FAUNA MARIN US STYLE PRIMEFRAG[®] SYSTEM

Vibrant and Unique Coral Coloration – Made simple! Successful coral keeping done USA style



FAUNA MARIN US STYLE PRIMEFRAG[®] SYSTEM

IN TO USE

US Style Primefrag[®] method instructions for the **simple** and **successful** operation of reef aquariums.

The Fauna Marin US Style Primefrag[®] System is a new system which utilizes the new modern methods of US-style aquarium care.

This system implements a **simple and safe method** which makes it possible to bring out **extremely colorful corals** while maintaining **maximum color vibrancy and luster**.

The new US Style Primefrag[®] System is **easy to use**, **low in cost** and designed especially for aquariums that use **LED lighting** as their primary source of light.

This system will also work well on aquariums using hybrid or pure T5 lighting.





OW TO USE FAUNA MARIN US STYLE PRIMEFRAG® SYSTEM

Bright, fluorescent corals made possible with the US Style Primefrag[®] System

Ever since the introduction of **LED lighting technology**, the marine aquarists have interestingly become more active in the areas of **coral feed** and **food additives**. Nowadays, more aquarists are using LED light as their **primary lighting source** than any other lighting type on the market. Many have discovered that this kind of lighting technology is capable of bringing out very special color variations in many corals. The US Style Primefrag[®] System fits into the picture by helping generate these fluorescent and strongly iridescent colors through the use of a carefully selected combo of products which follow US methodologies.





FAUNA MARIN US STYLE PRIMEFRAG[®] SYSTEM

Not every coral is compatible with this method

Not all coral species are suitable for this purpose. Fortunately, today's trade offers a large selection of animals which are suitable for this new system. When selecting a coral to purchase, make sure that the dealer you are purchasing from is capable of obtaining **healthy**, **perfect corals**, **which demonstrate fluorescence formation**. The trade typically holds special **UV LED flashlights** which can be used to demonstrate a coral's fluorescence even under white Lighting.

In our Fauna Marin coral facility, we offer such animals regularly and specifically breed coral for this type of aquarium keeping. You can find them under our US Style Primefrags[®] category at: www.faunamarin.de

A coral's color potential is determined by its **Fluorescent properties**. These type of corals offer **beautiful SPS** and **LPS color combinations**, which are commonly found in aquariums using the **US Style Primefrag® System**.

With this new system, a few yet very effective products are sufficient. The US Style Primefrag[®] System does not require very low nutrient ratios and is therefore safe, stable, and also suitable for beginners looking to achieve maximum color development from their corals. This system only requires dosing two times per week.





History of the US Style Primefrag[®] System

For several years now, we've used the **US Style Primefrag**[®] **System** on our own coral facility sales systems. The results have been nothing short of fantastic. Our products are **100% developed in-house** and **truly unique**. Our system not only consists of the **well-known**, **tried and true elements**, but also include **trace and micronutrients**, **marine proteins**, **biopolymers**, and **enzymes** which have proven to be an important basis for the **exceptional effectiveness of the system**.

Fauna Marin is the leader in the research and development of these newly identified micronutrients and organic bio-polymers found in the reef aquarium.

As a foundation for this system, we recommend you use the **Berlin filtration method** in conjunction with a simple **2-stage media filter** and **Balling Light System dosing method**.

Systems that **operate without water changes and/or use fixed dosing rules** can be used, but **are not recommended**; for more information, please refer to our **HTU** "How to Change to the Balling Light System".

If you choose to use such a system, we will be happy to help you switch to the Balling Light System. We recommend aquarists perform 5-10% weekly water changes using our Professional Sea Salt. Through the use of our products, we can guarantee that **no undesirable trace elements and nutrients** with foreign salts will be introduced into your aquarium.

Products that make up the **US Style Primefrag® System**, including our other products for other systems **are all tested and verified by our Seawater Research Laboratory**. Every product we create undergoes **rigorous testing to ensure that you receive the best quality product, guaranteed**.





