



Aquaforest®



**GUIDE FOR STARTING AND MAINTAINING
MARINE AQUARIUMS BASED ON INDIVIDUAL
AQUAFORREST PRODUCTS.**

2021 | www.aquaforest.eu

See what's new!

*New
Formula!*



AF GEL FIX

Fast and long-lasting gel for gluing coral frags. AF Gel Fix is designed for precise gluing of small elements. Due to the density of AF Gel Fix, it makes sticking coral frags to rock or plugs easy and effortless. The gel does not contain toxins that are dangerous to sea life. Bonds in 10 seconds.

AF BIO SAND

Natural white sand derived from the highest quality deposits. The latest technology in AF Bio Sand significantly accelerates the maturation process of an aquarium, and allows faster livestock addition in a newly set up tank. The bottles included contain laboratory isolated strains of nitrifying bacteria and a nourishment, facilitating their development and multiplication.



AF MINI ROCKS & AF FRAG ROCKS BLACK

High-quality biologically neutral rocks created for easy corals' fragging. Made of natural, quality materials of the highest porosity, they provide quick settlement of beneficial bacteria and other microorganisms. The addition of dolomite helps to stabilize key marine aquarium parameters such as pH and KH. The use of natural materials guarantees ideal conditions for the development of new life, which are coral frags. These can be easily cut and combined, and placed anywhere on rock or sand. The porous structure guarantees an increase in the filtration surface and maximally resemblance to natural rock.



AF PLUG ROCKS BLACK

Biologically neutral plugs made to easily fit grids in the frag tanks. The size of AF Plug Rocks fits perfectly most common reef grids sizes. These plugs were made of the highest quality materials to make sure we provide the best environment for your most precious frags.

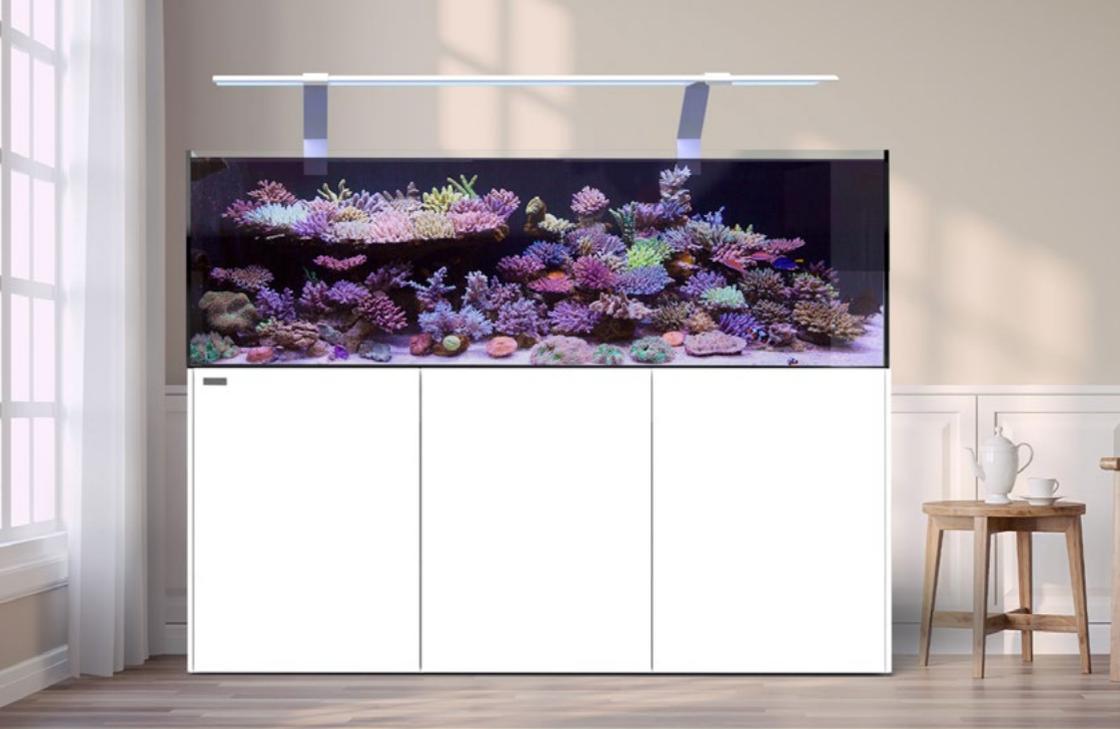


AQUAFOREST PRODUCTS GUIDE

GUIDE CONTAINS RECOMMENDED APPLICATION OF
AQUAFOREST PRODUCTS IN 4 MAIN TYPES OF SALTWATER AQUARIUMS

- 4 HOW TO SET UP A MARINE AQUARIUM
- 8 MAIN TYPES OF SALTWATER AQUARIUMS
- 12 PROBIOTIC METHOD IN COMPARISON WITH OTHER METHODS
- 13 PROBIOTIC BACTERIA PRODUCTS
- 14 SELECTION OF SALT
- 17 SUPPLEMENTATION
- 21 SUPPLEMENTS & CORAL FOODS
- 23 SUPPLEMENTS & FISH FOODS
- 26 TEST KITS
- 27 FILTRATION MEDIA & MEDIA REACTORS
- 28 MEDIA REACTOR & SUMPS
- 30 AQUASCAPING
- 34 AQUAFOREST LAB
- 38 DOSAGE OF AQUAFOREST PRODUCTS
- 42 AQUARIUM JOURNAL





HOW TO SET UP A MARINE AQUARIUM?

1

PICK A PLACE FOR YOUR AQUARIUM

Make sure to find a spot with close proximity of sockets (there'll be lots of equipment to plug in!) and no direct sunlight. **Remember, that aquarium filled with water can weight even few hundred kilograms**, so it won't be possible to move it later. Tank inhabitants need some peace too, it's best to set the tank in a quiet place.

2

DECIDE ON A SIZE!

