

chlorine, which is like adding oil to a fire.

In **covered pools**, a chlorination level of higher than 12 ppm may give rise to a health hazard if the chlorine that is released in the air exceeds the maximum permissible limit of 0.03 mg Cl/m³. Obviously, in spas running at higher temperatures, usually with a cover on top and/or indoors with poor ventilation, the risk is greatly increased.

But the riddle continues. The performance of conventional chemicals is affected by the pH of the water. For instance, a pH of 8.2 requires four times the amount of chlorine used at pH 7.4 to achieve the same chemical function in the water. Therefore the **higher** the pH, the more chlorine is required, and more chlorinated hydrocarbons are created. And yet the assortment of chemicals usually used in spa water makes it almost impossible to maintain proper pH levels.



SPA-MAGIC® is **stable** - because it is not affected by heat an provides **continuous** disinfection, and the result is all around health water. Bacteria tests, conducted by independent laboratories, are regularly being executed in various states, and show a total bacteria kill rate, **including Pseudomonas** and algae.

The success of the SPA-MAGIC® system is in the interaction and synergism (2+2=5) of both the liquid chemicals and the tablets.

For example, in heated water, oxidizing tablets will normally dissolve in less than a day. With the SPA-MAGIC® system, the tablets last for a week or more, even if the water is heated to 100 F 24 hours per day. If the SPA-MAGIC® liquid chemicals are taken out of the system, the dissolve rate of the tablets rapidly reduces to normal.

In addition to slowing down the dissolve rate of the tablets, the SPA-MAGIC® liquid chemicals aid the kill rate of the tablets through aggregation of algae, bacteria and viruses, making them more susceptible to the disinfectant action of the tablets.

from negative to more positive, and therefore aids the attack of the oxidizing agents.

The SPA-MAGIC® dosage of trichloro is only **1.0 ounce** per week, which is a minute when compared to the usual dosages of chlorine-related products used in spas. This vastly reduces potential health hazards from:

1. The formation of chlorinated hydrocarbons.
2. Chlorine in the bather's breathing zone and chlorine levels released to the air.
3. The formation of chloramines, which are proven eye irritants, and
4. Chlorine allergies.

The SPA-MAGIC® Water Super-Shock is an effective substitute for chlorine-based "shocking agents." It performs the essential function of oxidizing organics and chloramines, but **without** adding chlorine to the presence of organics which would result in creating more chlorinated hydrocarbons and chloramines.

The flocculating properties of SPA-MAGIC®

5. remove particulate matter, which can protect organisms from disinfection.
6. remove oils and organics such as humic acids, which can cause unpleasant tastes and odors and which are precursors for the potentially carcinogenic chlorinated hydrocarbons.
7. give water a very high clarity, which results in improved safety.

SPA-MAGIC® will not affect the pH of the water, nor will it be affected by the water's pH—the same dosage performs the same kill rate under various pH levels. **This is unique in water chemistry.** (NOTE: never allow the pH to drop below 7, as this will cause corrosion to sensitive spa equipment.)

Follow the easy instruction included in your SPA-MAGIC® kit, and enjoy crystal-clear, health and hassle-free spa water.

CRYSTALINE PRODUCTS OF FLORIDA, INC.

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SPA MAGIC® SPA CHEMICAL KIT



**2 LIQUID CHEMICALS
ONCE PER MONTH**

Plus

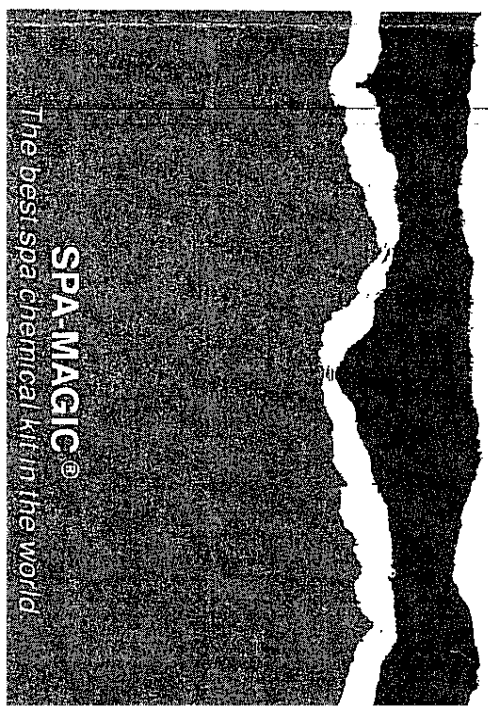


**2 SMALL TABLETS AND
SUPER-SHOCK EVERY 7 DAYS**



**= TROUBLE-FREE
TREATMENT FOR ONE MONTH!**

KEEPS WATER CRYSTAL CLEAR
Wipes out bacteria and algae without eye-burn or smell.
THIS KIT PRE-MEASURED FOR SPAS UP TO 500 GAL.
(No over or under dosing.)