For the US Style Primefrag[®] System you will need:

- 1) Saltwater aquarium with Berlin filtration system and skimmer.
- 2) LED lighting with UV component we recommend Kessil LED lighting systems. Hybrid lighting systems are also suitable.
- 3) Live Rock, Reefs ceramics or Reef Pottery. If you choose to use a substrate, you should always use **real coral sand**.
- 4) A media reactor with activated carbon Ultra Carb L and Phosphate absorber Fauna Marin Phos 0,04.
- 5) Balling Light System for supplementing Calcium, Alkalinity, and Magnesium.
- 6) Bacteria product such as Bacto Reef Balls.
- 7) The right dosing method for Trace Elements, Food, and Extras.
- 8) Regular lab analysis water testing by the Seawater Research Lab.

TIP:

Our products are very **concentrated** and **effective**. The indicated dosage amounts should be used only as **dosing guidelines**. Since each aquarium system behaves differently to different doses, we recommend you adjust your dosages to suit the needs of your tank.

When starting an aquarium or changing over from a different system, we recommend **starting at 25%** of the recommended dosage. Slowly increase the dosages every week until you've reached the ideal dosage for your tank. This process may take a few weeks, but keep in mind that a slow and steady transition from one system to the next will allow your corals to adapt to the new system. When this system is used alongside the **Balling Light System**, it is easier to start with a clean and stabilized supply method.





1.) Aquarium -Selecting the proper skimmer and flow pumps

For the **US Style Primefrag® System**, the aquarium should have a **powerful**, **efficient skimmer** installed. You can either use an **in-sump skimmer** or **external skimmer**. For aquariums operating **without a skimmer**, **dosage amounts** and **water change** intervals will differ.

Any type of aquarium can be used. It doesn't matter if it's made of glass, acrylic, standard or custom size.

Selecting the right skimmer

When choosing a skimmer, we recommend you consider one that is powerful and appropriately sized for your tank. The skimmer is the most important device in the aquarium.

We recommend using Royal Exclusiv or Bubble Magus skimmers.

We also recommend adding a small ozonizer with 5mg / 100 Liters (26 US gal) to your tank. This ozone device should be connected directly to the air inlet of the skimmer.

Providing strong and randomized flow throughout the aquarium

Providing sufficient flow for your corals are especially important.

When choosing **a suitable return pump**, the flow turnover in your aquarium should be **at least 5x the size of the gross aquarium volume**.

For example, a 1000 liter (264 US gal) aquarium should have at least 5000 l/h (1,320 gph) circulating throughout the display tank.

This can typically be accomplished with a return pump rated for **at least 2x the minimum flow rate**; also taking head loss into account.

For **in-tank flow pumps**, we recommend having at least **30 - 50x turnover**. We use and recommend **Panta Rhei** or **Sicce flow pumps** for this purpose. Of course you can use other branded flow pumps, but at the very least provide your aquarium with **30x turnover**.



2.) Lighting – Selecting the proper lighting for your coral

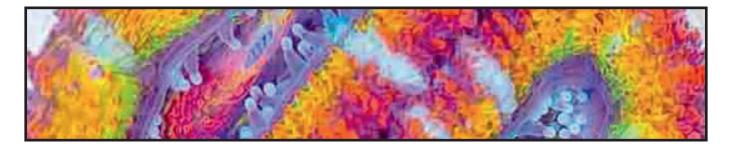
The special feature of the **US Style Primefrag® System** is the type of corals which deal with the preparation of the **coral's fluorescent properties**. It is commonly known that, coral coloration becomes most intense when it is **exposed to Blue-only lighting**.

In the US Style Primefrag[®] System, we use the coral's ability to fluoresce under blue lighting and make it equally possible to give off extreme vibrancy under normal daylight lighting. For this to happen, it is important to have high quality lighting fixtures with a built-in UV LED channel. It is equally important to make sure you create a perfect blend of LED channels so that corals are provided with the necessary spectrum to grow and thrive.

We highly recommend the **GHL LX7200 series**, **Kessil A360** and **AP700 series**. These lighting systems provide the necessary lighting conditions which make it an ideal choice for use with our **US Style Primefrag**[®] **System**.