Remember, that it's always easier to maintain stable parameters in a bigger tank and stability is the key to reefing success! On the other hand, owning a nano tank will let you check if reefing is really your thing.



3 CHOOSE THE AQUARIUM TYPE

Fish and coral cast you keep, determinate which products you should use. Reed more about our reef formulas on page: aquaforest.eu/formula

Of course, at the beginning **AF Starter Pack** will supply you with everything you need.

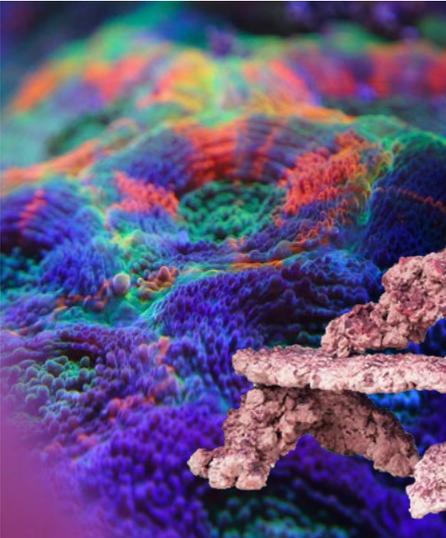


4 PICK THE RIGHT EQUIPMENT!

In order to make your aquarium system function properly, you'll need more than aquarium and cabinet. The typical aquarium set consists of:

1. **AQUARIUM, CABINET & SUMP**
2. **PLUMBING ELEMENTS** – pipes & valves to connect your display aquarium with the sump
3. **CIRCULATION PUMPS** – to provide necessary water movement
4. **RETURN PUMP** – to pump water from the sump up to the display tank
5. **HEATER** – to keep the optimal temperature
6. **LIGHT** – to make sure your fish and corals (that photosynthesize!) get enough of light
7. **FILTRATION SOCK/MEDIA REACTOR** – you need to put the filtration media somewhere! Efficient filtration system will help you avoid many latter problems.
8. **SKIMMER** – to get rid of food leftovers and other substances, that for your aquariums' healthy should be regularly removed from the water

5 CREATE SOME LIVING SPACE!



When all the necessary gear is collected, it's high time for some creative work... Make sure to use quality rock that will create a good environment for placing your corals and also for bacteria multiplication. Using **AF Rock** you can create your dream looking reef. Apply some **Stone Fix** to bond elements together. When it's solid bonded place the construction in your aquarium. Add **AF Bio Sand** (make sure to follow the usage manual) to complete your aquascape.





6 FILL YOUR AQUARIUM WITH SALTWATER

You can use **AF Perfect Water** which is a premixed salt water or prepare it yourself. If you want to do this yourself 24 Celsius degrees (75 F) RODI water and dissolve your salt of choice in it. From the wide range of Aquaforest products, for less demanding aquariums (mixed-reef with smaller amount of fish) we strongly recommend using **Reef Salt** or **AF Perfect Water** which is a ready to use ICP-tested salt mix with steady parameters. For fish-only aquariums we advise **Sea Salt**.

7 BOOST THE BIOLOGY

In your media reactor or filtration sock place some **Life Bio Fil**. It's already settled with bacteria, but we also advise boosting tank maturation with **Bio S** – a selection of nitrifying bacteria for aquarium start up.



8 TAKE CARE OF FILTRATION

We strongly advise to use **Phosphate Minus** when setting up a new aquarium – it'll absorb phosphate and silicates from water. After 14 days of tank functioning, add **Carbon** to your filter.



9 LET IT MATURE

Each tank needs time to mature, meaning that it needs to stabilize its chemistry and biology. Before that you shouldn't put any fish or corals there! Keep on daily dosing Bio S and be patient!

10 TEST IT

If water tests shows no ammonia or NO₂ presence we can add our first livestock. The most important thing to do is adding a clean up crew to the aquarium. **Firstly add snails, crabs and shrimps. You should also feed your clean up crew from time to time.**

11 KEEP THE NUTRIENTS LOW

It's important to keep NO_3 and PO_4 levels low. In order to do this we advise to use **-NP Pro & Pro Bio S combined**.

12 STOCK IT FURTHER

Maturing aquariums very often struggle with diatom blooms. It's completely normal and shouldn't worry you. After the diatoms disappear and the first corals we've put into the aquarium are fine, extending polyps – aquarium may be further stocked. **Before introducing decorative fish, start with corals.**



If all the parameters look fine, think of easy species like: caulastrea candy cane, sinularia, pseudogorgia, euphyllia, seriatopora callendrium, seriatopora hystrix, stylophora. After they acclimate, you can start feeding with coral foods and supplements (**AF Amino Mix, AF Build, AF Energy, AF Vitality**).

When few weeks pass, if everything looks fine and healthy, you can slowly introduce decorative fish (clownfish, gobioid, cardinal and tangs). In a tank with really stable parameters you can introduce anthias. After a time, you can introduce more difficult, demanding corals and fish.

Remember to test your water regularly and keep an eye on the parameters! Enjoy!

TIPS TO GET STARTED!

- before filling your aquarium with saltwater, you can check the system for water tightness by using freshwater
- in order to accelerate maturation process, you can put a cube of frozen food in the water
- as long as there are no animals in your aquarium, you can raise the main parameters without limits, if they're not in range
- if you plan to keep an SPS tank, don't put in soft corals - they're really expensive and have different requirements than SPS corals.

CLEAN UP CREW

- **SNAILS:** banded trochus snails, tiger nassarius snails
- **CRABS:** emerald crabs, hermit crabs
- **SHRIMPS:** peppermint shrimp, blood red fire shrimp
- **BEFORE INTRODUCING DECORATIVE FISH, START WITH CORALS!**





FISH ONLY FORMULA

This type of aquarium features only a variety of saltwater fish species with rock only, no corals. The unique formula provides perfect basic parameters and creates ideal environment for fish.

