04/23/2012 Interim Update to the San Francisco Asthma Task Force *Bleach Exposure In Child Care Settings: Strategies for Elimination or Reduction* Report (Issued March 2011)

April 23, 2012

The San Francisco Asthma Task Force conducted field testing in child care settings on the use of bleach-free sanitizers and disinfectants and safer bleach dilution methods to meet State Child Care Licensing requirements for infection control. The Task Force captured those findings and made formal recommendations in its March 2011 published report, now on the Asthma Task Force website, www.sfgov.org/asthma.

In 2012, the San Francisco Asthma Task Force became aware of two issues concerning the recommended bleach-free sanitizers and one issue concerning the safer bleach dilution method, and spent time investigating these issues to generate an update to the March 2011 report. Based on new findings, the Task Force is issuing this interim update to the March 2011 report, which newly recommends a different bleach-free sanitizer, and suspends support for the safer bleach dilution methods previously recommended. The Task Force will produce a new edition of the report mid-year 2012.

- Newly recommended ready-to-spray sanitizer: SaniDate® Ready-to-Spray Hard Surface Sanitizer

  This ready-to-spray sanitizer can be used by classroom, custodial, and kitchen staff to sanitize food contact surfaces and non-mouthed toys, following surface pre-cleaning with either soapy water or use of the IonatorEXP™ sprayed according to directions. The surface must remain wet with SaniDate® for a required one-minute (contact time) to ensure sanitizing action. SaniDate® contains the active ingredient, hydrogen peroxide, but is not the same as FDA-regulated skin antiseptic, 3.0-3.5% hydrogen peroxide, which is found in drug stores.
  NOTE: The ready-to-spray sanitizer is a different product than the SaniDate® 5.0 Liquid Sanitizer which contains an ingredient that increases asthma symptoms. To ensure ordering the correct product, verify the EPA Reg. No. 70299-9.

- Formerly recommended sanitizer device: IonatorEXP™

  The SF Asthma Task Force is withdrawing their recommendation of the IonatorEXP™ as a sanitizer, and instead recommending it *only* be used as a pre-cleaner. In 2012, the Task Force received USEPA review that Activeion Cleaning Solutions, LLC, the manufacturer of the IonatorEXP™ device, has not provided sufficient substantiating evidence of the device's sanitizing efficacy (effectiveness). There is also no evidence that the device does not sanitize. Activeion has since gone out of business, thereby rendering the situation unresolved; and the Task Force must withdraw the recommendation to use this device as a sanitizer.

- Formerly recommended ready-to-dilute sanitizer: Pro-San® L

  In 2012, the Task Force learned that Microcide, Inc., the manufacturer of Pro-San® L, had failed to renew the product's California Department of Pesticide Regulation (CDPR) registration, based on delays that occurred to CDPR's requested label change. Therefore, the product can no longer be sold in California until its CDPR registration is re-established.

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CHANGE IN SAFER BLEACH USE RECOMMENDATION

- Formerly recommended bleach dispensing method: portion-controlled pump

The SF Asthma Task Force is withdrawing their recommendation to use pumps that are calibrated to dispense the precise volume of full-strength bleach needed for accurate daily dilutions. In field testing, use of such pumps had proven to reduce overexposure to full-strength bleach and accidental spills, while ensuring accurate dilutions. However, in tracking the child care centers that implemented the pump-based dilution method, the Task Force learned that the pumps began to degrade after approximately one year, and no longer delivered the precise volume needed for accurate dilution. Therefore, these pumps are no longer considered a reliable way to ensure the accurate dilution of full-strength bleach, and the Task Force has not identified a substitute method to ensure safe bleach dilution.

For that reason, the Task Force *no longer recommends any bleach use*, either as a sanitizer or a disinfectant. If your center continues to use bleach, with the exception of the portion-controlled pumps, all other Recommendations for Safer Use of Bleach (Table 3) are still valid.