Example of light mixing and illumination:

- Blue, Cyan, Royal Blue channels: Set to 100%
- UV Channel: Begin at 20%, then slowly increase to 80% max over the course of 4-6 weeks
- White-Blue channel: Set to 20%
- Daylight channel: Turn on at 30% and Red channel at 2-5% for 5 hours a day
- Total duration of lighting: 12 hours daily, including dimming times





WTO USF

Blue LED lighting – Understanding a coral's reaction to this type of light

There is a huge difference between how we see blue light and how corals see it. To us it looks dark, but to the corals it is an **energized light source that provides many benefits**. When we look at blue light, our eyes do not capture the brightness of the color because our eyes are not anywhere near as sensitive to blue light as it is to white-green light. For this reason, when we look at white light, it is seen as a much brighter light source. It is important to note that corals can also burn under the seemingly dark light, especially UV lighting which is something we simply cannot see.

For this reason, **coral placement is extremely important**. The **supplements** we put together are also important since it helps to **strengthen a coral's protective proteins** and **fluorescent properties**. It is also important to **carefully observe your aquarium's water quality** and **beneficial trace element levels**. An accumulation of excess trace elements and undesirable trace elements can lead to radiation stress which results in a weakened coral.

We recommend using our **Seawater Research Lab** and **consulting service** to attain **fast and reliable data on your water values**.





FAUNA MARIN US STYLE PRIMEFRAG[®] SYSTEM

3.) Rockscaping – Selecting quality rocks for reef construction

The success of a reef aquarium is heavily dependent on **the type of rock decoration** that is used. It would be best to avoid artificial materials whenever possible.

It is safe to use decorative pieces such as **saltwater live rock** and **porous rock which are made from Neutral limestone**. These type of pieces provide sufficient surface area for **cultivating beneficial bacteria**. The **Fauna Marin online store** offers a **wide selection of decorative materials** and **products** which are suitable for a **safe start** of your aquarium: **www.faunamarin.de**

Constructing an effective rock layout

When rockscaping your reef, use as little material as possible. This will give your corals plenty of space to grow and for the flow to circulate throughout the aquarium with ease. Having an open layout will also make it easier for you to work in the aquarium.

You can find many examples of successful Fauna Marin aquariums on our **Facebook group page** (https://www.facebook.com/pages/Fauna-Marin-GmbH/114045578610991) or on our Fauna Marin support forum (http://forum.faunamarin.de/index.php?board-list/)

Rockscaping goes best with our **Reef Fix cement glue** and **Aqua Scape FIX polymer adhesive**. If you would prefer to work with reef ceramics, we recommend **reef ceramic material from Riffsystem**. We strongly advise against the use of other kinds of ceramics.

Thanks to our **Seawater Research Laboratory**, we can run our **own tests on different products** to give you the **best recommendations for use on your reef**.





FAUNA MARIN US STYLE PRIMEFRAG® SYSTEM

Selecting a good substrate

If you choose to use a substrate, you should always use **real coral sand**. Only this kind of sand can provide **high porosity** and offer the **best coverage**. Using real coral sand can also help maintain **consistent pH values**, much better than artificial substrates.

Artificial substrates commonly alter the chemistry of the aquarium and end up binding important micronutrients. It is these micronutrients which help the corals protect themselves from excess lighting. Without it, corals become more vulnerable. Genuine coral sand however, contains the correct chemical composition found in nature and therefore has a more positive effect on the aquarium environment. You can see the differences between real and artificial sands just by looking at them. Real sand contains a variety of different coral pieces, whereas artificial sand does not contain any of these.

TIP:

If you take a look on the **forums or Facebook**, you will find that many aquarists run into **problems within 1 to 1.5 years of starting their tank**. This issue commonly occurs from the **use of unsuitable systems**, **excess dosages**, and most importantly, from using **unsuitable rock and substrate** stemming back from when the tank first began.

The problem lies within the **bacteria's inability to stabilize and establish itself** throughout the aquarium system. Such issues typically result in **cyanobacteria** and/or **algae problems**. This state is also known as **"Old Tank Syndrome"**. OTS can be avoided when the proper steps are taken. Even though these steps will require more work and waiting-time at beginning, we assure you that this route is the **easiest and safest option for establishing a successful and long-term reef aquarium**. This technique is the secret tip used by the **world's most successful reefers**.





