



TECHNICAL NOTES

U-Seal™

Non-antibiotic

Dry Cow Intramammary Teat Sealant



Active Constituents

Bismuth subnitrate 650 mg/g

Actions

U-Seal is a sterile, non-antibiotic intramammary infusion that creates a physical barrier in the teat canal, preventing pathogens entering the udder during the dry period.

U-Seal is an inert substance containing 65% bismuth subnitrate in a mineral oil base and is presented in the form of a viscous white paste.

U-Seal seals the udder before the natural keratin plug in the teat canal has formed post dry-off and after it has broken down before first milking, offering greater protection against pathogens entering the udder during the dry period.

Key Features

- U-Seal provides a physical barrier in the teat canal that mimics the natural teat plug, preventing the entry of bacterial pathogens into the udder.
- The formulation of this physical barrier acts to prevent mastitis throughout the dry period and early post-calving.
- During dry-off, U-Seal can be administered concurrently with a dry cow antibiotic. When a teat sealant is used at the same time as a dry cow antibiotic, it has been shown to reduce the number of mastitis cases by up to 70%, compared to when dry cow antibiotic is used alone.¹
- In low cell count cows where dry cow antibiotic may not be warranted, U-Seal can be used as the sole intramammary infusion.
- In maiden heifers pre-calving, U-Seal can be administered four weeks prior to first calving, to dramatically reduce the chance of calving mastitis.

1. Runciman DJ, Malmo J & Deighton M (2010). The use of an internal teat sealant in combination with cloxacillin dry cow therapy for the prevention of clinical and subclinical mastitis in seasonal calving dairy cows, *J. Dairy Sci.*, 93 :4582–4591.





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Indications

U-Seal is indicated for the prevention of mastitis in dairy cows during the non-lactating (dry) period and early post-calving.

Restraints

DO NOT USE in lactating cows.

Dosage and Administration

During the administration of the product it is important to ensure that infection is not introduced. Accidental introduction of bacteria into the quarter during insertion of the intramammary syringe can result in serious mastitis. Thoroughly clean hands prior to administration and wear clean gloves during administration. Immediately after the last milking at drying off, prior to treatment with U-Seal, the udder should be stripped and each teat thoroughly cleaned with a suitable disinfectant.

Carefully infuse the entire contents of one injector into each teat to form a seal, preventing ingress of pathogenic bacteria into the udder during the dry period.

After infusion, DO NOT massage or squeeze the teat as this may dislodge the seal.

It is recommended that U-Seal be used as part of a herd approach to dry cow management and mastitis control. Cows considered likely to be free of subclinical mastitis and at risk for new infection in the dry period should be given U-Seal at drying off. Other animals should be managed in accordance with an approved mastitis control plan or specific veterinary advice.

For practical purposes, selection criteria may be based on the mastitis and cell count history of individual cows, or recognised tests for the detection of subclinical mastitis, or bacteriological sampling. As a guide, where there has been no episode of clinical mastitis and at least three individual cow cell counts are available, cows with all cell counts below 250,000 cells/mL may be given U-Seal.

Maiden heifers (first calvers): Administer U-Seal approximately 4 weeks prior to calving to reduce the risk of post-calving mastitis.

Use in combination with antibiotic therapy: In cows that have sub-clinical mastitis, U-Seal may be used following administration of a suitable dry cow antibiotic treatment to the infected quarter. The dry cow antibiotic should be administered in accordance with the product label and massaged into the quarter. Following administration, redisinfect the teat and infuse U-Seal as recommended above. After U-Seal infusion, DO NOT massage or squeeze the teat as this may dislodge the seal.

General Directions

Milking machine advice: To reduce the potential for U-Seal accumulation in milking machines and reduce the risk of particles entering milk in the vat, thoroughly hand-strip U-Seal out of each quarter, 10 to 12 strips per quarter, at the first milking of fresh cows.

Where possible, avoid removal of U-Seal by the milking machine.

Keep milk from fresh cows out of the vat for a minimum of 8 milkings (10 milkings in induced cows) or in line with industry standards designed to minimise colostrums entering milk for processing. If possible, use designated clusters and test buckets during this time to minimise adherence to rubberware and milk lines. Clean milking equipment carefully to prevent particles entering the vat. Change filter socks regularly, particularly if residual teat sealant is visible on the filter.





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U-Seal is designed to sit in the teat canal during the dry period. This means that the administration process should focus on ensuring that the product does not travel up in the higher udder tissue. This is in contrast to the administration of antibiotic dry cow therapy which is required to be infused into the udder tissue to ensure efficacy and duration of treatment. Care should be taken when administering U-Seal to ensure that it stays in the teat canal. Failure to do this may mean that the product has reduced efficacy and may not be fully removed by 8 milkings.

Key points:

- Plan for the time and labour that treatment takes.
- More than one person is often needed to do the job well.
- Ensure people administering U-Seal are trained adequately in the procedure.
- Keep the number of cows to be treated after any one milking to a manageable number.

U-Seal Infusion Instructions: Thoroughly clean hands prior to administration and wear clean gloves during administration. Immediately after the last milking at drying off, prior to treatment with U-Seal, the udder should be stripped and each teat thoroughly cleaned with a suitable disinfectant.

After infusion, DO NOT massage or squeeze the teat as this may dislodge the seal.

1. Hygiene: Ensure animals are appropriately restrained in hygienic conditions. Keep syringes clean and DO NOT immerse in water.
2. Clean and Dry: The teats should be clean and dry prior to disinfection. If the teats are not clean, wash and dry prior to disinfection.
3. Disinfection Technique: Wearing gloves, thoroughly scrub teat ends with alcohol impregnated wipes (one per teat) and leave to air dry. First, disinfect the two teats further away, then the two closest. Take care to avoid contamination of disinfected teats.
4. Insertion: Ensure teats are dry before insertion. Take care to avoid contamination of the syringe nozzle. Careful insertion of the U-Seal syringe nozzle with minimum penetration into the teat canal is recommended. Insert U-Seal into the teats in the opposite order to disinfection i.e. closest two teats first, then the two furthest away. While administering, gently close off the top of the teat (closest to the udder) when inserting the syringe nozzle to encourage product to remain in the teat cistern and canal, rather than in the udder.
DO NOT massage the teat or udder after insertion of U-Seal.
5. Teat Spray: After treating each cow, spray teat with your normal teat sanitiser, and mark treated cows with spray mark, raddle or similar.

U-Seal Removal in Fresh Cows:

Key points:

- You must remove U-Seal in fresh cows.
- Change filter socks after each milking.





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Withholding Periods

Milk: DO NOT USE in lactating cows or within 4 days of calving. After calving, colostrum or milk taken from treated cows must not be used for human consumption for 96 hours (8 milkings).

Meat: Zero (0) days

Trade Advice

Export Slaughter Interval (ESI): Zero (0) days. Before using this product, confirm the current ESI from Jurox Pty Limited on 1800 023 312 or the APVMA website (www.apvma.gov.au/residues).

Safety Directions

May irritate the eyes and skin. Avoid contact with eyes and skin. When using the product, wear disposable gloves. Wash hands after use.

First Aid

If poisoning occurs, contact a doctor or Poisons Information Centre. Phone Australia 13 11 26.

Presentation

Each pail of U-Seal contains:

- 200 x 4 g syringes of U-Seal containing bismuth subnitrate 650 mg/g.

Storage

Store below 30°C (room temperature). Protect from light.