DOSAGE PER 100 L OF AQUARIUM WATER (27 US GAL)

WEEKLY WATER CHANGE		FILTRATION MEDIA	
SEA SALT (SALINITY 30 PPT)	345 G	LIFE BIO FIL	250 ML
OPTIONAL:		CARBON	100 ML
AF PERFECT WATER	10%	PHOSPHATE MINUS	25-100 ML
BIOLOGY SETUP		MACROELEMENTS	
BIO S	1 DROP	THERE'S NO NEED	
LIFE SOURCE	1 SPOON/WEEKLY		
SUPPLEMENTATION		TESTS	
FISH V	1 DROP	AF TEST KIT: NO₃ , PO₄	
GARLIC OIL	1 DROP		

RECOMMENDED PARAMETERS

Salinity 30-33 ppt
 NO₃ 0-15 ppm
 PO₄ 0,00-0,10 ppm

SOFT, LPS & FISH FORMULA

Basic aquariums with mixed coral stocking, mostly soft corals. No SPS corals included. The formula was designed to keep water parameters on steady levels and provide ideal nutrient balance for soft and LPS corals growth and colouration.

DOSAGE PER 100 L OF AQUARIUM WATER (27 US GAL)

<p>WEEKLY WATER CHANGE</p> <p>REEF SALT (SALINITY 33 PPT) 390 G OPTIONAL: AF PERFECT WATER 10%</p>	<p>FILTRATION MEDIA</p> <p>LIFE BIO FIL 250 ML CARBON 100 ML PHOSPHATE MINUS 25-100 ML</p>
<p>BIOLOGY SETUP</p> <p>BIO S 1 DROP PRO BIO F 1 SPOON LIFE SOURCE 1 SPOON/WEEKLY</p>	<p>MACROELEMENTS</p> <p>CA PLUS, MG PLUS, KH PLUS 10 ML</p>
<p>TRACE ELEMENTS</p> <p>COMPONENT A, B, C 5ML</p>	<p>SUPPLEMENTATION*</p> <p>FISH V 1 DROP GARLIC OIL 1 DROP RICCO FOOD 1 SPOON AF PHYTO MIX 1 SPOON AF AMINO MIX 1 DROP AF VITALITY 1 DROP</p>
<p>TESTS</p>	

AF TEST KIT: **MG, KH, CA, NO₃, PO₄**
OPTIONAL: **AQUAFORREST LAB ICP-OES**

*WE RECOMMEND TO START DOSING FOODS AND SUPPLEMENTS AT HALF OF THE RECOMMENDED DOSE (EVEN ¼) AND OBSERVING THE CORALS AND THEIR REACTIONS TO THE ADMINISTERED FOOD.

RECOMMENDED PARAMETERS

Salinity	33-35 ppt	K	360-400 ppm
Ca	380-460 ppm	NO ₃	2-10 ppm
Mg	1180-1460 ppm	PO ₄	0,01-0,08 ppm
KH	6,5-8,0 dKH		

MIXED-REEF FORMULA

This setup replicates ocean reef environment with less demanding hard corals, soft corals, invertebrates and variety of fish species. Reef-keeping formula was created basing on natural saltwater parameters in order to keep your mixed-reef inhabitants in an excellent condition.

DOSAGE PER 100 L OF AQUARIUM WATER (27 US GAL)

WEEKLY WATER CHANGE	FILTRATION MEDIA
REEF SALT (SALINITY 33 PPT) 390 G OPTIONAL: AF PERFECT WATER 10%	LIFE BIO FIL 250 ML CARBON 100 ML PHOSPHATE MINUS 25-100 ML
BIOLOGY SETUP	MACROELEMENTS
BIO S 1 DROP SHOULD BE USED TOGETHER: -NP PRO 1 DROP PRO BIO S 1 DROP LIFE SOURCE 1 SPOON/WEEKLY DEPENDS ON NO ₃ & PO ₄ LEVELS: NITRAPHOS MINUS	COMPONENT 1+2+3+ EQUAL AMOUNTS! OR: COMPONENTS PRO DOUBLE CONCENTRATED! OR: MIX YOUR OWN PAGE 14
TRACE ELEMENTS	SUPPLEMENTATION*
MICROELEMENTS ARE INCLUDED IN COMPONENT 1+ 2+ 3+	FISH V 1 DROP GARLIC OIL 1 DROP AF POWER FOOD 1 SPOON RICCO FOOD 1 SPOON AF AMINO MIX 1 DROP AF BUILD 1 DROP AF ENERGY 1 DROP AF VITALITY 1 DROP
TESTS	

AF TEST KIT: **MG, KH, CA, NO₃, PO₄**
 OPTIONAL: **AQUAFORREST LAB ICP-OES**

*WE RECOMMEND TO START DOSING FOODS AND SUPPLEMENTS AT HALF OF THE RECOMMENDED DOSE (EVEN ¼) AND OBSERVING THE CORALS AND THEIR REACTIONS TO THE ADMINISTERED FOOD.

RECOMMENDED PARAMETERS

Salinity	33-35 ppt	K	360-400 ppm
Ca	380-460 ppm	NO ₃	2-5 ppm
Mg	1180-1460 ppm	PO ₄	0,01-0,05 ppm
KH	6,5-8,0 dKH		

AF PROBIOTIC METHOD

Aquariums with the most demanding SPS corals stocking. Provides perfect environment for hard corals growth and allows keeping nitrate and phosphate at the lowest levels possible. Low nutrient levels provided by the presence of probiotic bacteria ensure perfect colouration of corals.