TO USE

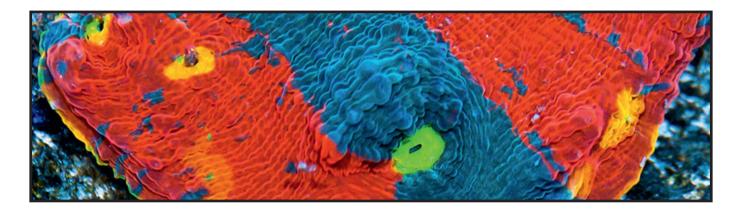
4) Carbon and Phosphate absorbers – Selecting the right media

In order to maintain clean aquarium water and adjust nutrient values to a suitable level, we use a **2-stage filtration method**; we use a **Carbon filter** and **Phosphate absorber**. In **smaller aquariums**, both carbon and phosphate media can be kept in a **single media filter**. For aquariums **500 liters (132 US gal) and larger**, we recommend using **2 separate multi-filters** (Fauna Marin Multi-filter).

We recommend you have **200-400 lph (53-106 gph)** flowing through the reactor. The **Sicce 1.0 pump** on our **Multi-filter** can be adjusted as necessary. Media should be changed **every 4-6 weeks**.

All Multi-filters should be positioned in front of the skimmer. We recommend the first filter be filled with our activated carbon. The second should be filled with Phosphate absorber and Zeolite. We do not recommend any other filter media for this system.

We do not recommend an algae refugium. Marine algae are rarely found in healthy reefs and would end up competing with the corals for food and nutrients.





FAUNA MARIN US STYLE PRIMEFRAG® SYSTEM

Achieving continuous filtration via Fauna Marin Carb L

Having continuous filtration via Carb L (High-purity activated pellet carbon) is the basic component of all Fauna Marin systems. Carb L is used over the long-run and is exchanged regularly. It is designed to help maintain SPS and LPS coral.

Filtering water with activated carbon has many benefits. As water runs through the media, **phenols**, **protein compounds**, **dyes**, and **toxins are removed from the water**. This is what helps achieve **crystalline water**.

Carb L – Dosing recommendation

25 - 30 ml / 100 liters (26 gal) of aquarium water
Position media in a filter reactor, max flow 200 lph (52 gph)
If used in a filter bag, add 50ml / 100 liters (26 gal)
Replace media every 4-6 weeks
Leave a 14-day gap between Carbon change-out and other media change-out.
Prepare Carb L by doing the following: Soak Carb L in hot water for 24 hours, then use.

Phosphate Absorber

Our PO4 media does NOT require any preliminary preparation. Our Fauna Marin Phos 0,04 is already cleaned and ready to use. Zeolite or pellet filters can also be used for nutrient control.

We would be happy to assist you with transitioning to other Fauna Marin systems.









5.) Balling Light System – Supplying the aquarium with Carbonate, Calcium, Magnesium, and Trace elements.

The **basic supply of elements** are provided by the **Balling Light System**. This unique system will provide your aquarium with **all the necessary baseline elements** that your corals need. Balling Light is a **very flexible supply method** which allows you to **individually tailor each element** so that **you can provide only what your aquarium needs**.

For the US Style Primefrag[®] System, the dosage amounts for the trace element components of the Balling Light system are slightly different than the usual dosages. Please refer to the Balling Light System manual only as a guide, **do not follow the Trace B dosage** instructions. Instead, add the following dosages to each container.

The US Style Primefrag[®] System requires the following:

• Trace 1	Dosing canister 1 (Calcium)	Add 75ml
• Trace 2	Dosing canister 1 (Calcium)	Add 40ml

• Trace 3 Dosing canister 3 (Carbonate) Add **50ml**

Please follow all other details shown in the Balling Light System manual.





FAUNA MARIN US STYLE PRIMEFRAG® SYSTEM

Water changes

We strongly recommend you **DO NOT skip weekly water changes!** Water changes are important for **the removal of waste and pollutants**. It also helps to adjust salinity and provide a fresh supply of necessary elements. For those who do not have time to do weekly water changes, we recommend **25% water changes every 4 weeks** as an alternative. For best results, we recommend **Fauna Marin Professional Sea Salt**. It is the same salt we use in our coral breeding facility with phenomenal success.

In order for the reef aquarium to be successful, it is very important to use pure salts which are void of any additives or artificial compounds. We do not recommend using salts that include bacteria, probiotic additives, or additional amino acids. These kind of salts are not suitable.

We recommend using our Fauna Marin Balling Salts (Calcium, Magnesium, and Carbonate). These are high purity salts which have been specifically designed for use in the reef aquarium. Regular water changes with natural sea water (Ocean Sea Water) increases the vitality and coloration of the corals.







