

|  |
| --- |
| Appendix 1A: Quick guide for the dilution of chlorine-based (sodium hypochlorite) solutions required for disinfection |
| Guidelines for the investigation of gastroenteritis |

## Bleach (sodium hypochlorite)

Chlorine-based (sodium hypochlorite) sanitisers/disinfectants (for example, plain, unscented household bleach) should be used in outbreak situations, as other sanitisers have very little effect on destroying viruses such as Norovirus. The following table will assist in making up the required concentration needed for disinfection.

Dilutions using household liquid bleach (with 4% available chlorine as written on the label).

| Household bleach 4% available chlorine | Add the following amounts of bleach to the water to give the required concentration | | |
| --- | --- | --- | --- |
| *Volume of water to which chlorine is added* | *100ppm* | *200ppm* | *1000ppm* |
| 1 litre | 2.6ml | 5.3ml | 26.3ml |
| 5 litres | 12.5ml | 25ml | 125ml |
| 10 litres | 25ml | 50ml | 250ml |

## Commercial sanitisers/disinfectants

Commercial sanitisers/disinfectants are available from a range of commercial chemical suppliers and retailers. It is important that the active ingredient in the sanitiser you use during an outbreak of gastroenteritis is chlorine (or sodium hypochlorite). This sanitiser should be an approved food grade sanitiser and must be used **in accordance with the manufacturer’s instructions.** The following table should assist with making up the required concentration needed for disinfection.

Dilutions using a commercial grade sanitiser (with 12.5% available chlorine as written on the label)

| **Commercial grade sanitiser 12.5% available chlorine** | **Add the following amounts of sanitiser to the water to give the required concentration** | | |
| --- | --- | --- | --- |
| **Volume of water to which chlorine is added** | **100ppm** | **200ppm** | **1000ppm** |
| 1 litre | 0.8ml | 1.7ml | 8.4ml |
| 5 litres | 4.2ml | 8.4ml | 42ml |
| 10 litres | 8.4ml | 16.8ml | 84ml |

***Please Note:*** *This table is to be used as a guide only. For questions about how to dilute specific products please refer to the relevant Material Safety Data Sheet (MSDS) for the specific product being used, or contact your supplier or manufacturer of the chemical.*

**Milton tablets are not validated for use as a surface disinfectant and are not recommended for this purpose. Please turn over for important safety notes, and chlorine dilution formula.**

**Chlorine dilutions calculator**

For other concentrations of chlorine-based sanitisers not listed in the tables above, please use the following link to calculate the dilution of your disinfectant: <https://www2.health.vic.gov.au/public-health/infectious-diseases/infection-control-guidelines/chlorine-dilutions-calculator>

## Note:

* Ensure that all environmental surfaces have been cleaned with hot water and detergent (so they are free of vomit, faeces or any other organic matter) before the sanitiser is applied.
* Sufficient time is required to kill the virus – **at least 10 minutes contact time**.
* Chlorine solutions **must be made up prior to use** as the chlorine deteriorates over time.
* Chlorine solutions should be used mainly on hard, non-porous surfaces.
* Check the expiration dates of your bleach or chemical sanitiser to ensure the active ingredients are still effective.
* Ensure your staff know how to correctly use your bleach solution or chemical sanitiser.

## Important safety notes for use of sanitising solutions:

* Use gloves and wear protective eye wear when preparing chlorine solutions.
* When using bleach, it is safer to add chlorine to water – **do not** add water to chlorine.
* Do not heat water up to make chlorine solutions – cold water is safer.
* Do not mix with any other chemical.
* Mix in a well ventilated room
* Follow safety, storage and handling instructions on all bleach and chemical containers.
* Use chlorine carefully as it is corrosive to metals, damages fabrics/textiles and may irritate the skin, nose and lungs.
* Ensure that all chemicals are labelled and stored separately so as to prevent the likelihood of food being contaminated.
* Bleach solutions should NEVER be applied using a spray bottle. This is an Occupational Health and Safety Hazard.