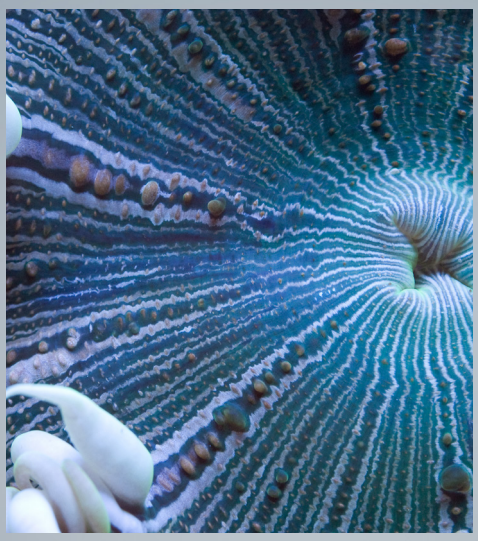
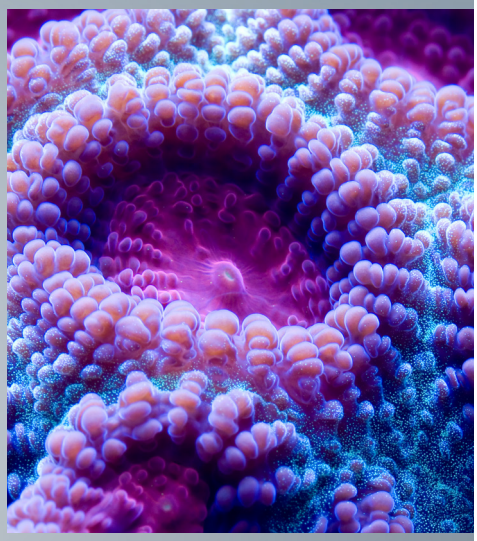
FAUNA MARIN

High Quality Reef Keeping Products





Watertreatment and primary care

BALLING Light®

Calcium, Magnesium, Alkalinity +Trace Elements

www.faunamarin.com

Introduction

The well-known and popular Balling method is an extremely simple method for providing your aquarium with calcium, magnesium, carbonate hardness and trace elements.

In Germany this method has practically replaced the previously popular calcium reactor. An increasing number of marine aquarists also use our Fauna Marin Balling salts with a calcium reactor in order to manually compensate for chemical imbalances, such as those that can occur when operating such a reactor.

To provide an optimum supply for a marine aquarium, these substances are added daily by hand or using a dosing pump. Strong lighting, stony coral husbandry, artificial reef decoration and special bacterial preparations have changed the water chemistry requirements and made it necessary for the Balling Classic method to be adapted.

With this in mind, **Fauna Marin** have developed a new Balling method approach and adapted it to the present conditions of modern **reef aquaristics**.

Introduction

Our salts comply with pharmaceutical purity levels and are packaged accordingly in a protected manner. Not only do we take the datasheet into consideration – we also check organic and inorganic trace elements as well as the effectiveness of the salts.

In our salts we use additional bioactive stabilisers, pH buffers and special minerals which significantly increase the stability of the chemical parameters in the aquarium.
The added trace elements are more stable in the solution and are thereby more accessible to the coral.

By using salt mixtures, this Balling Light ® method brings with it minerals and trace elements that are either missing from or only present in small amounts in commercially available sea salts. The supply of bioactive components and the purity of the salts prevents the coral from darkening and enhances its growth and colouration.

Fauna Marin Balling salts are simply beyond comparison!

- More effective, thanks to the highly purified salts with extremely low water content
- Salt mixtures for improved stability of important parameters
- Tailored to modern sea salts
- Stable PH value
- Supply of bioactive substances for improved colouration and coral growth

Fundamental Values

The following values should be produced during continuous operation.

- Calcium 380 – 420 mg/litre
- Magnesium 1200 – 1350 mg/litre
- Alkalinity 6,5 – 8 dkH
- Salinity 33 – 35 per mil

Instructions for the Balling Light method

Three **5-litre canisters** are to be **prepared separately**

CAUTION Always add the salt to the water – never the other way round!

1st Canister - Calcium

Dissolve **2.0 kg** of Fauna Marin calcium chloride dihydrate mixture into **4 litres** of osmosis water and then fill the canister with osmosis water.

Then add:

- 25 ml Ultra Trace B Color and Grow Elements (1) - strontium/barium complex
- 25 ml Ultra Trace B Metabolic Elements (2) - heavy metal complex

to the canister.

2nd canister - magnesium

Dissolve **2.0 kg** Fauna Marin **magnesium chloride hexahydrate mixture** into **4 litres** of osmosis water and then fill the canister with osmosis water.