Table 1. Recommendations for Bleach-Free Disinfectants and Sanitizers (*Recommended for use as specified in this table*)

NOTE: *Disinfecting with* Oxivir® TB *and sanitizing with* SaniDate® *require a pre-clean step using diluted non-antibacterial (triclosan-free) soap, or using the* IonatorEXP™.

Product	Surface	Contact Time: As Disinfectant	Contact Time: As Sanitizer	NOTES	EPA Reg. No.¥	Active Ingredient
Pre-Cleaning Step: Classroom, Kitchen, and Custodial Use						
Non-Antibacterial (Triclosan-Free) Soap and Water Solution	Pre-Clean Any Surface	N/A	N/A	Pre-Clean Step is required before any Sanitizing and Disinfecting	N/A	N/A
IonatorEXP™	Pre-Clean Any Surface ▪ Spray surface with the IonatorEXP™ and wipe dry ▪ Follow pre-clean step with a USEPA-registered sanitizer or disinfectant	Not marketed as a Disinfectant	Not recommended for use as a Sanitizer §		EPA Est.¥¥ # 086143-MN-001	Tap Water and Electrolysis & Electroporation Technology
Disinfecting: Classroom Use						
Oxivir® TB	Hard Non Porous, Non-Food Contact Surfaces Infant/Toddler Classrooms: ➢ Diaper Changing Tables * ➢ Potty Training Chairs * ➢ Cots/Cribs **** ➢ Mouthed Objects *** (Including Toys with Hard Surfaces) ➢ Disposable Diaper Containers *** Infant/Toddler/Classrooms with Mildly Ill Children: ➢ Sinks ** ➢ Walls/Partitions ****	1 Minute	Not registered for use on Food Contact Surfaces	Per CA Child Care Licensing⅄: Surfaces to DISINFECT * After each use ** After each use if soiled *** Daily **** Weekly Surfaces to SANITIZE *** Daily	70627-56	Accelerated Hydrogen Peroxide
Sanitizing: Classroom, Kitchen, and Custodial Use						
SaniDate®	Food Contact Surfaces All Classrooms: ➢ Snack/Meal Tables € ➢ High Chair Tables € ➢ Dishes, Utensils, Cups * Non-Food Contact Surfaces Infant/Toddler Classrooms: ➢ Disposable Diaper Containers ***	Not registered for use as a Disinfectant	1 Minute	Per CA Child Care Licensing⅄: Surfaces to SANITIZE * After each use *** Daily Recommendation for Surfaces to SANITIZE € After each use	70299-9	Hydrogen Peroxide
All in One: Custodial Use						
Alpha HP®	Hard Non Porous, Non-Food Contact Surfaces Infant/Toddler Classrooms: ➢ Diaper Changing Tables * ➢ Potty Chairs * ➢ Cots/Cribs **** Infant/Toddler/Classrooms with Mildly Ill Children: ➢ Sinks ** ➢ Floors *** ➢ Walls/Partitions ****	10 Minutes All Specified Areas Infant/Toddler/ Classrooms with Mildly Ill Children 1:64	10 Minutes Floors (Pre-K & Hallways) 1:128	Per CA Child Care Licensing⅄: Surfaces to DISINFECT * After each use ** After each use if soiled *** Daily **** Weekly	70627-54	Accelerated Hydrogen Peroxide

NOTES:

1) Pre-cleaning: performed using a soap and water solution, or IonatorEXP™ spray, which is wiped off the surface before applying sanitizer/disinfectant, in order to remove dirt, grease, wax, or bodily fluids. If the pre-clean step is omitted or not performed properly, debris acts as a shield for microorganisms thereby lessening the effectiveness of sanitizers and disinfectants.
2) Spray sanitizers and disinfectants away from the worker's and children's breathing zone.
3) Wait the appropriate contact time as specified on the label before wiping the surface dry.