SPA-MAGIC®
The best spa chemical kit in the world

The Facts

Before SPA-MAGIC®, you were concerned about your spa water and equipment, and this is what you would have to buy:

- A disinfectant such as chlorine, to kill harmful bacteria.
- A clarifier to clear cloudy water.
- A descaler to prevent calcium build-up and corrosion inside the equipment.
- A metal remover to prevent metal build-up.
- A defoamer to reduce foaming in the water.
- A shock treatment to clear and rid the water of contaminants such as chloramines, which cause eyeburn.
- A fragrance to get rid of the smell of chlorine and other unpleasant odors, and
- A pH adjuster such as soda ash to increase the pH, or acid to decrease the pH. And how can you maintain a proper pH if the above confusion of chemicals affects the pH in various ways, complicated further by perspiration, unbalanced tap water or acid rain?

Do you constantly shop for chemicals, or do you stock up to prevent running out?

**THERE MUST BE AN EASIER WAY
...AND THERE IS!**

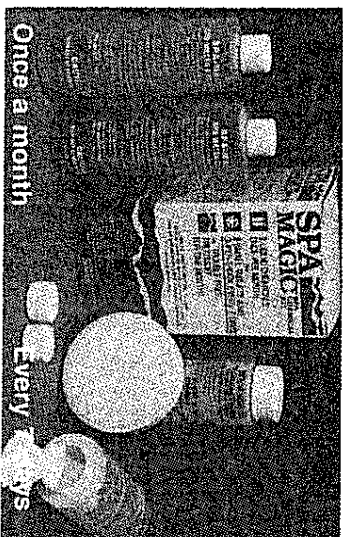
Now, the unique new SPA-MAGIC® system makes it simple.

SPA-MAGIC® is a once-a-month spa pack of pre-measured chemicals which ensures crystal-clear water. It eliminates algae, bacteria and microscopic impurities. Yet it does not cause eyeburn or skin irritation and does not bleach clothing. It is odorless, tasteless, and harmless if swallowed in solution. It causes no corrosion to spa equipment.

Spa Water - Trouble-Free and Safe from Bacteria

The unique SPA-MAGIC® kit replaces the assortment of chemicals currently being used for the treatment of spa water. It simply consists of two liquid chemicals which go into the water only **once a month**, and two small tablets with two ounces super-shock **every 7 days**.

That is the total treatment routine for a month!



SPA-MAGIC® is a simple, monthly system consisting of the following chemicals:

SPA-MAGIC® Water Clarifier – this organic polymer flocculant binds microscopic impurities together to be trapped in the filter. Acting as an emulsion breaker, it aids in the removal of body oils from the water (a spa user perspires two to five pints per hour). During filtration, this results in continuous polishing of the water, giving it a crystal-clear sparkle.

SPA-MAGIC® Water Anti-Scale – this anionic, non-phosphate dispersant reduces scale formation, iron staining, corrosion of equipment, scum deposits and plugging of filter.

SPA-MAGIC® Oxidizing Tablets – the SPA-MAGIC™ dispensing cartridge is loaded with trichloro-s-triazinotriene tablets, which kill bacteria and algae as well as oxidize harmful chloramines.

SPA-MAGIC® Water Super-Shock – this non-chlorine based "shocking agent" reduces the organic content of the water. It increases water clarity, reduces eyeburn and odor by destroying chloramines.

Beware

Bacteria dangers can lurk even in apparently "clear" water. Although contamination of the water can occur from both the original water supply or from airborne particles, the major source of contamination is from bathers themselves. The average person introduces nearly 1266 million bacteria into a pool (W.L. Mallman, "Critical Reviews in Environmental Control," 1970, CRC Press, Inc., Florida). These bacteria include coliform and staphylococci, mainly arising from the nose, throat and mouth, and those of fecal origin.

Although most of these bacteria are non-pathogenic, the possibility of cross-infection of bather necessitates the rapid and efficient destruction of potential pathogens.

The possibility of infection in spa water is obviously increased because hot water destroys conventional chemicals, yet accelerates the growth of bacteria and algae, resulting in opposing factors. This combined with bather load – four people in a 250-gallon spa are equivalent to 400 people in an ordinary 25,000 gallon swimming pool – puts extraordinary demands on spa chemicals.

We know chlorine is unstable – it is dissipated by heat, ultraviolet rays and bather load. At the water temperature spas are usually operated, and with jet aeration, chlorine dissipates quite rapidly. This instability creates a graph of highs and lows in chemical effectiveness, and is thus also inconsistent in bather protection against bacteria and viruses because the lows create ideal breeding conditions for bacteria, including Pseudomonas. The need for **continuous** disinfection is obvious.

Ammonia and organic amines, which arise from the decomposition of algae, bacteria, vegetation and waste products from the human body, (mostly from the nose, mouth, throat and fecal origin), are commonly found in spa water. The reaction of chlorine with these organic compound results in chlorinated hydrocarbons, which are a health hazard. Since the amount of chlorinated hydrocarbons increases with the concentration of chlorine and the amount of organics present, it is obviously desirable to minimize their formation by maintaining moderate levels of chlorine and