of the equation all together,”* he said.

*“I just love that it’s such a consistent product, and you know that you’re right – every single time.”*

## CHLORHEXIDINE HAS ITS PLACE

Chlorhexidine is a man-made sanitiser with a neutral pH. It works by immobilising bacteria, stopping them from feeding, thus they die. It was developed in the 1960s because hospitals wanted a disinfectant that didn’t stain.

*“It’s very gentle on the cow’s teats, but it doesn’t cope at all well with poor quality water,”* Paul said. *“There is some evidence that it isn’t as effective on some bacteria species, like Pseudomonas and Serratia, but, if you have town water, it’s a great option.”*

DDBSA is a base chemical builder for a type of detergent. It works in a similar way to chlorhexidine, but, Paul said, is not as bullet-proof.

## SUMMARY

Paul said there is no *“one-size fits all”* when it comes to dairies and he urged producers to take advantage of the skilled advice within the Daviesway/DASCO team to find the most effective option available.

# SLASH TEAT DISINFECTANT COSTS AND IMPROVE RESULTS



The world's very first Dip Cup was developed by Ambic in conjunction with the UK National Institute for Research in Dairying. This pioneering work established the importance of post-milking teat disinfection in the control of mastitis.



## Ambic StandardDipper™

- Large angled cup for easy application and maximum teat coverage
- Specially designed splash-proof lip to overflow chamber to reduce spillage and overflow
- Soft squeeze bottle for ease of use
- 30ml Dip Cup capacity
- Convenient belt hook.



## Ambic UniDipper™

Dip Cup design makes it suitable for dipping cow, goat and sheep teats. It is also ideal for dairy farmers who prefer a 'side action' dipping routine, such as when dipping in a stanchion barn.

- First fully non-return lateral Dip Cup
- Unique patented DipWell™ chemical reservoir and anti-drip lip to prevent chemical spillage.

## Australian dairy farmers have a golden opportunity to slash their post-milking teat disinfectant costs.

DASCO Industrial Chemist Hamish Hunt says there are some very real savings to be made – among other advantages – if farmers choose to dip rather than to spray teats post-milking.

## 80% OF THE WORLD DIPS

Interestingly, 80% of the world's dairy farmers dip, rather than spray. Yet, conversely Australian dairy farmers predominantly spray – with the notable exception of the country's biggest single-site dairy, Moxey Farms.

Hamish says, "The stats for dipping is that it takes about 10 millilitres of teat disinfectant per cow. With hand spraying, typically the target volume is about 20ml – so 100% more chemical than dipping.

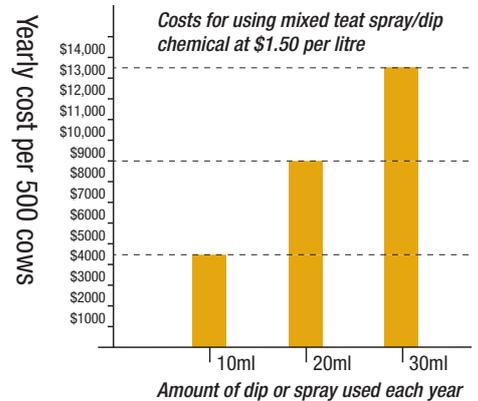
"That's because the spray pressure may be set too high, the operator might pull the trigger and keep going, or they don't actually look at what they're applying – which is more common. I've seen the backs of udders and tails sprayed. It can involve a huge amount of extra volume – more than 70ml/cow in some instances.

To put that into perspective, you could spend up to \$9000 more a year on chemical if you are spraying rather than dipping [in a 500-cow herd].

"And, with floor-mounted systems on rotaries that have directional sprays, there is an assumption that every cow is the same size. But, a cow in her third or fourth lactation is bigger than a two-year-old, and that naturally changes how far forward or back they stand in the bail."

## Ambic DipMizer™

The traditional Dip Cup applies teat dip by immersing the teat in chemical and coating it with teat dip. Adding the DipMizer™ device adds a 'sweeping' step to the dipping routine in order to remove excess chemical from the cow's teat as it is withdrawn from the Dip Cup – saving you money on unnecessary teat dip consumption.



## CONSCIOUSLY 'LOOKING'

Hamish says there is also merit in dipping, because it encourages the dairy farmer to consciously engage, and check their cows.

"Because we are culturally always in a hurry, we often don't think about these things," he said.