6.) Bacteria – Supplying bacteria with Bacto Reef Balls

For those using Live Rock, we generally do NOT recommend dosing bacteria at the very beginning of a tank's setup. If you have ceramics, reef bones, and perforated rocks in your aquarium, we recommend you start the Bacto Reef Balls dosage with 1 Ball / 100 liters (26 gal) for the first 2 weeks. If you started your aquarium with live rock, you can begin adding Bacto Reef Balls after about 3 months. Start with 1 Ball / 100 liters (26 gal) every 2 weeks.

Starting an aquarium **exclusively with artificial decorative materials** is the more modern approach to sustainable reefkeeping. Using materials that have a **bacterial layer**, also regarded as **"artificial material"** require bacteria dosing **from the very beginning**. In this scenario we recommend **adding the normal dosage of Bacto Reef Balls at the start of the aquarium**.





7.) Supplemental Dosages – Dosing Trace elements, Food, and Extras

Many aquarists commonly look for specific dosage amounts they should add to their aquarium. Unfortunately, these amounts **cannot be easily calculated** due to the many variables that come into play. It really comes down to **aquarium stocking levels**, **current nutrient levels**, **and what kinds and how many animals are kept in the aquarium**. Each of these animals have **different consumption rates** and therefore have **different needs**.

However:

The basic supplemental needs of the coral are covered by the controlled dosages of the Balling Light System and by consistent water changings with Fauna Marin Professional Sea Salt.

In order to supply the corals **with all organic and inorganic nutrients and micronutrients**, you will need:

Fauna Marin Organic

Micro and nutrient solution with **organic fluorescence boosters** Starting dose: **2ml / 100 liter (26 gal) / every 7 days** Long term dose: **3 – 5ml / 100 liter (26 gal) / every 7 days**

Fauna Marin Amin

Vitamins, Amino acids, and food for corals with fluorescence boosters Dosage: **1ml / 100 liter (26 gal) / every week**







Fauna Marin Coral Sprint – Coral fertilizer

Coral Sprint is a highly nutritious coral feed that contains high quality volatile proteins, marine fatty acids, and denatured marine bacteria.

Coral Sprint is a **new generation of coral food**. When added to the tank, it has **no effect on the NO3** and **PO4 levels**, yet supplies corals **with the same nutrients found only in nature's coral reefs**. A large part of food received by corals in nature consist of **bacteria**, **algae**, **single cells**, **and Nanoplankton**. With Coral Sprint, we have found a way to **conserve these micronutrients** so that it can be made available to the aquarium owner.

Coral Sprint is **best suited for Azoo**, LPS, and SPS corals.

Our food is designed for **continuous dosing**.

At the end of this manual, you will find a **dosing schedule** suitable for a slow and safe start for your system. In our systems, we do **keep fish alongside our coral**. Professionals know that **fish waste is the best source of coral food**. Corals can benefit when fishes are fed **high-quality frozen food** and **protein-rich granules** or **Ocean Plankton**. The **high proportion of essential fatty acids** also help with **PO4 degradation** and **stabilization of nutrients**.





8.) Maintaining Water Quality – Test services from Seawater Research Lab

The **Fauna Marin Research Laboratory** can be your resource for finding the levels of all important seawater parameters.

We recommend regular water tests using our Seawater Research Laboratory. These lab tests will help you fine-tune your dosages and see what parameters need adjusting.

Take advantage of our Business Test service and receive one-on-one support and individualized advice tailored to your test results and aquarium goals.







Short instructions + Dosing schedule for US Style Primefrag[®] System

1. Basic supply via the Balling Light System → HTU Balling Light 2017

Trace 1/2/3 dosage changes:

Trace 1	Dosing canister 1 (Calcium)	75 ml
Trace 2	Dosing canister 1 (Calcium)	40 ml
Trace 3	Dosing canister 3 (Carbonate)	50 ml

Recommended water parameters:

Salinity:	34 - 35	psu
Calcium:	440 - 450	mg / Liter
Magnesium:	1350	mg / Liter
Potassium:	400 - 420	mg / Liter
Alkalinity:	7 - 7,5	dkH
Nitrate:	2 - 10	mg / Liter
Phosphate:	0,02 - 0,07	mg / Liter

Other recommended values depending on the water-test-results from the laboratory.

