



**BioGuard®**  
**for spa**  
spa care and  
maintenance  
guide



SpaGuard.



by SpaGuard.



# what makes BioGuard® different?

When you use BioGuard® spa care products (SpaGuard® or Soft Soak®), you are enlisting a group of individuals whose expertise is unsurpassed in the spa and pool industry. Whose dedication to helping you achieve perfect water no matter what the individual circumstance is their number one priority. Whose sole purpose is making your spa or pool the most enjoyable and trouble-free experience that you and your family will ever have. Whose dedication to the innovation and history of new product introductions is never matched, but often imitated. This dedication to service and the relentless pursuit of perfect water is inherent in the DNA of every BioGuard dealer.

Our customized spa programs make spa care simple and give you soft, soothing water. What's more, you can rely on the expertise and knowledge of our BioGuard dealers to guide you along the way and answer your questions.

## Why BioGuard?

- Right solutions
- Right technology
- Right people

Ensuring you never miss a spaside memory.

Be sure to visit us online at [www.spaguard.com](http://www.spaguard.com) for all your spa care needs. It's the perfect resource for "instant" information on our products, programs and services, including the location of the nearest BioGuard Dealer.



# six necessities of spa care and maintenance.

Get in the habit of practicing some basic spa care rules everyone should observe. Prevent problems before they occur and you'll get even more enjoyment from your sparkling, clear spa – not to mention the perfect environment for relaxing with family and friends.

## 1. Circulation

Proper water circulation will help prevent contaminants from becoming problems. As the water circulates, it passes through the filter, trapping suspended particles. Properly circulating BioGuard® spa care products help keep the water inviting and ready for your soaking pleasure. Be sure to run your spa's circulation system every day to ensure good working order.

## 2. Filtration

Many spa issues are caused by poor filtration—when the filter is dirty or clogged, debris stays in the water. A properly cared for filter captures hair, oils and cosmetics. (Most spas have a cartridge filter.) Because spa filters trap many contaminants, cleaning has two steps: spraying off loose debris, then using [SpaGuard Filter Cleaner](#) to remove oils and other contaminants embedded into the filter.

You need to clean your filter every 4 to 6 weeks. Check your owner's manual or ask your BioGuard Dealer for information on how to remove and clean your filter.

## 3. Cleaning

Contaminants such as dirt, oil and even bacteria can accumulate at the waterline, much like a bathtub ring. Regular cleaning preserves spa surfaces and prevents unwanted build-up.

[Off The Wall® Surface Cleaner](#) - A powerful, low-sudsing cleaner that works specifically with spa water chemistry. Use it to remove the ring of oil and dirt that serves as a breeding ground for bacteria and to prevent residue from building up around the waterline and inside skimmers.

[SpaGuard® Spa Cleaning Mitts](#) - An innovative product perfect for removing dirt, oil and waterline deposits on all spa surfaces. Mitts are 100% disposable and come five to a pack in a resealable bag that keeps them moist until ready for use.



## 4. Draining and refilling

Regular draining and refilling is a normal part of spa maintenance. Over time, the water absorbs and dissolves minerals, chemicals and other soluble material. Your BioGuard dealer can perform a Total Dissolved Solids (TDS) test to help determine if it's time to replace your water. High TDS can make the water look dull, become foamy, and develop an odor.

How often you drain and refill your spa depends on how often you use it. This simple formula can help:

$$\text{Spa Gallons} \div \text{Daily Bathers} \div 3 = \text{Days Between Draining}$$

Example: 300 gallons  $\div$  2 Daily Bathers  $\div$  3 = 50 days

*Note: a bather is one person in the spa for 15-30 minutes.*

## 5. Chemistry

There are two primary components that affect spa water quality: sanitizer (bromine or chlorine) residual and pH. When both are within their recommended ranges, your water is comfortable, protected and clear; sanitizers and “shock products” work efficiently; and spa surfaces and equipment are protected. Recommended bromine or chlorine residual levels are:

**Bromine Residual (using Brominating Tablets)**  
Residential = 2 – 4 ppm  
Commercial = 4 – 6 ppm

**Bromine Residual (using Brominating Concentrate)**  
3 – 6 ppm

**Chlorine Residual (using Chlorinating Concentrate)**  
3 – 5 ppm

Maintain pH between 7.4 - 7.6 (the ideal range; acceptable range is 7.2 – 7.6). By adding [SpaGuard Spa Sentry](#), it holds the pH within its optimum range. Spa Sentry is formulated to “watch over” the pH and protect the water from pH changes.