"And, if you are looking to get more production out of less animals, it's important to pay attention and see what is going on with them.

"I think this is especially important in Australia, because most of our dairy farmers don't prep udders – they strategic wash – so there's next to no inspection at cups on. It's literally 'cups on'.

"But as part of your finish at cups off, if you dip every cow you also have to look at, and focus on, every teat. So, you're more likely to see whether she has been milked out properly, or [for example] if she is in the early stages of a mastitis infection.

"Getting on to any health problems early is a cost-saving in terms of medication/vet costs and potential lost production or compromised fertility."

## 80% CAN'T BE WRONG

The other good news is that dipping cups are inexpensive – and easy to get hold of.

"There seems to be a feeling in Australia that dipping is somewhat old fashioned, slower and something that our grandparents did a long time ago.

"The reality is, dipping gives you a significant advantage in being able to control the dip solution on the teat, with the added opportunity to consciously inspect the animal post-milking – while saving a significant amount of money on chemical doing it."



## QUALITY TEAT & UDDER CARE

*Australian-made products available in range sizes*

### TEAT & UDDER CARE



#### REDENE READY-TO-USE

- Gold standard in Iodine teat sanitising - fast acting.
- No mixing or water quality issues
- Consistent performance for your Mastitis control program.



#### THE ORIGINAL REDENE

- Iodophor concentrate teat dip and spray
- Helps control mastitis
- 1:3 mix.



#### PROTECT-E

- A highly effective chlorhexidine gluconate teat spray or dip sanitiser.
- Helps control mastitis, udder and teat-skin conditions.



#### UDDAGARD

- Iodophor teat sanitiser concentrate
- Helps control mastitis, and stops teats cracking
- 1:1 mix.



### TEAT DIP AND SPRAY

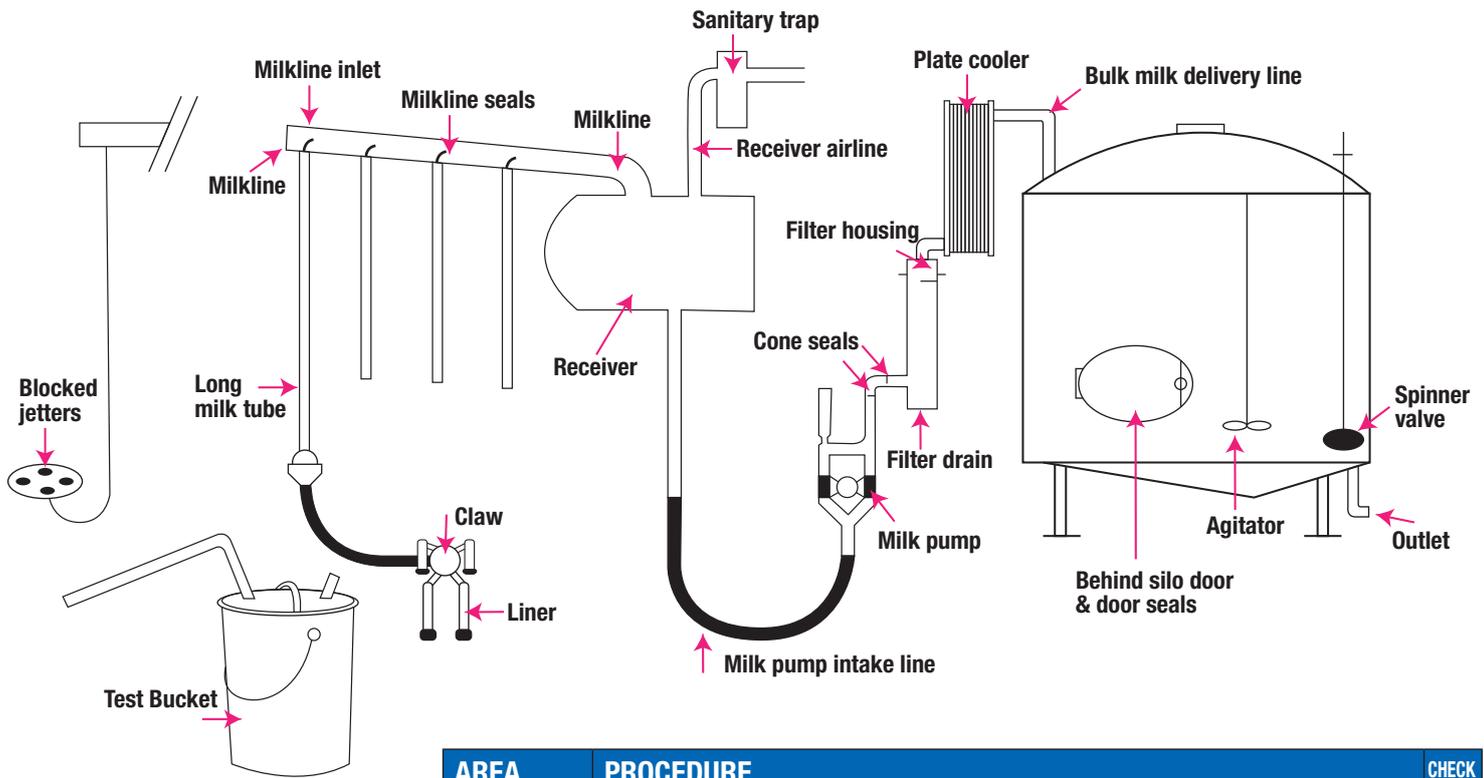
**TRUSTED – Controlling mastitis for more than five decades.**