DOSAGE PER 100 L OF AQUARIUM WATER (27 US GAL)

WEEKLY WATER CHANGE	FILTRATION MEDIA
PROBIOTIC REEF SALT (SALINITY 33 PPT) 390 G OPTIONAL: AF PERFECT WATER 10%	LIFE BIO FIL 250 ML CARBON 100 ML PHOSPHATE MINUS 25-100 ML ZEO MIX 100 ML
BIOLOGY SETUP	MACROELEMENTS
BIO S 1 DROP SHOULD BE USED TOGETHER: -NP PRO 1 DROP PRO BIO S 1 DROP LIFE SOURCE 1 SPOON/WEEKLY DEPENDS ON NO ₃ & PO ₄ LEVELS: NITRAPHOS MINUS	COMPONENT 1+2+3+ EQUAL AMOUNTS! OR: COMPONENTS PRO DOUBLE CONCENTRATED! OR: MIX YOUR OWN PAGE 14
TRACE ELEMENTS	SUPPLEMENTATION*
MICROELEMENTS ARE INCLUDED IN COMPONENT 1+ 2+ 3+, OPTIONALLY: FLUORINE, KALIUM, IRON, IODINE, STRONTIUM, MICRO E 1 DROP* OR: AF LAB MICROELEMENTS *HIGHEST CONCENTRATION! DOSE CAREFULLY	FISH V 1 DROP GARLIC OIL 1 DROP AF POWER FOOD 1 SPOON RICCO FOOD 1 SPOON AF AMINO MIX 1 DROP AF BUILD 1 DROP AF ENERGY 1 DROP AF VITALITY 1 DROP
TESTS	

AF TEST KIT: **MG, KH, CA, NO₃, PO₄**
 OPTIONAL: **AQUAFOREST LAB ICP-OES**

*WE RECOMMEND TO START DOSING FOODS AND SUPPLEMENTS AT HALF OF THE RECOMMENDED DOSE (EVEN ¼) AND OBSERVING THE CORALS AND THEIR REACTIONS TO THE ADMINISTERED FOOD.

RECOMMENDED PARAMETERS

Salinity	33-35 ppt	K	360-400 ppm
Ca	380-460 ppm	NO ₃	0,1-0,5 ppm
Mg	1180-1460 ppm	PO ₄	0,01-0,04 ppm
KH	6.5-8,0 dKH		

BIOLOGY SETUP HINTS:

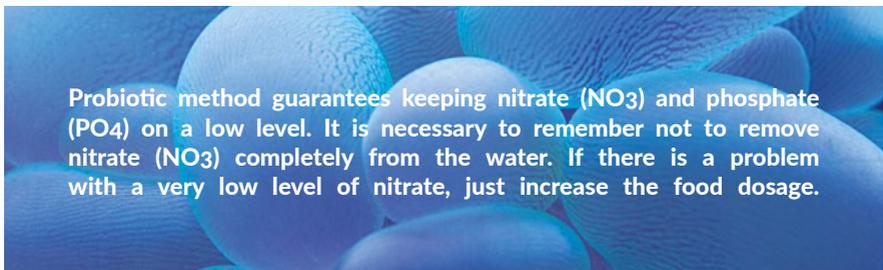
- Bio S should be used at start-up and after water changes
- Pro Bio S (bacteria) & -NP Pro (nourishment) – the set is perfect for sizeable, demanding and heavily stocked aquariums
- Pro Bio F (bacteria + nourishment) – perfect for small and medium sized aquariums

AF PROBIOTIC METHOD COMBINED WITH OTHER METHODS:

COMBINED WITH:	ACCEPTABLE	NOT RECOMMENDED
DSB: DEEP SAND BED	✓	
REFUGIUM	✓	
MM: MIRACLE MUD	✓	
VSV: VODKA, SUGAR, VINEGAR	✓	
VODKA METHOD	✓	
BIO PELLETS*		✓
OZONE, UV*		✓

*Both Bio Pellets and -NP Pro/NitraPhos Minus are nourishment for probiotic bacteria, so it's not advised to use these methods combined.

It's possible to run an aquarium with Probiotic Method and use ozone and UV light at the same time, though, it significantly lowers efficiency of probiotic bacteria. Ozone and UV light kills not only harmful bacteria, but also desired ones, that we dose for nitrate and phosphate reduction hence these methods combined are less efficient.



PROBIOTIC BACTERIA PRODUCTS

Bacteria play a crucial role in aquarium filtration. As a medium you can use ceramics, dry rock, live rock or synthetic rock. As a general rule - the more porous materials the better conditions for bacteria settlement.



Bio S

A specialized formula created for the quick and effective elimination of ammonia and nitrogen compounds from the aquarium. Bio S is recommended especially in the first days after setting up a new aquarium to start and accelerate the nitrification process. In mature aquariums, it accelerates the decomposition of food residues, as well as other organic compounds and sediments.

Dosage: 1 drop per 100 l of water every day for the first 2 weeks. In functioning aquariums, Bio S should be used after water changes.

PRO BIO S

A unique composition of specially selected probiotic bacterial strains designed to accelerate the decomposition of organic matter. Pro Bio S is especially recommended for large, demanding and heavily stocked tanks. In order to keep the probiotic bacteria in good condition, we recommend using -NP Pro as a nutrient solution.

Dosage: 1 drop per 100 l of water daily.



- It's good to dose Pro Bio S and -NP Pro at the same time of the day.
- Bio S is perfect not only for starting nitrification process in new aquariums, but also for replenishment of bacterial strains in matured aquariums. After maturing your aquarium, use it during water changes.



-NP PRO

-NP Pro is a medium for probiotic bacteria (Pro Bio S) and is designed for reef aquariums. The product contains biodegradable liquid polymers, which are an excellent source of carbon for probiotic bacteria. -NP Pro positively affects the organic mass distribution and reduces undesired NO₃ and PO₄ in aquarium water. Contrary to typical polymers, -NP Pro is the only formulation available on the market that does not require the use of specialized flow filters.

Dosage: 1 drop per 100 liters (27 US gal) everyday.

