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Bleach Concentrations for Suspect and Confirmed Norovirus Outbreaks

Background

The concentration of sodium hypochlorite (the active ingredient in bleach) in commercially sold bleach ranges from 5.25%to 8.25%. It is challenging to identify the concentration of sodium hypochlorite from the packaging. It is important that the appropriate concentrations of bleach are used, because higher concentrations can be corrosive and irritating to the respiratory tract, skin and eyes; lower concentrations are not effective at killing pathogens. The instructions below can be used for unscented bleach with concentrations of sodium hypochlorite ranging from 5.25% - 8.25% (most bleach sold in stores).

Bleach is used at varying dilutions for sanitizing, routine disinfection, and norovirus disinfection. This document provides guidelines for using bleach during confirmed or suspect norovirus outbreaks. Refer to the appropriate regulations or guidance documents for additional information about the concentration needed for other uses.

For bleach to be effective, it must be applied at the appropriate dilution to a clean surface. The surface must stay wet for the entire contact time. Ensure that the bottle of bleach is not expired and has not been left open for prolonged periods of time as this can dilute the concentration.

Proper Bleach Use with 5.25% - 8.25% sodium hypochlorite

Purpose	Final ppm	Dilution	Contact time*	Follow-up procedure
Norovirus Disinfecting (examples: Norovirus outbreak or gastrointestinal outbreak of unknown etiology)	5000 or greater	1 cup bleach : 10 cups water	1 minute	Air dry or dry with paper towel. Food contact surfaces must be rinsed and sanitized.

*for the contact time, surface area must remain wet for entire time in order to be effective

Other Disinfectants for Norovirus

There are numerous commercially-available products that EPA has registered as appropriate for disinfection for norovirus: see their list

References

Barker, J., I.B. Vipond, and S.F. Bloomfield. "Effects of Cleaning and Disinfection in Reducing the Spread of Norovirus Contamination via Environmental Surfaces." Journal of Hospital Infection 58.1 (2004): 42-49. Web. 18 Dec. 2014. Read the full article.

Norovirus Disinfecting