**Redene was Australia's first teat dip, and it remains this country's market leader.**

- Saturated liquid Iodine complex with superior wetting agents enables rapid penetration.
- Integrated emollients translates into low (or nil) irritancy - 20% emollient.
- When it is used at recommended dilution rates of 0.5% Iodine, it kills 99.9% of bacteria.
- Two-year shelf life
- Thick concentrated formulation coats & sticks to the teat
- 1:3 mix.

# WORKING TOGETHER FOR MILK QUALITY

## AREAS OF PLANT TO CHECK



## Weekly Dairy Inspection

*Water & chemical recommendations should be done by DASCO*

In all areas of the dairy plant check for soils, dirt, build up of protein, milk fat & rubber breakdown.

### Staff MUST ensure:

- Is the Auto / Manual Wash System going through the cycles ok?
- Is the right amount of chemical & hot water being used?
- Check the wash / rinse times & temperatures
- Wash water temperatures – *Detergent water MUST be dumped above 60°C*
- Automatic wash systems  
Observe the wash going through at least once a week

## CHECK LIST

| AREA                          | PROCEDURE  | CHECK |
|-------------------------------|--|-------|
| MILK PLANT                    | Check claws & milk flow meters for protein/milk fat  |       |
|                               | Check milk tubes from the claws to droppers or milk line for protein/milk fat  |       |
|                               | Check long tail milk tubes from the top of the droppers to the milk line for protein/milk fat  |       |
|                               | On rotary platform where the milk line is on the inside of the platform<br>• Check milk tubes from milk line to the outside of the platform for protein/milk fat |       |
|                               | Check milk receival can & sanitary trap wash water spinner & drain system for protein/milk fat   |       |
|                               | Check tubes and bends around milk pumps for protein/milk fat   |       |
|                               | Rotary – Check that milk line shutoff valve is closed through wash cycle   |       |
| MILK FILTER                   | Check all rubber bends and tubes for protein/milk fat  |       |
|                               | Check inside the filter for protein/milk fat   |       |
|                               | If filter has a drain valve or milk tube with a snap clamp on the bottom<br>• Ensure snap clamp is as close as possible to filter                                |       |
| HEAT EXCHANGER (PLATE COOLER) | Check all rubber tubes and bends for protein/milk fat  |       |
|                               | Check for water getting into milk side of the cooler – <i>Discuss with your technician</i>   |       |
|                               | Check milk delivery tube/rubber bends from cooler to bulk milk tank for protein/milk fat   |       |
| BULK MILK TANK                | Check inside tank<br>• When protein is present it gives a rainbow effect in a dry tank<br>• If protein is present - <i>Discuss with your technician</i>          |       |
|                               | Check milk agitator is working   |       |
|                               | Check cooling is working   |       |
|                               | Check the dosing system is working on automatic wash systems and is getting the correct amount of chemical according to wash procedure                           |       |
| TEST BUCKET                   | • Check rubber tube seals and bucket or hygiene issues   |       |



Daviesway Pty Ltd – 15 Helen Street, Heidelberg Heights, VIC 3081  
Phone: +61 (0) 3 9459 4533 • 1800 666 269

[daviesway.com.au](http://daviesway.com.au)