The new method does not require magnesium sulphate as it becomes too strongly concentrated and causes ion displacement in the aquarium water.

Nothing else is added to this canister!

3rd canister - alkalinity/carbonate hardness

Dissolve **500 g** of sodium bicarbonate mixture into **4 litres** of osmosis water and then fill the canister with osmosis water.

Then add:

- 25 ml Ultra Trace B Health Elements (3) - iodine/flour complex

to the canister.

Tipps und Hinweise

Larger canisters can also be used; you will simply need to extrapolate the quantities added for each canister

Use lukewarm water to dissolve the carbonate. A small residue will always be left over in this canister. However, this has no effect on the stability of the solution.

A slight discolouration of the solutions is normal, and is due to the addition of bioactive substances and trace elements. This has no impact on the quality or stability of the solutions. After dissolution the solutions can be stored indefinitely.

The reguarly doasge

The more regularly the solutions are added - the more stable are the values in your system. We recommend using the **Fauna Marin** Balling Light ® dosing computer, which has been specially developed for this method, or the corresponding model from GHL for the Profilux aquarium computer.

The three canisters are now connected to an appropriate dosing computer via 4/6 mm PVC tubes.

Tip - Drill a small hole into the lid of the canister and insert a 4 mm PVC rod all the way down into the canister. Then connect the rod to the 4/6 mm tube. You can then use the entire contents of the canister.

Adding the solutions

Depending on the content of the aquarium, the individual solutions are now metered manually in order to determine the actual requirements. Before doing this, determine the current water values and make a note of the results. (Ca, Mg, Alk)

Example: 50 ml of canister 1 into a 500-litre aquarium.
Value before dosing = 380 mg of calcium. After 2 hours, repeat the test the calcium value after the 2nd test is then 400 mg of calcium. In this example, the addition of 50 ml of the solution from canister 1 increases the calcium value by 20 mg/litre for a 500-litre aquarium.

Now program the dosing computer to add 7 ml of solution 1 once a day, i.e. 50 ml of the solution spread over a week.

After a week measure the calcium value again and note it has only risen to 390 mg/litre, although in a pure arithmetic sense this should have risen to 400 mg/litre.

This method determines the actual loss of calcium that is to be compensated in the system. Due to chemical precipitation, growth or the use of water treatment agents, the actual calcium loss that is determined may differ from the calculated value.

You can now easily adjust the dosage level by increasing the value by 3 ml per day. 50 ml = +20 mg/7 days = 7 ml

Therefore, to obtain the value + 30 mg, 75 ml/7 days = 10 ml must be added. Using this simple 3-part calculation you can easily adjust each of your desired values and set an automatic dosing schedule in just a few days.

A daily inspection of the calcium (Ca test), magnesium (Mg test) and dKH values (KH test) is to be conducted at the start and the dosing quantity must be adjusted on the device if necessary.

Advice

The Fauna Marin dosing computer is ideal for this application, as each channel can be individually adjusted and the substances can be dosed at 5 minute intervals twice per day.

After no more than 2 weeks, you will have determined the specific requirements for your aquarium and set the dosing unit accordingly.

The fact that mineral salt is no longer used for the Balling Light ® method (this is used in the traditional method) is not only due to regular water changes, but the volume of dissolved trace elements in our aquariums, which is generally too high.

Therefore, the often mentioned ‚ion displacement' factor is only applicable based on theoretical consideration of the Balling method. The regular exchange of water helps your system to dilute unwanted substances and it makes it very easy to adjust and control salinity levels.

The addition of trace elements in the canister is used to compensate (balance) the Balling solutions and provides a nature similar water chemistry in your reefaquarium.
If you have the need for an additional dose of elements (coloration), use our new Color Elements. T hese additional elements can significantly enhance the colors of your corals and stimulate growth.

Naturally, the system is also suitable for manual dosing. To do this add the solutions to a well-circulated area of the tank. There should be an interval of approx. 10 minutes between the doses. Start by adding magnesium, then calcium and carbonate.

Correct measure

We recommend that you verify your water tests with the reference solution from Fauna Marin. We can also provide you with an exceptionally accurate KH test for marine aquariums.

Please measure the salinity of your aquarium on a regular basis and adjust it if necessary. To do this, use a refractometer (regularly calibrated with the Fauna Marin Multi Reference) or a high-quality aerometer, e.g. from Tropic Marin.

Questions, contacts, support

We wish you lots of success using this new method and we are happy to answer any further queries you may have.

info@faunamarin.de
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FAUNA MARIN

High Quality Reef Keeping Products

Fauna Marin GmbH
Gottlieb-Binder-Str. 9
D-71088 Holzgerlingen

Tel.:+49 (0) 7031 427 1142
Fax:+49 (0) 7031 238 592
www.FaunaMarin.de