⅄ Source: *CALIFORNIA-DSS-MANUAL-CCL, MANUAL LETTER NO. CCL-98-11, Effective 11/1/98*

¥ Refer to USEPA's Pesticide Product Labeling System (PPLS) for information on individual product's labels. http://iaspub.epa.gov/apex/pesticides/f?p=PPLS:1:1551081374572213

¥¥ Because the IonatorEXP™ is a device rather than an antimicrobial pesticide, its efficacy claims are not regulated by the USEPA, and it has no USEPA product registration number or label. Device manufacturers are solely required to have an establishment number from USEPA, and to only make antimicrobial claims that are not "false or misleading" (i.e., claims they can substantiate). Refer to the USEPA's Pesticide Registration Manual: Chapter 13 – Devices, section 40 CFR 156.10(a)(5).

§ ActiveIon has not provided sufficient substantiation of their antimicrobial claims for the IonatorEXP™ at this time.

Table 2. Ordering Information: Bleach-free Disinfectants and Sanitizers for Child Care Settings

NOTE: *Disinfecting with* Oxivir® TB *and sanitizing* with SaniDate® *require a pre-clean step using diluted non-antibacterial (triclosan-free) soap, or using the* IonatorEXP™.

Predominant Use	Product	Product Number	Approximate Quantity	Distributor Information**
Classroom Use				
• Diaper Changing Tables • Sinks • Toilets • Activity Tables	Oxivir® TB Sold as 946mL/ 1 US Qt	Case of 12 quart (32 oz.) bottles Item # 901-4277285 Individual quart bottles Item # 901-4277285EA	1 Qt. bottle of Oxivir® TB per Infant/Toddler Room per Month	Quill Office Supplies Order online: www.quill.com Order by phone: 1-800-982-3400
Custodial Use				
• Floors • Sinks • Toilets	Alpha HP® Sold as 1.5L	4339853	1.5 L of Alpha HP® produces 25 Diluted Gallons at Sanitizing Level or 50 Diluted Gallons at Disinfecting Level*	Waxie Sanitary Supply www.waxie.com Marklin Alford Sr. Account Executive Office: (925) 454-2900, Ext. 417 Cell: (415) 400-6942 email: MALFORD@WAXIE.COM
Classroom, Kitchen, and Custodial Use				
• Food Contact Surfaces • Non-Mouthed Toys	SaniDate® Ready to Spray Hard Surface Sanitizer Sold as 946mL/ 1 US Qt	2018-32oz	½ to 1 Qt. bottle of SaniDate® per Infant/Toddler Room per Month	Enviroselects LLC #3172-115 Garfield St. Sumas, WA 98295 www.enviroselects.com 1-877-358-1299
	SaniDate® Ready to Spray Refills Sold as 1 Gallon Refills	2017-1	1 Gallon of Refills will last approximately 4 Months	

* The average custodial mop bucket and wringer system (on wheels) holds between 6.5-8.75 Gallons.
** The vendors listed serve the San Francisco Bay Area, and may not apply to all locations.

Table 3. Recommendations for Safer Use of Bleach

Goal	Recommendations
Reduce Exposure	Use personal protective equipment (PPE) 1) Gloves 2) Safety goggles 3) Aprons
	Purchase fragrance-free bleach with 5.25% or 6.0% Sodium Hypochlorite a) Avoid industrial strength bleach that exceeds 6.15% concentration b) Avoid purchasing bleach with no concentration specified on the label.
	Use quart-size (32oz.) spray bottles to hold diluted bleach.
	Use tools for accurate and safe dilution of bleach: Gloves, eye protection, and a measuring device that can measure one Tablespoon and one teaspoon.
	Keep a safe distance from the bleach when diluting.
	Maximize ventilation by opening windows or doors where possible.
	Ensure that the children are in another area/room when diluting, sanitizing, and disinfecting.
	Apply bleach solution to surfaces while spraying away from breathing zone; leave surface wet with bleach solution for 2 minutes contact time.
	Ensure that surfaces are completely dry when children are in the area after sanitizing and disinfecting.
Proper Practices	Dilute bleach daily.
	Use dilutions specified on the label for sanitizing and disinfecting. Proper dilutions for 6.0% Sodium Hypochlorite: Sanitizing: ~1 Teaspoon bleach per quart (32oz) of water Disinfecting: 1 Tablespoon bleach per quart (32oz) of water Disinfecting bodily fluid spills*: ~6 Tablespoons bleach per quart (32oz) of water
	Label spray bottles appropriately.
	Pre-clean with diluted non-antibacterial (non-triclosan-containing) soap.
	Ensure proper contact time (2 minutes) by using digital timers.
	Rinse the surface with water after disinfecting.
Avoid Accidents & Prepare for Emergencies	Keep bleach or any products out of the reach of children.
	Do not mix different products or chemicals.
	Do not recycle spray bottles from other products. Do not recycle concentrated bleach bottles.
	Avoid using similar spray bottles for diluted bleach as those used for water play.
	Purchase an Emergency Eye Wash Station.