*\*Not Applicable for Spas using Spa Sentry.*

*\*\*Spa Sentry not compatible with Soft Soak®.*

## 6. Testing

The chemistry of your spa water needs to be checked regularly. Use BioGuard® products to maintain the correct levels, including: sanitizer residuals, pH, total alkalinity, calcium hardness, metals, and total dissolved solids. BioGuard® 4-way Test Strips – and Soft Soak® 4-way Test Strips for Soft Soak spas – test pH, total alkalinity, and sanitizer levels with only one strip.

Maintaining proper levels will make the water clear and comfortable, kill bacteria that can multiply rapidly in a spa, protect spa surfaces from stains caused by metals, and protect spa equipment from scale.

There are 3 essential chemical areas to maintain.

1. Sanitization – kills bacteria to help prevent the transmission of disease.
2. Oxidation/shock – removes residues and restores clarity and comfort.
3. Water balance – ensures spa user comfort, water clarity, sanitizer efficiency, and longevity of spa surfaces and equipment.

# the BioGuard® program approach makes spa care simple.

Spa maintenance is absolutely essential. Why? It keeps spa water soft and soothing, extends the life of spa surfaces, fights bacteria, and protects equipment. BioGuard is the world leader in spa care and we are dedicated to ensuring simplified spa care so you can spend more time enjoying your spa and less time maintaining your spa.

Our network of BioGuard dealers, who are extensively trained, knowledgeable and professional, will help you find the spa care program that best fits your needs. We consider our dealers to be the experts in the industry. Every BioGuard for Spa product our dealers recommend is the result of extensive research and testing. What's more, each product is designed to work with our complete line of spa products.

Depend on your BioGuard dealer to be the best source of reliable information, quality products and personalized service. Call 800-932-5943 or visit [www.spaguard.com](http://www.spaguard.com) to find a dealer in your neighborhood.



# pick the program that's right for you.

All BioGuard® programs include sanitizers and oxidizers/shocks. These products are essential in maintaining soft, soothing water and work to ensure the longevity of your spa. Sanitizers work to kill bacteria and oxidizers remove residue and restore clarity and comfort.

If your spa is equipped with an ozone generator or some form of ion device, you will still need to refer to this spa care guide. Ozone and ionizers are supplemental treatments and are not “stand alone” spa care programs.

## SPAGUARD SANITIZERS

### Bromine Program

Your best bet for indoor\* or covered spas. Brominating sanitizer reduces odors and is also more effective in killing certain types of algae.



### Chlorine Program

If you have an uncovered outdoor spa, chlorine is the better method of sanitation. That's because the ultra-violet rays of the sun can destroy the sanitizer residual. Our chlorine system also oxidizes; meaning it eliminates undesirable compounds — such as oils, cosmetics and perspiration — from the water.



### Soft Soak® Program

Our bromine-free, chlorine-free spa care system requires only a few minutes of attention each week and provides a wonderfully soft, soothing and gentle spa environment. The program offers an easy Start-Up Kit as well as a complete product line.



\* Indoor spas must be placed in a well-ventilated room.

# maintaining balanced water: a vital component.

Total alkalinity, pH, calcium hardness and metals are essential factors in balancing water. Spa water must be balanced to ensure spa user comfort, water clarity, sanitizer efficiency, and longevity of spa surfaces and equipment.

## TRADITIONAL METHOD

This method involves adjusting total alkalinity (TA), pH, and calcium hardness. Refer to the chart on page 3 for recommended levels. Low total alkalinity can cause the pH to bounce from one level to another, potentially causing scaling or corrosion of surfaces. Add [SpaGuard® Total Alkalinity Increaser](#) to raise low TA. High TA levels can cause scale, cloudy water, and other pH issues. Add [SpaGuard pH Decreaser](#) to lower TA.