PRO BIO F

A unique composition of freeze-dried probiotic bacteria and nourishment to facilitate their multiplication. Pro Bio F is especially recommended for small aquariums in which installing a filter with polymers is not possible or it is much more difficult. It can replace the administration of VSV or other carbon sources. The use of Pro Bio F reduces the amount of nitrate to an undetectable level, providing the coral with perfectly balanced living conditions and excellent colouring.

Dosage: 1 spoon per 100 l (27 US gal) of water daily.



SELECTION OF SALT

Choosing the salt is very important and should be done according to the requirements of tank. This decision should be based on tank cast & way of managing it. In order to maintain consistent water parameters, we recommend the use of salt that has the most similar parameters to those of natural environment. We recommend that water changes are carried out every 7 days in amount of approximately 5%-10% of water volume.

Each Aquaforest salt dissolves in 15 minutes and is immediately ready to use. We recommend the use of water RO + DI (eg. Demineralization Resin)

Optimal water parameters:

Salinity:	33-35 ppt
Ca:	410-440 ppm
Mg:	1230-1320 ppm
KH:	6.5-8,0 dKH
K:	360-400 ppm



Macro & micro elements in the water have different levels depending on the salinity:

SEA SALT:

Salinity	Alk (°dKH)	Ca (ppm)	Mg (ppm)	K (ppm)
30 ppt	7.3 – 7.6	320 – 340	1140 – 1200	330 – 350
33 ppt	7.7 – 8.0	340- 360	1200 – 1260	360 – 380
35 ppt	8.3 – 8.9	380 – 400	1260 – 1300	380 – 400

REEF SALT:

Salinity	Alk (°dKH)	Ca (ppm)	Mg (ppm)	K (ppm)
30 ppt	7.0 – 7.3	370 – 380	1200 – 1260	330 – 350
33 ppt	7.3 – 7.7	410 – 430	1300 – 1360	360 – 380
35 ppt	7.7 – 8.3	440 – 460	1360 – 1420	380 – 400

PROBIOTIC REEF SALT:

Salinity	Alk (°dKH)	Ca (ppm)	Mg (ppm)	K (ppm)
30 ppt	7.0 - 7.3	370 - 380	1200 - 1260	330 – 350
33 ppt	7.3 – 7.7	410 – 430	1300 – 1360	360 – 380
35 ppt	7.7 – 8.3	440 – 460	1360 – 1420	380 – 400



ABOUT ICP-OES CERTIFIED QUALITY SALTS

Aquaforest products are manufactured in the EU under strict laboratory supervision to meet the highest quality standards. Each product is prepared from carefully selected raw components in quantities proven to yield consistent composition.

● HOW IS OUR MARINE SALT PRODUCT RANGE TESTED?

We mix our Marine Salt in 1 metric tonne (2204 lb) batches and 3 separate samples per batch are collected during the production stage for testing. Each of these samples is dissolved in 15 litres (4 US gal) of RO water. Our experienced team of professionals performs ICP-OES analysis to verify that the chemical composition is within consistent range and to rule out the presence of unwanted contaminants at the same time. Note: Even though our salt is thoroughly mixed, not every bucket/bag will be identical. The parameters may vary slightly between containers and around a 2-3% variation is acceptable. This fluctuation is a result of both physical properties of the mix and the limitations of the processing techniques available. These variations are still smaller than the typical margin for error for popular hobbyist test kits.

● HOW TO IDENTIFY THE BATCH NUMBER OF MY AQUAFOREST SALT?

Labels displaying Batch numbers are present in 2 locations:

1. On the outside of the bucket or cardboard box
2. Inside the packaging (e.g. on the inside of the bucket lid or cardboard box)

● WHERE CAN I FIND THE PARAMETERS OF MY AQUAFOREST SALT?

You can check the ICP-OES report from your batch here: www.aquaforest.eu/icp-oes-results.

● SOMETIMES MY HOME TESTS SHOW DIFFERENT PARAMETERS TO THOSE STATED ON THE LABEL. WHY?

There are no hobbyist test kits available on the market that are able to measure small discrepancies with 100% accuracy. Variations of parameters are typically still smaller than the acceptable error of the test kits available and therefore there is little chance of a negative impact on aquarium life.

● HOW TO PREPARE SALT FOR TESTING?

We recommend preparing at least 15 litres (4 US gal) of saltwater. Mix your RO water with 585 g (20.63 oz) of salt and perform the test at least 2 hours after fully dissolved. Always check the salinity in which the test was made, as this will influence the measured parameters. A salinity refractometer is recommended, together with a calibration fluid. *Note that salinity readings also depend on the temperature. Please check your salinity at 20°C (68°F). If you detect a small difference in parameters between your tank and the salt, the impact is also minor. For example if you make the typical recommended 10% water change, the change in parameters of your tank will only be 10% of the difference. If the Calcium level in your aquarium is 430 ppm and the water change water is 450 ppm, the difference is 20 ppm. But as you are actually only changing 10% of aquarium volume, 10% of that 20 ppm is only 2 ppm. Changing water this way, with that discrepancy, would only result in a difference of 2 ppm of Calcium. That's 0.5%.

E.g. Tank Ca = 430 ppm. New salt water Ca=450 ppm. The difference: 450-430=20 ppm. Estimated impact: 10% *20 =2. Tank Ca after change will be 432 ppm



AQUAFOREST.EU/ICP-OES-RESULTS



SEA SALT

Fully synthetic marine salt created for fish tanks, less demanding corals and invertebrates. Phosphate and nitrate free. Upon filling new marine tanks it is recommended not to let animals in for 10 – 14 days. For salinity of 30 ppt dissolve about 345 g (12.16 oz)/10 l (2.7 US gal) of water.



REEF SALT

Designed for aquariums with more demanding SPS and LPS corals. This salt can be used with ozone-assisted filtration. Also, it does not contain any probiotic bacteria or growth media. Phosphate and nitrate free. Upon filling new marine tanks it is recommended to let animals in not earlier than after 10-14 days. For salinity of 33 ppt dissolve about 390 g (13.75 oz)/10 l (2.7 US gal) of water.



