

# Child Care Environmental Disinfection Table

There are several disinfection chemicals which can be used in child care daily cleaning and disinfecting practices. Be sure to use the right concentration of the chemical based on the purpose of cleaning and the manufacturer instructions.

**Important:** Based on the *Ontario Food Premise Regulation 493/17*, the chemicals used in food service areas are different and require different concentrations and contact times.

Chemicals	Uses   Comments				Concentration
	Uses	Advantages	Disadvantages	Precautions	
<p><b>Chlorines</b> (Household Bleach) 5.25% Sodium Hypochlorite</p> <p><i>Note: Cleaning of the area with soap and water must be done before disinfection. Mix fresh bleach solutions daily. Use the Chlorine test paper to make sure you get the right concentration.</i></p>	<ul style="list-style-type: none"> <li>Disinfection of the environmental surfaces, counters, toilets, sinks, tables, diaper change tables, floors, walls, toys</li> <li>Used for home, child care and health care</li> <li>Blood spills</li> <li>Soaking of items, toys, dishes.</li> </ul>	<ul style="list-style-type: none"> <li>Rapid action</li> <li>Readily available in non hospital settings</li> <li>Sporicidal</li> <li>Low cost.</li> </ul>	<ul style="list-style-type: none"> <li>Corrosive to metals</li> <li>Inactivated by organic material; for blood spills, blood must be removed prior to disinfection</li> <li>Irritant to skin and mucous membranes</li> <li>Should be used immediately once diluted.</li> </ul>	<ul style="list-style-type: none"> <li>Use in well-ventilated areas</li> <li>Must be stored in closed containers</li> <li>Away from ultraviolet light and heat to prevent deterioration</li> <li>Stains clothing and carpets</li> </ul>	<p><b>100 ppm (low level)</b> 2 mL of bleach with 1 litre of water*. OR ½ teaspoon (tsp) of bleach with 4 cups of water*. Contact time: 1 minute.</p> <p><b>1000 ppm (medium level)</b> 20 mL of bleach with 1 litre of water*. OR 4 tsp of bleach with 4 cups of water*. Contact time: 1 minute.</p> <p><b>5000 ppm (high level)</b> 100 mL of bleach with 1 litre of water*. OR ½ cup of bleach with 4 cups of water*. Contact time: ≥10 minutes.</p>
<p><b>Accelerated Hydrogen Peroxide</b></p> <p><b>Important:</b> Chemical is also available in 0.5% and 7% dilution stored.</p>	<ul style="list-style-type: none"> <li>Disinfection of the environmental surfaces, counters, toilets, sinks, tables, diaper change tables, floors, walls, toys</li> <li>Used for home, child care and healthcare</li> </ul>	<ul style="list-style-type: none"> <li>Rapid action</li> <li>Safe for the environment</li> <li>Non-toxic</li> <li>Test papers are not required.</li> </ul>	<ul style="list-style-type: none"> <li>Do not use on copper, zinc, brass, aluminum.</li> </ul>	<ul style="list-style-type: none"> <li>Store in cool places</li> <li>Protect from light.</li> </ul>	<p><b>Low level</b> For daily environmental cleaning: 0.5% solution follow manufacturer's instructions.</p> <p><b>High level</b> Blood spills: major and during an outbreak situation: 7% solution follow manufacturer's instructions.</p>
<p><b>Note:</b> Follow manufacturer's instructions for use to determine disinfectant concentration and contact time. There is shorter contact time for higher percentage of the chemical. After the contact time is achieved with for the disinfection step, equipment should be rinsed under clean running water and become placed in a clean location for drying and storage.</p>					

Chemicals	Uses   Comments				Dilution
	Uses	Advantages	Disadvantages	Precautions	
<p><b>Quaternary Ammonium Compounds (QUATs)</b></p> <p><i>Note:</i> Use the QUAT test paper to make sure you get the right concentration.</p>	<ul style="list-style-type: none"> <li>Daily environmental cleaning agent</li> <li>Disinfection of the environmental surfaces, counters, toilets, sinks, tables, diaper change tables, floors, walls, toys</li> <li>Used for home, child care and healthcare</li> <li>Blood spills prior to disinfection.</li> </ul>	<ul style="list-style-type: none"> <li>Non-corrosive, non-toxic, low irritant</li> <li>Good cleaning ability</li> <li>May be used on food surfaces.</li> </ul>	<ul style="list-style-type: none"> <li>Limited use as disinfectant because it is not effective for a number of microbes. Switch to Chlorine or Accelerated Hydrogen Peroxides if an outbreak happens in the child care centre.</li> </ul>		<p><b>Low level</b> Utensils sanitization: 200 ppm for 45 seconds.</p> <p><b>Intermediate level</b></p> <ul style="list-style-type: none"> <li>For daily environmental cleaning: 400 ppm follow manufacturer's instructions for use for contact time.</li> <li>Rinse the mouthing toys under the running water.</li> </ul>

\* Based on regular household bleach solution of 5.25% sodium hypochlorite solution (50,000 parts per million available chlorine). To determine recipe and contact time for other percentages of sodium hypochlorite, refer to Public Health Ontario's Chlorine Dilution Calculator <https://www.publichealthontario.ca/en/health-topics/environmental-occupational-health/water-quality/chlorine-dilution-calculator>.

**References:**

- PIDAC Best Practices for Environmental Cleaning for Prevention and Control of Infections in All Health Care Settings, 3rd Edition, April 2018.
- Guide to Infection Prevention and Control in Personal Service Settings, 3rd edition, July 2019.

**Check with Huron Perth Public Health before using any other disinfectant not indicated on the above chart to ensure it is appropriate for use.**