Next comes pH. If pH is high (above 7.6) chlorinating sanitizers are less effective, surfaces and equipment can scale, water may cloud and shorter filter runs may occur. Correct this by adding [SpaGuard pH Decreaser](#).

Low pH (below 7.2) causes sanitizers to dissipate more rapidly, increases corrosion of surfaces and equipment, and may make water irritating to spa users. Adjust low pH by adding [SpaGuard pH Increaser](#).

Never add more than three capfuls (4 tsp.) of pH adjuster per 250 gallons of water. Add while pump is operating. Maintain pH level between 7.2 - 7.6.

Lastly, adjust calcium hardness.

Low levels of calcium (water's too soft) can lead to corrosion of equipment and foaming. Add [SpaGuard Calcium Hardness Increaser](#) to raise low calcium hardness.

High levels of calcium can cause scaling of equipment (reducing efficiency) and ugly, rough patches on the interior of the spa. Refer to calcium hardness chart to determine appropriate calcium level.

For hard water areas, use [SpaGuard Stain and Scale Control](#) as maintenance.

## ALTERNATE METHOD\*

SpaGuard® Spa Sentry is an easy way to establish and hold the correct pH in a spa – the most important aspect of spa water quality. Maintaining the proper pH can be a challenge.

The heated, aerated water combined with heavy bather loads can cause the pH to change quickly, unless a means for buffering these changes is present. Spa Sentry is formulated to “watch over” the pH and protect the water from pH changes. If fill water is more than 300 ppm calcium hardness, the alternate method is not recommended. On average, Spa Sentry will last approximately two months before a new application is needed.

## OXIDIZERS

### Enhanced Shock\*

This SpaGuard® product is four functions in one: oxidizer, water clarifier, flocculent and buffer. It does not require premixing and is formulated for spas to enhance water comfort.

### Spa Shock\* (non-chlorine)

Easy to dispense and is applied directly to water while the pump is circulating. Dissolves instantly, immediately oxidizing undesirable compounds.

### Soft Soak® Shock (bromine-free, chlorine-free)

This oxidizer removes undesirable organic compounds that can be introduced into the spa from body oils and debris. This product should only be used in Soft Soak Spas.

*\*Not to be used in Soft Soak® Spas.*



## COLOR-CODING FOR YOUR CONVENIENCE.

All the SpaGuard® products are color-coded. You can tell instantly what product category each bottle belongs to.

**BLUE** Sanitizers to kill bacteria and keep the water protected.

**ORANGE** Oxidizers to remove undesirable compounds and keep the water clear and inviting.

**PURPLE** Balancers to make the water feel wonderfully soothing, and protect the spa surfaces and equipment.

**TEAL** Accessory products to keep spa surfaces clean, enhance water and keep it beautiful.



# the basics of starting your spa.

By now you know the most important aspects of taking care of your spa. You also have selected the SpaGuard® sanitizing program that best fits your spa. Now you're ready to fill your spa and start enjoying it to the fullest.

The steps below will guide you through starting your spa for the first time, or refilling it after draining. We recommend talking with your BioGuard® Dealer since they are the best source for instructions and advice. Also refer to [www.spaguard.com](http://www.spaguard.com) for more information.

## FOR SPAS USING BROMINATING TABLETS

### FIRST TIME START-UP

1. Fill your spa with water. If the make-up water is from a well or other nonmunicipal source, testing prior to filling is recommended.
2. Super-oxidize the spa with [Brominating Concentrate](#) with the spa circulation system on. Run all pumps at least one cycle.
3. Operate the spa circulation system for at least 2 hours.
4. Drain, then rinse interior surfaces and refill. Follow draining instructions in owner's manual. The reason for doing this is because spas are tested with water and when they are shipped there is some water in the plumbing. By super-oxidizing with a sanitizer during a pre-fill, you lessen the opportunity to contaminate the water with bacteria.

