



Nonyl-phenol Ethoxylates (NPEs)

Key points for industry / supplier communications

22nd February 2016

What are NPEs and why are they a concern?

- Nonyl-phenol Ethoxylates (NPEs) are surfactants used in many industrial chemicals, pesticides, and herbicides but from the dairy industry's perspective it is their use in most iodine-based teat sprays that is of greatest concern. NPEs are used in the spray formulations to solubilise iodine.
- Over the past few years concerns have emerged globally about effects of NPE in the environment and, in particular, toxicity in aquatic environments
- There have also been some other studies that indicate some NPEs may act as an endocrine disruptor (they can mimic estradiol)
- In response to these concerns several countries have regulatory limits in place for the use of NPEs, driven primarily by the potential effect they can have on aquatic environments
 - EU has a default limit of 0.01 mg/kg
 - China is now monitoring imported foods for the presence of Nonyl-phenols
- Most other dairy trading nations are well ahead of Australian in eliminating NPEs from their supply chains
- There is also particular sensitivity to milk ingredients used to manufacture infant and growing up milk powders, and as such additional MRLs and the requirement for testing and monitoring and providing assurance that these products do not contain chemical contaminants (less than LOD/LOR).
- Residue testing in Australia has identified that teat sprays containing NPEs can cause positive residue test results.

What can the Australian dairy industry do to mitigate residue risk?

- Dairy Australia, Australian Dairy Products Federation (ADPF) and Australian Dairy Farmers (ADF) are working together with the chemical companies that manufacture teat disinfectants on phasing out NPE-formulated products, with the aim of eliminating them in Australia by July 2017.
- Reducing / removing the residue risk of NPE teat spray can be achieved by using NPE-free products, and through best practice and correct use of these products on farm (see Countdown 2020 update).
- Application rates per cow should be limited to no more than 15-20mL post milking. More isn't necessarily better.

The use of teat sprays pre-milking

- The off-label use of (NPE-containing) post-milking teat sanitisers *pre-milking* poses a very high risk of causing residues in milk.
- There is only one current APVMA approved pre-milking teat spray available on the Australian market (DeLaval Spray & Dip RTU), which is NPE-free.
- Other teat disinfectant products are not registered for pre-milking application and it is a breach of food safety laws to use them as such.

What can farmers do?

- Select an NPE-free teat disinfectant product. NPE-free teat disinfectant products will start to be identified from March 2016. Use these products according to the recommended dilution and application rates on the product label.
- Avoid using teat sprays pre-milking unless registered for this purpose. Any pre-milking use must be strictly in accordance to label directions, including wiping off the product before attaching the cups.
- Never use teat disinfectant to disinfect cluster or cups.
- Always wipe off teat disinfectant from cows teats if cluster is to be re-attached after spraying.
- Your chemical representative, Countdown Adviser and/or milk company will be able to provide advice as to how you can assist to further mitigate the risk of NPE contamination in our milk.

If you would like any further information please feel free to contact the Executive Director, Dr Peter Stahle at p.stahle@adpf.org.au.