- Warming up the water will help the salt to dissolve.
- It's a good idea to roll the bucket with all salts after shipping they can settle by grain size.
- Once dissolved Reef Salt and Sea salt should be used the salt within 5 days. Due to bacteria presence, Probiotic Reef Salt should be used within 24 hours.



PROBIOTIC REEF SALT



Fully synthetic marine salt created for coral culture, especially SPS. Composition is destined to create the best conditions for marine animals. The micronutrients and macronutrients contained fully satisfy the amount of elements required for proper growth and colorization of corals. Addition of Reef Probiotic Inside the formula guarantees good influence on reduction of nitrates, phosphates, and also inhibits pathogenic bacteria in marine aquarium. Freshly prepared marine water, after dissolution of salt, can be used immediately for water exchange. When setting up new aquariums, the first animals are recommended to be placed no sooner than 10-14 days from filling the aquarium. For salinity of 33 ppt dissolve about 390 g (13.75 oz)/10 l (2.7 US gal) of water.



SUPPLEMENTATION

Aquaforest recommends to change 5-10% of the water weekly. It is always a good practice to perform tests (Ca, KH, Mg, K) during this process and supplement calcium, KH or magnesium when a drop is observed. In the initial phase of the marine aquarium development the microelements contained in the Components Strong are not required. You should consider Micronutrient supplementation when the aquarium is fully inhabited with corals.

To make micronutrient selection easier- Aquaforest created Component 1+ 2+ 3+. These ready mixed macro and micronutrient solutions fully meet the corals requirements, guarantee healthy growth and beautiful coloration. The dosage of Component 1+ 2+ 3+ formulas depends on macro and micronutrient levels of consumption by corals, as well as on water parameters. The microelements that are included in Components Strong may also be dosed separately (Iron, Fluorine, Kalium, Micro E, Strontium, Iodum), but we only recommend this approach to experienced aquarists. For tanks with Calcium reactor Components A, B, C are more suitable.

SUPPLEMENTATION HINTS:



- Always dose each of the Components 1+, 2+, 3+ equally!
- When water parameters aren't in recommended range use of one of our additives (Ca Plus, Mg Plus, KH Plus) to reach desired level.

COMPONENT 1+, 2+, 3+

Component 1+2+3+ is based on the Balling Method. This method is used to maintain Ca, Mg, Alk and Trace Elements. The biggest difference between 2 part dosing and 3 part/Balling is that Balling uses NaCl free salt (AF Reef Mineral Salt). This salt keeps the ionic balance in your tank water, which is how you can find it in natural seawater.

So why must we dose this components in equal amounts?

Component 1+ contains Calcium Chloride + Sr, Ba, Co, Mn, Cu, Fe, Zn, Ni, Cr
Component 2+ contains Sodium Bicarbonate + F, I
Component 3+ contains Magnesium chloride and NaCl free salt + K, B

The Calcium from Component 1+ binds with the Carbonate from Component 2+ creating Calcium Carbonate which is what corals are made of/need to grow. Then we have Sodium and Chloride making Sodium Chloride and the more we are dosing, the more Sodium Chloride we have in our water. This is when the NaCl free salt from Component 3+ comes into play, binding with it and maintaining the ionic balance. When the dosing is not being done in same amounts then ions are not binding properly with each other and true Balling Method is not in place.

So how do we start dosing Component 1+2+3+?

First STOP ALL dosing of Calcium, Magnesium and Alkalinity.

First thing you need to do is determining your daily consumption of calcium, magnesium & alkalinity. The easiest way to do this is stopping dosing all the main elements (Ca, KH, Mg) — that includes also no water changes. Test your water for the crucial parameters and then test it again after 24 hours. The difference between first and second result will indicate the consumption. Based on that, you can define the dose of Component 1+ 2+ 3+. If your aquarium is heavily stocked and the consumption of the elements is high, please remember, that stopping the dosage will lead to a sudden parameters change. Keep that in mind when determining the doses.

What is the best time to dose Components 1+ 2+ 3+? Split it into as many doses as it is possible during 24 hours. Some aquarists, owning auto monitoring KH tools found that corals consume more KH while they are lit. From our experience, small doses during 24 hours period work best.

During preparing Component 1+, after a day or so I often get a brown residue on the bottom of the container. Is it ok? Brown residue is the excess of iron, there's no need to remove it from the container.

What's the difference between KH Buffer and KH Plus?

KH Buffer is powdered while KH Plus is ready to use fluid.

Can I dilute your Calcium, KH Buffer and Magnesium with less water in order to make stronger solution? If yes, what is the limit? The reason is my tank doesn't evaporate much, and if I use your recommended dosage, I will add much water to my tank. Yes, it's possible to make stronger solutions of Calcium and Magnesium. In order to keep it safe, we recommend preparing doses maximum 2 or 3 times stronger. Solution of higher concentration may clog the pump. KH Buffer is a saturated solution, therefore you can't get higher concentration.

Should I dose Component 1+ 2+ 3+ while using calcium reactor? No, if you run a calcium reactor, it means you have a different source of macronutrients. If you use Component 1+ 2+ 3+ simultaneously, you'll simply double the dose. Component A, B, C are perfect as a microelements source for calcium reactors. Dosage depends and should be established on calcium consumption.



MIX YOUR OWN COMPONENT 1+2+3+!

USING COMPONENTS STRONG

COMPONENT 1+ RECIPE

1 l	RODI WATER
50 g	CALCIUM
5 ml	STRONG A
5 ml	STRONG B

100 ML RAISES THE CALCIUM LEVEL
IN 100 L OF WATER BY 17.5 PPM

COMPONENT 2+ RECIPE

1 l	RODI WATER
80 g	KH BUFFER
5 ml	STRONG C

100 ML RAISES KH LEVEL IN 100 L
OF WATER BY 2,6 dKH

COMPONENT 3+ RECIPE

1 l	RODI WATER
10 g	MAGNESIUM
25 g	REEF MINERAL SALT
5 ml	STRONG K

100 ML IN 100 L OF WATER RAISES
MAGNESIUM LEVEL BY 1,2 PPM

COMPONENTS STRONG

We recommend to use Components strong with Aquaforest Calcium, Magnesium, KH Buffer & Reef Mineral Salt.