### REFILL GUIDE

1. Once spa is filled, start your spa. Add [SpaGuard Stain and Scale Control](#).
2. Apply [SpaGuard Water Clarifier](#) and circulate the water for 5 minutes.
3. Using [BioGuard® 4-way Test Strips](#), test and balance pH (7.2-7.6), and total alkalinity (125-150 ppm).
4. Fill brominator or floater with [SpaGuard Brominating Tablets](#).
5. Adjust brominator setting to yield a 2-4 ppm bromine residual.
6. Add [SpaGuard Natural Spa Enzyme](#) once a bromine residual of 2-4 ppm is established.

### DAILY CARE

- Test the bromine residual. Fill brominator with [Brominating Tablets](#) as needed to maintain proper residual.
- If foaming occurs, use [SpaGuard Anti-Foam](#).

### WEEKLY CARE

- Test the pH. Acceptable range is 7.2-7.6. Ideal range is 7.4-7.6.
- Test total alkalinity of the water. Proper range is 125-150 ppm.
- Apply [SpaGuard Natural Spa Enzyme](#), and [Stain and Scale Control](#) following label instructions.
- Shock your spa with [SpaGuard Enhanced Shock](#) or super-oxidize with [Brominating Concentrate](#).

## MONTHLY CARE

- Test calcium hardness. Proper range is 100-200 ppm.
- Chemically clean your filter with [SpaGuard® Filter Cleaner](#).

## AS NEEDED

- Drain, clean, polish and refill based on usage.

## FOR SPAS USING CHLORINATING CONCENTRATE

### FIRST TIME START-UP

1. Fill your spa with water. If the make-up water is from a well or other non-municipal source, testing prior to refilling is recommended.
2. Super-oxidize the spa with [SpaGuard Chlorinating Concentrate](#) with the spa circulation system on. Run all pumps at least one cycle.
3. Operate the spa circulation system for at least 2 hours.
4. Drain, then rinse interior surfaces and refill. Follow draining instructions in owner's manual. The reason for doing this is because spas are tested with water and when they are shipped there is some water in the plumbing. By super-oxidizing with a sanitizer during a pre-fill, you lessen the opportunity to contaminate the water with bacteria.

### REFILL GUIDE

1. Once spa is filled, start your spa. Add [SpaGuard Stain and Scale Control](#).
2. Apply [SpaGuard Water Clarifier](#) and circulate the water for 5 minutes.
3. Adjust pH (7.2-7.6), total alkalinity (125-150 ppm) and calcium hardness\* (100-200 ppm).
4. Use [SpaGuard Spa Sentry](#), following the recommendations on your SpaGuard computerized water analysis. If source water is greater than 300 ppm, please consult your BioGuard Dealer.
5. Apply [SpaGuard Chlorinating Concentrate](#) following label directions. Establish proper chlorine residual of 3-5 ppm.
6. Apply [SpaGuard Natural Spa Enzyme](#) once the chlorine residual of 3-5 ppm has been established.

### DAILY CARE

- Test the free chlorine residual. Apply [SpaGuard Chlorinating Concentrate](#) as needed to maintain proper residual.
- If foaming occurs use [SpaGuard Anti-Foam](#).

### WEEKLY CARE

- Test the pH. Acceptable range is 7.2-7.6. Ideal range is 7.4-7.6.
- Test total alkalinity of the water. Proper range is 125-150 ppm.
- Apply [SpaGuard Natural Spa Enzyme](#), and [Stain and Scale Control](#).
- Shock your spa with [SpaGuard Enhanced Shock](#) or superchlorinate with [Chlorinating Concentrate](#).

### MONTHLY CARE

- Test calcium hardness.\*
- Chemically clean your filter with [SpaGuard Filter Cleaner](#).

## AS NEEDED

- Drain, clean, polish and refill based on usage.
- Apply [SpaGuard Spa Sentry](#) following label directions every 60 days or upon refill, whichever is more frequent.

\* If using [Spa Sentry](#) there is no need to check calcium hardness.

## FOR SPAS USING BROMINATING CONCENTRATE

### FIRST TIME START-UP

1. Fill your spa with water. If the make-up water is from a well or other nonmunicipal source, testing prior to filling is recommended.
2. Super-oxidize the spa with [SpaGuard® Brominating Concentrate](#) with spa circulation system turned on. Run all pumps at least one cycle.
3. Operate the spa circulation system for at least 2 hours.
4. Drain, then rinse interior surfaces and refill. Follow draining instructions in owner's manual. The reason for doing this is because spas are tested with water and when they are shipped there is some water in the plumbing. By super-oxidizing with a sanitizer during a pre-fill, you lessen the opportunity to contaminate the water with bacteria.