2. Dosages

Ultra Organic (Coral Booster): 2 - 3 ml per 100 liters (26 gal) per week Ultra Amin (Fluorescent booster): 1 - 2ml per 100 liters (26 gal) per week Coral Sprint: 1 Dosing spoon per 100 liters (26 gal) every 2 days



3. Filtering

Ultra Carb L: 30ml per 100 liters (26 gal) \rightarrow max 200 lph (52 gph) flow rate \rightarrow Change every 4-6 weeks

Phos 0,04 : 50 − 100 ml per 100 liters (26 gal) → max 200 lph (52 gph) flow rate → Change as needed

Correctly sized protein skimmer with light ozone in-use Max: 5 – 10 mg/h per 500 liters (132 gal) run continuously

4. Water Changes

Perform **weekly 5 - 10% water changes** with **Fauna Marin Professional Sea Salt**. You can also perform regular water changes with **natural seawater (Ocean Sea Water)**. Doing so will significantly enhance the vitality and coloration of corals.

Partially exchange substrate when using coral sand between 1-3 mm in grain size. In this case, **remove 3 - 5%** of the sand during water change and replace with fresh new sand.

5. Regular testing via the Seawater Research Laboratory

For fine-tuning dosages and finding anomalies in water quality.



Transitioning from other systems to US Style Primefrag[®] System

Transitioning from another system to the **US Style Primefrag® System** is not difficult, but necessary. Depending on which system is used before our system, the transitional period may take some time. The most important step to switching systems is to get a **basic analysis of your system** before the switch. **Please complete our diagnostic sheet and order a Business Test. Send us your sample along** with a photo of your aquarium. We will be more than happy to assist you with changing systems.

Other measures which lead to success with the US Style Primefrag[®] System

- 10% weekly water changes with Fauna Marin Professional Sea Salt
- Partial removal of sand (3 5%) with each water change
- High quality LED lighting: Kessil or GHL LED luminaires
- Compliance with the correct dosage amounts; starting with smaller dosages and slowly increasing
- Adequate fish and coral stocking levels; a "Cleaning Crew" is very important
- Sufficient corals to consume biomass. A reef aquarium needs coral colonies; a tank filled with frags are not enough and do not compete well with algae and bacteria deposits
- Sufficient flow
- Regular maintenance of equipment; pump cleaning, skimmer cleaning, etc.



Instructions for starting an aquarium with the Fauna Marin System:

- Day 1 Assemble and install aquarium and equipment
 - Position decorations, substructures, live rock or reef branches in aquarium
 - Add substrate of choice (normal coral sand, grain size 1 3 mm)
 - Add RO or tap water (Tap water depends on quality of water)
 - Power ON the return pumps and flow pumps
 - Check for any leaks in the system
- **Day 3** Replace all water and fill with RO water
 - Add sea salt mix and measure salinity. Use quality salt like FM Professional Sea Salt and adjust value to 25°C (77°F) and 34 - 35 salinity
 - Install zeolite filters
 - Power ON other equipment such as skimmer, reactors, etc.
- **Day 5** Continue adding decorations with live rock (always pre-order)
 - Adjust salinity, alkalinity, and temperature
 - Start lighting schedule (10 hours / day)
 - Begin initial dosing of Bacto Reef Balls with 1 ball per 100 liters (26 gal) every 2 weeks when not using live rock!
- Day 7 Test water parameters: Calcium, Magnesium, Nitrite, Nitrate, Phosphate
 - Nitrite level will naturally increase at this time due to tank cycling
- **Day 10** Check Nitrite level. The value should only be up to 0.1 mg/L
 - Start dosing Balling Light or install Calcium Reactor, then adjust Calcium and Alkalinity level
 - Add Carb L media to carbon filter
- Day 11 Begin stocking!
 - First add hermit crabs, snails, and urchins. Algae eaters such as blennies can be added a few days later

A few days after adding your first fishes, you can begin adding your first batch of coral. Increase stocking level every 7 - 10 days.



FAUNA MARIN US STYLE PRIMEFRAG® SYSTEM

For more information or individual advice, please contact us directly on our Support forum: http://forum.faunamarin.de

Further instructions, information about animals and our products can be found on our website's download center: https://www.faunamarin.de/download-center/



