<https://www.foodprocessing.com/articles/2018/cleaning-sanitizing-food-plants-trucks/>

# Options Increase For Cleaning And Sanitizing Food Plants And Trucks

Of all the changes ushered in by the Food Safety Modernization Act (FSMA), few created as much uncertainty as the sanitary transportation rule.

Whether they use a common carrier, regional distributor or their own trucks, manufacturers of refrigerated and frozen foods faced an April 6 compliance deadline for the Sanitary Transportation of Human and Animal Food Rule. Besides worker training and documentation requirements, companies must validate the effectiveness of cleaning and sanitation procedures for the reefers that move perishables.

Refrigeration units are notorious breeding grounds for microbes, which thrive on warm coils and moisture-laden components. Thoroughly cleaning and sanitizing the trailer cube and the reefer unit typically take an hour or longer, depending upon the size of the truck.

Sanitization standbys like chlorine and quaternary ammonium compounds usually are used, along with copious amounts of water. Up to 40 gallons of water serve as a carrier, in which case “you’re basically building an incubator” for microbial growth, points out Tom Myers, executive vice president-technical services for Pure Bioscience ([www.purebio.com](http://www.purebio.com/)), an El Cajon, Calif., supplier of silver dihydrogen citrate sanitizers. Some trucking firms try to compress sanitation cycles with power washing, “but it’s a lick and a promise” approach, he adds.

Disinfection of food-contact surfaces and spiral freezers was Pure Bioscience’s focus after its eponymous product became the first EPA-approved disinfectant in more than 30 years. In recent years it introduced an environmental misting system for in-plant use. A more mobile version of the mister is a key part of the sanitary trailer system, which includes a foam surfactant with only 5 percent moisture.

After removing any debris and applying the foam, the portable mister is placed in a trailer with doors either open or closed and the refrigeration unit on. Instead of a fogging machine, which typically produces 60-100 micron particles, the misting nozzles produce 15 micron particles that are sucked through the reefer unit at high velocity and reach every crevice in the interior. In trials against a conventional truck-cleaning process involving two quat applications, the misting system shrank the cleaning cycle to 15 minutes vs. 2 hours.

“When you factor in the labor savings, water savings and reduced chemistry, we’re a net cost saving to the user,” maintains Myers. Some food processors and distributors apparently agree: Several are implementing the system, with two adopting it as standard operating procedure.

A sanitation worker applies a pressure hose to bakery equipment as part of the cleaning process. Equipment designed for easier cleaning can speed the process considerably. Photo: Packers Sanitation Services Inc.

# Inside job

Quat and chlorine are the primary chemistries Myers referenced. Add to them peroxyacetic acid, or PAA, which is experiencing growing acceptance, particularly in clean-in-place applications, to the cleaning and sanitation arsenal, and you have described the agents of choice at many food and beverage facilities.

“Chlorine and quat have been around forever, and for a number of companies, they are tried and true,” acknowledges Matt Prine, food safety director at Packers Chemical, sister company of Packers Sanitation Services Inc. ([redefinecleanpssi.com](http://www.redefinecleanpssi.com/)), both based in Kieler, Wis. (the name references the meatpacking business that also inspired the identity of the state’s NFL franchise). But environmental concerns and the growth of organic foods is driving a shift toward alternative cleaners, particularly PAA. “It’s popularity and usage is growing exponentially,” notes Prine.

Alternative sanitizers also are getting a boost from FSMA’s emphasis on environmental monitoring. Pure Bioscience’s misting system also can be applied to processing rooms and other areas inside a plant. Another alternative is fogging units that aerate ozonated water, one of the most powerful oxidizers.

Gaseous ozone for atmospheric treatment complements the aqueous form for surface treatment and direct product contact offered by Tristrata Group ([tristratagroup.com](http://tristratagroup.com/)), Bainbridge Island, Wash. Formerly known as Universal Ozone, Tristrata limits the amount of ozone for aerated delivery to 50 parts per billion (ppb), half the allowable limit set by OSHA for human exposure.

***Legenda:***

Vermelho: Modal Verbs

Azul: Passado Simples do Regular (Tempos Verbais)

Verde: Presente Simples (Tempos Verbais)

Violeta: Presente Continuo (Tempos Verbais)

Azul escuro: Perfeito Continuo (Tempos Verbais)

1- O artigo fala sobre o aumento de opções de limpeza dos caminhões que transportam os alimentos e as maquinas de processo e mostra os produtos principais para a higenização.

Perguntas:

1- A quem a Lei de Modernização da Segurança Alimentar (FSMA) é direcionada?

R: Donos de transportadora comum, distribuidores regionais e os fabricantes de alimentos refrigerados e congelados.

2- Quais os principais produtos que devem ser usados para a limpeza?

R: O quat e o cloro, segundo Myers.

3- Que exigências as pessoas atingidas devem cumprir?

R: Treinamento e documentação do trabalhador e também as empresas devem validar a eficácia dos procedimentos de limpeza e saneamento.

4- Quais as vantagens que a Lei proporciona as empresas?

R: Ajuda as empresas de alimentos e bebidas a aumentar cada vez mais a prevenção de riscos à segurança alimentar.

5- As empresas atingidas concordaram e cumpriram a Lei? Mostre no texto.

R: Sim, "Several are implementing the system, with two adopting it as standard operating procedure."

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