### REFILL GUIDE

1. Once spa is filled start your spa. Add [SpaGuard Stain and Scale Control](#).
2. Apply [SpaGuard Water Clarifier](#) and circulate water for 5 minutes.
3. Adjust pH (7.2-7.6), total alkalinity (125-150 ppm) and calcium hardness\* (100-200 ppm).
4. Use [SpaGuard Spa Sentry](#) following the recommendations on your SpaGuard computerized water analysis. If source water is greater than 300 ppm, please consult your BioGuard Dealer.
5. Apply [SpaGuard Brominating Concentrate](#) following label directions. Establish proper bromine residual of 3-6 ppm.
6. Add [SpaGuard Natural Spa Enzyme](#) once a bromine residual of 3-6 ppm is established.

### DAILY CARE

- Test the bromine residual. Apply [SpaGuard Brominating Concentrate](#) as needed to maintain proper residual.
- If foaming occurs use [SpaGuard Anti-Foam](#).

### WEEKLY CARE

- Test the pH. Acceptable range is 7.2-7.6. Ideal range is 7.4-7.6.
- Test total alkalinity of the water. Proper range is 125-150 ppm.
- Apply [SpaGuard® Natural Spa Enzyme](#) and [Stain and Scale Control](#) following label directions.
- Shock your spa with [SpaGuard Enhanced Shock](#) or super-oxidize with [Brominating Concentrate](#).

### MONTHLY CARE

- Test calcium hardness.\*
- Chemically clean your filter with [SpaGuard Filter Cleaner](#).

### AS NEEDED

- Drain, clean, polish and refill based on usage.
- Apply [SpaGuard Spa Sentry](#) following label directions every 60 days or upon refill, whichever is more frequent.

\* If using [Spa Sentry](#) there is no need to check calcium hardness.

## FOR SPAS USING SOFT SOAK®

### FIRST TIME START-UP

1. Fill your spa with water. If the make-up water is from a well or other nonmunicipal source, testing prior to filling is recommended.
2. Super-oxidize the spa with [Soft Soak® Shock](#) with spa circulation system turned on. Run all pumps at least one cycle.
3. Operate the spa circulation system for at least 2 hours.
4. Drain, then rinse interior surfaces and refill. Follow draining instructions in owner's manual. The reason for doing this is because spas are tested with water and when they are shipped there is some water in the plumbing. By super-oxidizing with a sanitizer during a pre-fill, you lessen the opportunity to contaminate the water with bacteria.

### REFILL GUIDE

1. Once spa is filled, start equipment following the manufacturer's directions.
2. Balance total alkalinity, pH and calcium hardness, following label directions or recommendations from your SpaGuard computerized water analysis.
3. Add the following amounts of Soft Soak® products per 150 gallons of spa water:  
Add 5 ounces of [Soft Soak Spa Conditioner](#)  
Add 1 ounce of [Soft Soak Stain & Scale Control](#)  
Add 3 ounces of [Soft Soak Shock](#)  
Circulate your water continuously for approximately 30 minutes with the blowers off.  
NOTE: Wait at least 15 minutes between additions.
4. Add 1 ounce of [Soft Soak Sanitizer](#) per 150 gallons of spa water and circulate continuously again for approximately 30 minutes.
5. Using [Soft Soak Spa Water Test Strips](#), check your [Soft Soak Sanitizer](#) level and pH. The sanitizer level should be between 30–50 ppm and the pH range should be 7.2-7.6.

