



## THE WYSIWASH<sup>®</sup>™ ADVANTAGE

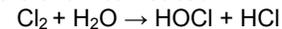
WYSIWASH is a patented, 21st century system revolutionizing the environmental hygiene industry. WYSIWASH means disinfection from the end of a hose.

1. **ECONOMICAL:** User cost is an extension of chlorination level and the amount of water used. For example, in an animal shelter, the cost will be under one half cent per gallon of disinfectant solution.
2. **ONE-STEP WASHDOWN OPERATION:** WYSIWASH provides a continually renewed source of hypochlorite disinfectant throughout the washdown process. Because of this and the "roll-over" effect of washdown, WYSIWASH can disinfect the environment and give the user the simplest, most efficient disinfectant tool available today. Unlike many other disinfectants, WYSIWASH requires no pre-rinse and no potable water rinse afterwards to remove harmful chemical residues. Practically speaking, WYSIWASH means disinfection from the end of a hose.
3. **NO BATCH-MIXING:** Because of its "point-of-use" design, WYSIWASH eliminates the need for proportioners, complex metering devices, and batch-mixing of chemicals by your workers. With WYSIWASH you only use what you need, no more. Furthermore, since there is no batch-mixing, WYSIWASH limits worker liability while enhancing worker safety and shortening the clean-up time.
4. **STABILITY:** Wysiwash Jacketed Caplets (65%) are much more stable than the more commonly used sodium hypochlorite (5.25%). In dry storage it loses 5% of its strength per year while sodium hypochlorite (bleach) can lose up to 50% strength in 60 days!
5. **NON-CORROSIVE:** WYSIWASH's unique ability to dispense calcium hypochlorite (a solid into a liquid) insures controlled pH. Most of the corrosion associated with hypochlorites occurs from the use of sodium hypochlorite (household bleach) and its excessive alkalinity. Control of pH also means a high percentage of the most active chlorine disinfectant, hypochlorous acid.
6. **NO HARMFUL CHEMICAL RESIDUES:** The active disinfectant provided by WYSIWASH and the Wysiwash Jacketed Caplets disinfects, deodorizes, and performs its functions before it ceases to contain oxidizing properties. It is then reduced to a chloride and loses all its disinfectant qualities. Chlorides are inert and naturally occurring and environmentally friendly.
7. **ODOR CONTROL:** With WYSIWASH there are no obnoxious, unpleasant odors. Most odors are ammonia/nitrogen based. Wysiwash Jacketed Caplets, with their 65% available chlorine, provide enough chlorine to "burn through" ammonia. The low-yield (5.25%) chlorine provided by household bleach is insufficient to "burn through." Instead, the low-yield chlorine forms a bond with the nitrogen and creates chloramines. Chloramines produce the obnoxious, pungent odor many people associate with "chlorine disinfection."

## BLEACH vs. WYSIWASH

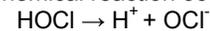
The patented Wysiwash Jacketed Caplets used with the WYSIWASH system were designed to keep the pH of the washdown solution below 8.0, slightly alkaline.

Based on the chemical reaction:



The HOCl is a highly effective disinfectant at low parts per million.

When bleach is added to water, even at proper amounts, the pH rises far above pH 8 and the following chemical reaction occurs:



The OCl<sup>-</sup> is a much less effective disinfectant. In fact, research done at the University of Illinois indicates that as the proportion of HOCl<sup>-</sup> increases below pH8, the greater the effectiveness of the disinfecting solution.

Another proof of effective chlorine activity and levels is the elimination of pungent odors. Sometimes a properly mixed bleach-water wash solution will hit ammonio-nitrogen based waste products and a pungent chloramine odor is produced.

Our patented system will provide a power wash to remove the organic debris as well as enough effective chlorines to eliminate the ammonia-nitrogen based odors.

TABLE 1

Percentage of chlorine species present in dilute solutions at various pH levels:

Titration concentrations ppm  
%HOCl

pH	Most Effective	%OCl
4 and below	100	0
5	99.7	0.3
6	96.8	3.2
7	75.2	24.8
8	23.3	76.7
9	2.9	97.1
10	0.3	97.7
11	0.03	99.97

*From the above table, we can see the relationship between pH and the % of available hypochlorous ion/hypo chlorite ion.*