STRONG A

Contains concentrated strontium and barium. Strontium supports hard corals in development of skeletal tissue and significantly improves calcium absorption and growth of soft corals. The strontium level in reef aquarium should be around 5 to 15 ppm. **5 ml of Strong A should be added to 1 l of Calcium solution.**

STRONG B

Contains concentrated heavy metals which are necessary for correct biological processes of the aquarium inhabitants. Supplements water with elements naturally existing in seawater. **5 ml of Strong B should be added to 1 l of Calcium solution.**

STRONG C

Contains concentrated iodine and fluorine. Iodine intensifies dark blue and purple colouration of hard corals and its proper level in sea water supports shrimp molting. Fluorine takes part in calcification process and supports development of the skeletal tissue. Recommended levels of both elements in the reef aquarium are: iodine approx. 0.06 ppm and fluorine approx. 13 ppm. **5 ml of Strong C should be added to 1 l of KH Buffer solution.**

STRONG K

Contains concentrated potassium. Potassium plays an important role in metabolic processes of corals, takes part in transportation of nutrients and boosts red and pink colouration of SPS corals. Recommended potassium level in reef aquarium is 360-380 mg/l (ppm). **5 ml of Strong K should be added to 1 l of Reef Mineral Salt + Magnesium.**





CALCIUM

Essential for proper coral development. Easy to dose.
Calcium and Magnesium can be combined into one solution. Dissolves fast.

Dosage

Dissolve 50 g of Calcium in 1000 ml RODI water. 100 ml of Calcium solution raises the calcium level in 100 l of water by 17.5 mg/l (ppm). 10 g of Calcium in 100 l of water raises the calcium level by about 35 mg/l (ppm).

Recommended level: 380-460 ppm

MAGNESIUM

Essential for proper coral development. Easy to dose.
Calcium and Magnesium can be combined into one solution. Dissolves fast.

Dosage

Dissolve 10 g in 1000 ml RODI water. 100 ml of Magnesium solution in 100 l of water raises Magnesium level by 1,2 mg/l (ppm). 10 g of Magnesium in 100 l of water raises the magnesium level by 12 mg/l (ppm).

Recommended level: 1180-1460 ppm



KH BUFFER

Maintains constant carbonate hardness level. Easy to dose. Stabilizes parameters
Crucial for corals health.

Dosage

Dissolve 80 g of KH Buffer in 1000 ml RODI water. 20 ml of KH Buffer solution raises KH level in 100 l of water by 0,5° dKH. 10 g of KH Buffer in 100 l of water raises KH level by about 3,3° dKH (Alk. 1,18 meq/l).

Recommended level: 6.5°-8.0°dKH.

REEF MINERAL SALT

Maintains ionic balance. Prevents mineral deficiencies. Crucial during calcium chloride and sodium bicarbonate dosage.

Dosage

Dissolve 25 g in 1000 ml RODI water. Solution of Reef Mineral Salt should be dosed at the same amount as Calcium and KH Buffer.

Good to know

Water changes are still necessary during Reef Mineral Salt supplementation.



- Component A, B, C may be administered in aquariums run on Balling method with the dosage of 20 ml/1 l Balling solution.
- Though trace elements supplementation is important to get astonishing colouring of corals, overdosing may be dangerous to the tank. That's why we prepared products of different concentrations, so that your reef is always safe with us: (lowest concentration) Component A, B, C < Components Strong < Fluorine, Iodine, Strontium, Micro E (highest concentration)



CA PLUS

Ca Plus was created for maintaining shortages and sudden drops of calcium levels. Due to its very assimilable form it ensures easy raising of calcium levels in the aquarium. The effectiveness of Ca Plus supplementation depends on the proper KH level, therefore it is recommended to use products that raise carbonate hardness (KH Plus or KH Buffer).

Dosage: 10 ml of Ca Plus raises the calcium level by 15 mg/l (ppm) in 100 l (27 US gal) of water. Maximum daily dose is 20 ml of Ca Plus per 100 l (27 US gal) of water. Recommended calcium level in reef aquarium is 380-460 mg/l (ppm).

Mg PLUS

Mg Plus is created for managing shortages and sudden drops of magnesium levels. Magnesium is necessary for healthy and balanced growth of corals. The appropriate level of magnesium in the tank water provides corals better absorption of calcium. A reduced level of magnesium may cause an inability to maintain proper calcium levels and a lowered pH.

Dosage: 10 ml of Mg Plus solution raises magnesium level by 7.5 mg/l (ppm) in 100 l (27 US gal) of water. We do not recommend raising magnesium levels by more than 100 ppm a day. The recommended magnesium level in reef aquariums is 1180-1460 mg/l (ppm).



KH PLUS

KH Plus was created for maintaining sudden carbonate hardness drops and restoring the ionic balance in the aquarium. The proper value of carbonate ions is necessary for healthy coral growth and for building skeletons. Due to the presence of carbonate ions, maintaining stable pH level is possible.

Dosage: 10 ml of KH Plus solution raises carbonate hardness by 0.25°dKH in 100 l (27 US gal) of water. Maximum daily dose is 20 ml for 100 l (27 US gal) of water. Do not raise dKH more than 1.0° dKH per 24 hours. Carbonate hardness in a reef aquarium should be about 6.5°-8.0°dKH.