#### Quick Start-Up Chart

Spa Volume (in gallons)	Soft Soak Spa Conditioner	Soft Soak Stain & Scale Control	Soft Soak Shock	Soft Soak Sanitizer
100	3 1/3 oz.	2/3 oz.	2 oz.	2/3 oz.
150	5 oz.	1 oz.	3 oz.	1 oz.
200	6 2/3 oz.	1 1/3 oz.	4 oz.	1 1/3 oz.
250	8 1/3 oz.	1 2/3 oz.	5 oz.	1 2/3 oz.
300	10 oz.	2 oz.	6 oz.	2 oz.
350	11 2/3 oz.	2 1/3 oz.	7 oz.	2 1/3 oz.
400	13 1/3 oz.	2 2/3 oz.	8 oz.	2 2/3 oz.
450	15 oz.	3 oz.	9 oz.	3 oz.
500	16 2/3 oz.	3 1/3 oz.	10 oz.	3 1/3 oz.

Remember to take a water sample to your BioGuard dealer regularly for a complete water analysis. Every four to six weeks is recommended. In addition to testing the pH and sanitizer, this analysis will measure the water's total alkalinity, calcium hardness, iron, copper, manganese and total dissolved solids. Based on this, your dealer can recommend the [SpaGuard®](#) and [Soft Soak](#) products you need to keep your spa looking and feeling great!

\* If the temperature of the spa water is below 90°F when this product is added, temporary clouding of the water may occur. This clouding will disappear once water is warmed to over 90°F and circulated.

## FOR SPAS USING SOFT SOAK® (continued)

### WEEKLY CARE

- Using [Soft Soak Spa Water Test Strips](#), test the pH, total alkalinity, calcium hardness and sanitizer levels of your spa. Write down the results.
- Add the following amounts of Soft Soak products per 150 gallons of spa water:  
Add 1/4 ounce of [Soft Soak Stain & Scale Control](#).  
Add between 1 1/2 to 3 ounces of [Soft Soak Shock](#) according to spa use rate.  
If your spa is used three or more times per week, add 3 ounces per 150 gallons of spa water. If sanitizer level is above 30 ppm, do not add sanitizer.
- The sanitizer levels should be 30-50 ppm. If sanitizer level is 15-30 ppm, add 1/2 ounce of [Soft Soak Sanitizer](#) per 150 gallons of spa water. If sanitizer level is 0-15 ppm, add 1 ounce of [Soft Soak Sanitizer](#) per 150 gallons of spa water.
- If pH is outside 7.4, adjust as needed with [SpaGuard® pH Increaser](#) or [pH Decreaser](#).

**Quick Maintenance Chart (dosages in ounces)**

Spa Volume (IN GALLONS)	Soft Soak Stain & Scale Control	Soft Soak Shock	Soft Soak Shock FOR HIGH USE SPAS*	Soft Soak Sanitizer IF LEVEL IS 15-30 PPM	Soft Soak Sanitizer IF LEVEL IS 0-15 PPM
	100	1/4 oz.	1 oz.	2 oz.	1/3 oz.
150	1/4 oz.	1 1/2 oz.	3 oz.	1/2 oz.	1 oz.
200	1/3 oz.	2 oz.	4 oz.	2/3 oz.	1 1/3 oz.
250	1/3 oz.	2 1/2 oz.	5 oz.	1 oz.	1 2/3 oz.
300	1/2 oz.	3 oz.	6 oz.	1 oz.	2 oz.
350	1/2 oz.	3 1/2 oz.	7 oz.	1 1/2 oz.	2 1/3 oz.
400	3/4 oz.	4 oz.	8 oz.	1 1/2 oz.	2 2/3 oz.
450	3/4 oz.	4 1/2 oz.	9 oz.	1 2/3 oz.	3 oz.
500	1/2 oz.	5 oz.	10 oz.	1 2/3 oz.	3 1/3 oz.

\*NOTE: If your spa is used three or more times per week, use the Soft Soak Shock for High Use Spas dosage rate.

### MONTHLY CARE

- Have your water tested by your BioGuard dealer.
- Chemically clean your filter with [Soft Soak Filter Cleaner](#).

### AS NEEDED

- Drain, clean, polish and refill your spa.

NOTE: Spa Sentry is not compatible with the Soft Soak program.

CAUTION: Water containing Soft Soak Filter Cleaner is acidic. Be careful not to get it in eyes or on skin. If eye or skin contact occurs, flush area with plenty of water for at least 15 minutes.

