



LIFESAVING SOCIETY®
SOCIÉTÉ DE SAUVETAGE

The Lifeguarding Experts
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Safety Standards for Canadian Swimming Pools and Waterfronts Swimming Pool Standard

Pool Contamination Standard

Standard

Every owner and every operator shall ensure that there are written pool contamination procedures to be implemented in the event of pool contamination and that all lifeguards and other appropriate facility personnel are trained in the pool contamination procedure.

Definitions

Pool Contamination: the introduction of an unwanted/harmful substance such as blood, vomit, or feces into a swimming pool.

CT Values: a CT value is the product of the concentration of a disinfectant (e.g. free residual chlorine) and the contact time with the water being disinfected. It is typically expressed in units of mg-min/L.

Rationale

- Pool contaminations increase the risk of bathers contracting recreational water illness (RWI) in public pools.
- There are established procedures to deal with pool contamination as determined by provincial legislation and the Centres for Disease Control and Prevention (CDC).
- Pool operators should ensure these procedures are documented and staff are trained and prepared to respond to pool water contamination.

Implementation

Operators of public pools should:

- Establish a public education campaign that can be provided to reduce the risk of pool contamination incidents from occurring.
- Establish a contamination response log to document:

- Date and time of incident
- Type of incident
- Concentration of chlorine, pH and ORP at the time of the incident
- The procedures followed, including CT value tracking
- Concentration of Chlorine, pH and ORP upon reopening the pool
- Name of person(s) involved in response

Blood, Vomit or Formed Stool Contamination Response

1. Direct everyone to leave the pool.
2. Remove as much of the stool as possible using a net or scoop.
3. Dispose of the stool in a sanitary manner.
4. Clean or disinfect the net or scoop. Do not vacuum the stool from the pool.
5. Raise the free chlorine to 2 parts per million (ppm) if less than 2 ppm, and ensure a pH level of 7.5 or less. This chlorine concentration was selected to keep the pool closure time to approximately 30 minutes. Other concentrations or closure times can be used as long as the contact time (CT) inactivation value is achieved
6. Complete pool contamination report.

Diarrheal Contamination Response

1. Direct everyone to leave the pool.
2. Remove as much of the stool as possible using a net or scoop.
3. Dispose of the stool in a sanitary manner.
4. Clean or disinfect the net or scoop. Do not vacuum the diarrhea from the pool.
5. Raise the free residual chlorine concentration to 20 ppm and maintain pH of 7.5 or less. The free residual chlorine and pH should remain at these levels for at least 12.75 hours to achieve the required CT inactivation value of 15,300.
6. Sample and test pool water in at least three locations to confirm concentrations throughout the pool.
7. Backwash the filter after reaching the CT inactivation value. Be sure the water is discharged directly to waste and in accordance with all regulations.
8. Do not reopen the pool before the free residual chlorine level has returned to a normal operating level.
9. Complete pool contamination report.

References

- Fecal Incident Response Recommendations for Pool Staff (Revised Nov 2010) – Centre for Disease Control and Prevention.
- Government of Alberta – Alberta Health – Pool Standards July 2014.

Approval

- Approved by the Lifesaving Society Canada Board of Directors on 8 May 2016.

Disclaimer

Lifesaving Society Canada's National Safety Standards are developed using Coroners' recommendations, the latest evidence-based research, and reflect the aquatic industry's best practices at the time the publication was approved or revised.

The purpose of these standards is to encourage swimming pool, waterpark and waterfront owners, managers, operators and regulators to adopt these standards in order to prevent drownings in aquatic environments.

Lifesaving Society Canada's National Safety Standards do not replace or supersede local, provincial/territorial or federal legislation or regulations, but they are considered the standard to which aquatic facility operators should work towards in order to enhance safety within their operations and to prevent drowning and aquatic-related injury.