* Per Cal-OSHA, bodily fluid spills greater than 10mL require disinfection with a 1:10 dilution. For outbreak situations, refer to medical personnel serving the center.

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Glossary

All disinfectants and sanitizers must be registered with the USEPA as antimicrobial pesticides due to their ability to "reduce, or mitigate growth or development of microbiological organisms". The USEPA authorizes intended and proper use during the registration process as stated on a product's label. USEPA definitions, last updated on web pages April 6th, 2012:

Clean: The process of physically removing debris from a surface or area by scrubbing, washing, and rinsing. Sanitizers and disinfectants cannot work on dirty or greasy surfaces.

Sanitize: To reduce, but not necessarily eliminate, microorganisms from the inanimate environment to levels considered safe as determined by public health codes or regulations. A food contact surface sanitizer must kill at least 99.999% of the two specified bacteria (*Staphylococcus aureus* and *Salmonella enterica*) within 30 seconds.

Disinfect: To destroy or irreversibly inactivate infectious fungi and bacteria but not necessarily their spores, in the inanimate environment. EPA registers three types of disinfectants based on the type of efficacy data submitted. For each type, the disinfectant must kill on 59 of 60 carriers for each of three product samples tested against the bacteria specified below:

- Limited disinfectant— effective against only a specific major group of microorganisms, such as gram positive or gram negative bacteria (i.e., must kill on 59 of 60 carriers for each of three product samples of either a) gram-positive *Staphylococcus aureus* or b) gram-negative *Salmonella choleraesuis).*
- General /Broad-spectrum disinfectant— effective against both gram-positive and gram-negative bacteria. A broad spectrum or general disinfectant must kill on 59 of 60 carriers for each of three product samples tested against two specified bacteria- *Salmonella choleraesuis* and *Staphylococcus aureus.*
- Hospital disinfectant— a general or broad-spectrum disinfectant that is also effective against *Pseudomonas aeruginosa* (i.e., must kill on 59 of 60 carriers for each of three product samples tested against *Salmonella choleraesuis*, *Staphylococcus aureus,* and *Pseudomonas aeruginos).*

References

US Environmental Protection Agency: Regulating Antimicrobial Pesticides, http://www.epa.gov/oppad001/ad_info.htm (web page last updated Apr. 6, 2012)

United States Environmental Protection Agency: Office of Chemical Safety and Pollution Prevention (7519P). Product Performance Test Guidelines, OCSPP 810.2300: *Sanitizers for Use on Hard Surfaces—Efficacy Data Recommendations*. EPA Pub No. EPA 712-C-07-091, Docket ID No. EPA-HQ-OPPT-2009-0150, issued March 12, 2012. Retrieved from http://www.regulations.gov/#!documentDetail;D=EPA-HQ-OPPT-2009-0150-0015

US Environmental Protection Agency: *DIS/TSS-1 Jan 22, 1982 EFFICACY DATA REQUIREMENTS Disinfectants for Use on Hard Surfaces,* http://www.epa.gov/oppad001/dis_tss_docs/dis-01.htm (web page last updated Apr. 6, 2012); refers to the AOAC Germicidal Spray Products Test (AOAC 961.02)

US Environmental Protection Agency: *Pesticide Registration Manual: Chapter 4 - Additional Considerations for Antimicrobial Products,* Retrieved from http://www.epa.gov/opprd001/registrationmanual/chapter4.html (current as of August 2011)