## indulge in Moments®.

SpaGuard® offers you [Moments](#), an assortment of six luxurious spa aromatherapy fragrances, that will not only soothe and moisturize your skin but will leave you with a breathtaking aroma. These six scents include: [Retreat](#), [Revive](#), [Passion](#), [Tranquility](#), [Immerse](#), and [Rejuvenate](#). Treat yourself to a moment and give your body and mind a break.



# troubleshooting

## tips

Your best source for help is always your local BioGuard® Dealer. Take a water sample of your spa water into the store for a free analysis and treatment plan. Here are a few common problems you should become familiar with.

### COLORED WATER/METALS

Copper may erode or corrode from the spa's heating system and dissolve into the water due to high velocity and/or low pH, low total alkalinity and low calcium hardness. This can show up as green or greenish-blue water.

### STAINS

Stains are usually caused by metal in the water such as iron, copper or manganese, which can be introduced from a variety of sources including "fill water."

### SCALE

Rough, sandpaper-like deposits can coat spa walls, clog circulation and filtration systems and plug heaters. Scale is a result of excess dissolved calcium in the water.

### SOLUTION

SpaGuard Stain & Scale Control. Use it after draining and refilling your spa to help prevent stain and scale build-up caused by excessive metals and minerals. In areas with hard water or copper and iron content, a weekly dose is recommended. Use Soft Soak Stain and Scale Control for Soft Soak Spas.

### FOAMING

Foaming is fairly common due to agitation and the presence of lotions, body oils, cosmetics and other substances.

### SOLUTION

SpaGuard Anti-Foam. Use it to quickly eliminate surface foam caused by excess undesirable compounds and detergents.

# safety

## tips

Always read labels and follow directions carefully. You'll learn important information about the proper application, handling and storage of the product you're using. Used correctly, spa water maintenance products safeguard the health of your entire family. If they're mishandled, they can be hazardous. Keep the following do's and don'ts in mind for a safer more enjoyable pool environment.

### YOU SHOULD ALWAYS:

Clean up spills as soon as they occur and safely dispose of the material. Contact your BioGuard® Dealer for advice on cleaning larger spills. Never use a vacuum cleaner to clean spills. It's hazardous to throw chemicals in the trash or put spilled material back into the original container. Keep all spills away from lawns and landscaping to avoid damage. Dispose of all chemicals according to label directions.

Store chemical products safely and out of the reach of small children. Never store liquids directly above sanitizers and oxidizers as they may leak and contaminate other products. Never store sanitizers and oxidizers near metal products, such as bicycles, lawn mowers or cars because they may cause rust. Keep your spa maintenance products in a cool, dry, well-ventilated area, away from other household or garden chemicals and petroleum products.

Keep chemical product containers tightly closed when not in use.

Brace liquids so they won't tip while transporting them in your car. Don't allow chemicals to stay in the car for a long period of time. Make the spa store your last stop. Unpack them as soon as you get home.

Wear protective equipment (safety glasses, rubber gloves, etc.) as directed on the label of the product.

Use care when broadcasting powdered products into the spa on windy days to prevent product from getting in eyes or mouth or onto skin.

## YOU SHOULD NEVER:

Never mix chemicals of any kind together. An uncontrolled reaction such as fuming, fire or explosion could occur. Always add maintenance products to the pool water separately and in different areas.

Never mix two chlorine products from different containers together regardless of their similarities. All chlorine is not the same.

Never overdose your spa. Be sure to use the exact amount specified on the label or by your SpaGuard® Dealer. Knowing your spa's exact volume will help prevent over- or under-application.

Never add water to chemicals. Always add the chemical to large amounts of water.

Never inhale fumes or allow products to get in your eyes, nose or mouth. When opening a product, turn your face to one side or point the container away from you. In the event of accidental contact or if product is swallowed, follow emergency advice on the product label and call your doctor and/or your local Poison Control Center. [The phone number of the Rocky Mountain Poison Control Center is \(877\) 800-5553. This is a toll-free number.](tel:8778005553)

Never smoke around chemicals. Some chemical fumes can be highly flammable, and sanitizers or oxidizers can be ignited by a lit cigarette or match.

