

# Calf Notes.com

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## *Calf Note #130 – Regulation of tincture of iodine*

### **Introduction**

Veterinarians and dairy professionals have routinely recommended dipping the navel of newborn calves as a means of reducing the risk of infection. The most commonly used product was tincture of iodine, which contains 7% iodine plus alcohol for disinfecting the navel. Bacterial infection (often *E. coli*) of the navel (called “navel ill”) or migration of infection to the joints (called “joint ill”) are associated with improper or incomplete navel dipping of newborn calves.

On August 1, 2007, the Drug Enforcement Agency (DEA) announced that it was strengthening the rules regarding the use of iodine and iodine mixtures greater than 2.2% to control the use of these chemicals in the production of methamphetamine. For the actual DEA announcement in the Federal Register, go here:

<http://a257.g.akamaitech.net/7/257/2422/01jan20071800/edocket.access.gpo.gov/2007/E7-12736.htm>.

The DEA will not make “strong” iodine solutions illegal to use, but will increase regulations and record keeping requirements. They wrote:

“Persons handling regulated iodine materials are required to register with DEA, are subject to the import/export notification requirements of the CSA, and are required to maintain records of all regulated transactions involving iodine regardless of size.”.

From a practical standpoint, all but the largest farms and veterinary clinics will not want to maintain records and controls required by the DEA; therefore, for all purposes, tincture of iodine will not be available to the average calf grower.

The American Veterinary Medicine Association published some guidance to veterinarians on their website (<http://www.avma.org/onlnews/javma/aug07/070815d.asp>). They wrote:

“Veterinarians who already have registered to handle controlled substances do not need to register to handle such iodine products. Anyone who conducts transactions of these iodine products, however, must maintain records of the transactions for two years. Anyone handling these iodine products must report suspicious transactions and provide effective security. Also, premises where people handle controlled substances are subject to inspection.”

### **Why dip navels anyway?**

There are not many refereed publications that document the value of navel dipping on reducing the incidence of joint or navel ill. However, several websites document an increase in rates of navel ill when navels of calves are not dipped. The Miner Institute reported that incidence of navel ill increased from 5% to 20% when navel dipping was not properly performed

([http://www.whminer.com/Farm%20Report/09\\_07.htm](http://www.whminer.com/Farm%20Report/09_07.htm)). In his book titled “The Calf”, JHB Roy cited a Belgian study that reported an increase in mortality from 5% to 8.5% when the navel was not properly disinfected at birth (Roy, 1990). Regardless of the data available, navel dipping is a well accepted and standard practice on most dairies. For the vast majority of dairies that I have worked with, navel dipping is done at least once and often twice in the first couple of days of life.

### **Alternatives to tincture of iodine**

Well, if tincture of iodine is no longer a viable option for your operation, what alternatives are available? Two veterinary schools have published alternative formulations, using chlorhexidine (a product named Nolvasan) as the disinfecting agent.

1. The University of WI Vet School recommends using 2% chlorhexidine (Nolvasan), and mixing 1 part Nolvasan to 4 parts water  
(<http://www.uwex.edu/ces/cwas/documents/CWASNLOctober2007.pdf>).
2. A publication by the University of Minnesota Vet School recommends a 0.5% Nolvasan solution, made mixing 1 part of 2% chlorhexidine (Nolvasan) with 3 parts water  
(<http://www.extension.umn.edu/horse/components/newsletter/May2006.pdf>).

For more information regarding the general use of disinfectants and the properties of chlorhexidine, the University of Nebraska put together a nice review of the use of various types of disinfectants. You can read this article at  
<http://www.ianrpubs.unl.edu:80/epublic/pages/publicationD.jsp?publicationId=431>.

The label information regarding chlorhexidine can be obtained at Fort Dodge Labs, manufacturer of Nolvasan. For the label, go here:  
<http://ftdodge.naccvp.com/view.php?u=country&p=msds&prodnum=1003135>.

### **Summary**

Changes in the regulatory environment make it important to adapt dairy “best practices” to meet those changes. Navel dipping is important to the health of young dairy calves. Utilizing the suggested formulations for teat dips may be valuable on your operation.

### **References**

Roy, J.H.B. 1990. The Calf. Vol. 1. Management of Health. Butterworths, London.

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