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Bovine TB Disinfectants

Dan Grooms, D.V.M., Department of Large Animal Clinical Sciences,
Robin Mecklem, M.S., Office of Radiation, Chemical and Biological Safety

Disinfection should be a routine biosecurity practice used in all animal agriculture enterprises. This is a critical practice used to control the buildup of pathogens and reduce the risk of disease outbreaks.

Mycobacterium bovis, the bacterium that causes bovine tuberculosis (TB), is very resistant to destruction by chemical disinfectants. However, if used properly, disinfectants composed of chlorines, phenols, glutaraldehydes and formaldehydes can be effective in destroying *Mycobacterium bovis*. Any product that is used to disinfect surfaces potentially contaminated with *Mycobacterium bovis* must be tuberculocidal. The word "tuberculocidal" should appear on the product label or the label should specifically state that the product is effective in destroying *Mycobacterium tuberculosis* (human TB). If the disinfectant is effective against human TB, it will also be effective against bovine TB.



Disinfectants effective against bovine TB should say "tuberculocidal" or "effective against *Mycobacterium tuberculosis*" on the label.

For tuberculocidal disinfectants to work effectively, they must be used under proper conditions. For example, not all disinfectants are effective on all types of surfaces. Check the product label to determine which types of surfaces the product will work on, as well as the contact time needed. The disinfectant's contact time is the amount of time that the product must be in contact with the surface to achieve decontamination. Surfaces that are more porous and rough may need a longer contact time with the disinfectant for it to be effective. In most cases, the longer the contact time of the product, the more effective decontamination will be.

The concentration of bacteria present in an area will affect the ability of disinfectants to work efficiently. Areas contaminated with a high concentration of organisms may require a higher concentration of disinfectant or a longer contact time than areas with a lower concentration of bacteria.

A disinfectant's ability to decontaminate effectively may also be affected by the environmental temperature. At lower temperatures (wintertime), disinfectants tend to have lower activity levels. In this case, it may be necessary to increase the contact time of the product to ensure that it disinfects the surface completely.

Sodium hypochlorite, an ingredient in household bleach, is an excellent disinfectant and effective against bovine TB. A 1:10 dilution of household bleach with water can be used to disinfect surfaces such as water tanks, feed bunks, etc. The solution should be made up fresh just before use by adding 9 parts water to 1 part bleach. The surfaces to be disinfected should be free of organic material to improve the effectiveness of the disinfectant. Use the solution with care — sodium hypochlorite is a skin and respiratory irritant.



Any organic material — dirt, manure, bedding, feed, etc.— present on the surfaces to be disinfected will affect the product's effectiveness. Disinfectants are not cleaners. Proteins found in blood, body fluids and various tissues may affect the ability of the disinfectant to decontaminate an area. Feces, urine, soil and other environmental material can also inactivate or significantly reduce the effectiveness of disinfectants. Therefore, it is important to remove all debris from the area before using disinfectants.

Disinfectants can be harmful if not used properly. Special precautions should be taken when decontaminating surfaces that may come into contact with food-producing animals, such as water tanks. When using any disinfectant, it is important to read the product label and follow all precautionary steps prescribed by the manufacturer.

The table below contains some examples of manufacturers of disinfectants that are marketed as tuberculocidal and safe for use in veterinary and/or livestock environments.

Tuberculocidal Product Manufacturers*

Manufacturer	Phone Number	Website Address
Spartan Chemical	800-537-8990	www.spartanchemical.com
Pharmacial	800-243-5350	www.pharmacial.com
Wexford Labs, Inc.	314-966-4134	www.wexfordlabs.com
Steris	800-548-4873	www.steris.com
Bio-Tek Industries	800-843-7687	www.bio-tekdisinfectant.com
Decon Laboratories, Inc.	800-332-6647	www.deconlabs.com

* This information is intended for informational purposes only. Michigan State University Extension does not endorse the companies specified in this table and recognizes that other manufacturers may also have tuberculocidal products suitable for use in livestock environments.

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