Never allow children to handle, measure or dispense chemicals.

Never interchange measuring scoops or place wet scoops back into any chemical container.

Never store liquids directly above sanitizers and oxidizers. They may accidentally leak and contaminate other products.

Never store sanitizers and oxidizers near metal products like bicycles, lawn mowers, cars, etc., because they may cause rust.

Never leave large, open containers in areas where children play. Such containers often collect water and present a potential drowning hazard.

# know how to speak spa language.

Get to know spa-related terms so you can talk with your BioGuard® Dealer and better understand how your spa works.

**Aeration:** Process of mixing air and water. In a spa this can happen two ways: 1) Using an air blower to force air into an air channel or through the spa jets. 2) With Venturi Air Controls that allow air to be pulled into and mixed with the water in the spa jet.

**Available Chlorine:** Amount of hypochlorous acid (the active form of chlorine that does the work) a chlorinating product produces. Also referred to as Free Available Chlorine in the water.

**Bacteria:** Single-celled microscopic organisms. Pathogenic bacteria can cause infections, disease and bather irritation. Hypochlorous acid or hypobromous acid are used to kill bacteria in pool and spa water.

**Balanced Water:** Pool or spa water that has a proper pH and the appropriate mineral content to prevent corrosion and scaling.

**Bromine:** A member of the halogen family commonly used as a sanitizer or disinfectant to destroy bacteria and algae. It is resistant to heat and rapid pH fluctuations.

**Buffer:** Chemicals that serve to prevent fluctuations in pH.

**Chelant:** Ingredient that prevents minerals and metals from scaling and staining.

**Clarifier:** A coagulant that gathers tiny particles together to make filtering them out much easier.

**Corrosion:** Etching, pitting and other destructive erosion of the spa surfaces and equipment due to low pH or chemical imbalance.

**Filter Element:** Device (cartridge) within a filter housing designed to remove suspended debris from the water.

**Make-Up (Fill) Water:** Fresh water used to fill the spa. Also called Source Water.

**Oxidation:** Chemical process for removing undesirable compounds from the water (see Shock Treatment).

**Ozone:** Gaseous molecule composed of three atoms of oxygen (O<sub>3</sub>). In a spa, ozone is used to oxidize contaminants. Its instability and short life in the water require that it be used only to supplement chlorine or bromine residual to control bacteria.

**pH:** Measurement that indicates the acidic or basic nature of a solution. Measured on a scale from 0 to 14. Refer to chart on page 3 for acceptable ranges.

**ppm:** Parts per million. Unit of measurement used in measuring chemical application. Indicates the amount, by weight, of a chemical in relation to one million parts by weight of water.

**psi:** Pounds per square inch. Unit that measures filter pressure on a pressure gauge. Psi increases as the filter gets dirtier.

**Pump:** Motor-powered device that creates pressure and water flow by spinning an impeller to provide circulation through the filter and heater.

**Saturation Index (SI):** Numeric value indicating whether water is scaleforming or corrosive. It factors in pH, total alkalinity, calcium hardness and water temperature. Ideal range is between -.3 and +.3. Not applicable to spas using Spa Sentry.

**Scale:** Mineral deposits – usually calcium carbonate – that form on spa surfaces and equipment due to excessive calcium in the water. Scale is more likely to form in heated water if proper water balance is not maintained.

**Shock Treatment:** Addition of an oxidizing compound for the destruction of nitrogenous and other undesirable compounds.

**Skimmer:** Device in the spa that continuously pulls in surface water and floating contaminants that are then removed by the filter. A hand skimmer net can be used manually to remove floating debris from the water.

**Super-oxidation:** Application of large quantities of oxidizing compounds to destroy chloramines, ammonia and other oxidizable compounds. It's done to get rid of odors and cloudy water, as well as for maintenance.

**Total Alkalinity (TA):** The amount of alkaline components in water. TA acts as a buffer against rapid pH fluctuation.

**Total Dissolved Solids (TDS):** Measure of the amount of dissolved matter in the water. High TDS (2,500 ppm and higher) can interfere with the sanitizer's ability to combat bacteria growth. If TDS is above 2,500 ppm drain and refill your spa.



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