Improve colour of your corals using following concentrated microelements:



COMPONENT A

The unique formula was created based on the same strontium and barium ratio as natural seawater. **Dosage:** in mixed reef aquariums 5 ml per 100 l of water once a week. The dose can also be adjusted to the calcium consumption - 1 ml for every 20 ppm/100 l of water. In aquariums run with Balling method - 20 ml/l | Calcium solution. When using Components A, B, C a 5-minute time interval should be kept between each dose.

COMPONENT B

Component B is designed for complementing minor deficiencies of heavy metals in a marine aquarium. Contains: cobalt, copper, chrome, manganese, vanadium, zinc, nickel, iron. **Dosage:** in mixed reef aquariums 5 ml per 100 l of water once a week. The dose can also be adjusted to the calcium consumption - 1 ml for every 20 ppm/100 l of water. In aquariums run with Balling method - 20 ml/l | Calcium solution. When using Components A, B, C a 5-minute time interval should be kept between each dose.

COMPONENT C

Component C is designed for complementing minor deficiencies of iodine and fluorine in a marine aquarium. **Dosage:** in mixed-reef aquariums 5 ml per 100 l of water once a week. The dose can also be adjusted to the calcium consumption - 1 ml for every 20 ppm/100 l of water. In aquariums run with Balling method - 20 ml/l | KH Buffer solution. When using Components A, B, C a 5-minute time interval should be kept between each dose.

SUPPLEMENTS & CORAL FOODS

Corals are affected not only by parameters of the water, but also by the nutrients provided to them in various supplements. Those contained in food, increase their vitality, accelerate growth and improve colours. In the system with an efficient protein skimmer there is always a big drop in the level of vitamins and amino acids necessary for proper corals development. For this reason, we recommend regular use of supplements to keep appropriate levels in the aquarium.

- Note that corals need time to adjust to the environment and new supplements, so it's important to observe the aquarium and introduce changes slowly.
- Start dosing foods and supplements from half of the dose (even $\frac{1}{4}$), that's how you avoid overdosing.
- SPS and LPS corals should be fed after the light is out.
- Zoanthus, Ricordea and other mushroom corals should be fed during the day.
- During the feeding we recommend switching off the skimmer for about an hour.



AF BUILD



Perfect for hard corals. Fast growth & healthy development. Boosts skeleton building process. Reduces growth of undesired algae.

Dosage

1 drop per 100 l (27 US gal) of water every other day after lights out.

Good to know

AF Build should be used during intensive coral feeding, especially when using AF Energy. Once opened store in the fridge, if the temperature exceeds 24°C.

AF ENERGY



Highly concentrated & easy to dose. Contains Omega-3 and Omega-6 acids. Boosts pastel coloration. Safe copper sulfate content.

Dosage

1 drop per 100 l (27 US gal) of water every other day after lights out.

Good to know

Switching off the skimmer for an hour during feeding is a good practice. Due to the natural composition of the product, its color may vary. Once opened store in the fridge, if the temperature exceeds 24°C.

AF PHYTO MIX



Ideal for gorgonias and soft & non-phosphorylated corals. Perfectly balanced mix of phytoplankton & zooplankton. Ensures intense growth & vivid colors. Highly absorbable and protein rich.

Dosage

10 drops per 100 liters (27 US gal) of water every other day after lights out.

Good to know

The use of ozonators, active carbon cartridges and strong skimmers can lead to sterilization of water and, as a result, to vitamin deficiencies. Once opened store in the fridge, if the temperature exceeds 24°C.

AF VITALITY



Highly concentrated vitamin mix. Efficient & easy to dose. Completes deficiencies. Provides all the necessary vitamins. Boosts coloration.

Dosage

1 drop per 100 liters (27 US gal) of water every other day after lights out.

Good to know

The use of ozonators, active carbon cartridges and strong skimmers can lead to sterilization of water and, as a result, to vitamin deficiencies. Once opened store in the fridge, if the temperature exceeds 24°C.

AF AMINO MIX



Contains all the necessary amino acids. Boosts colors. Improves the quality of photosynthesis. Supports growth. Improves immunity.

Dosage

1 drop per 100 l (27 US gal) of water every other day after lights out.

Good to know

AF Amino Mix completes water with all the necessary amino acids, thus prevents corals from bleaching and boosts their colors. Once opened store in the fridge, if the temperature exceeds 24°C.

AF LIFE SOURCE



AF Life Source is a 100% natural deposit derived from the cleanest waters of the Pacific. It is perfect as a buffer to enhance microbiology in saltwater aquariums. Biological stabilization is crucial for corals. Usage of AF Life Source provides corals access to components and minerals derived from the natural environment. The product is also an excellent complement of an algae refugium and DSB. We recommend dosage at least once a week, adding 10 ml/100 l (27 US gal) of water. To ensure that corals permanent access to the minerals dose in a high flow water, it contains valuable minerals and nutrients are permanently released into the aquarium.

AF POWER FOOD

Perfect for SPS corals. Ensures perfect coloration & quick growth. Highly nutritious. Shellfish additives for healthy growth.

Dosage

1 measuring spoon per 100 l (27 US gal) of water.

Good to know

In order to facilitate the food absorption, SPS and LPS corals should be fed after the light is out. You can feed selected corals with a pipette or dose the suspension directly into the tank.



AF PURE FOOD

100% natural food. Calcium carbonate content eases calcification. Derived from corals natural habitat. Stabilizes pH level.

Dosage

1 measuring spoon per 100 l (27 US gal) of water.

Good to know

Use at least once a week.



EXAMPLE OF WEEKLY DOSING SCHEDULE

Monday	AF AMINO MIX, AF VITALITY
Tuesday	AF ENERGY, AF BUILD, AF POWER FOOD
Wednesday	AF AMINO MIX, AF VITALITY, RICCO FOOD
Thursday	AF ENERGY, AF BUILD, AF GROWTH BOOST
Friday	AF AMINO MIX, AF VITALITY, AF PURE FOOD
Saturday	AF ENERGY, AF BUILD, AF LPS FOOD
Sunday	BREAK

AF GROWTH BOOST

Perfect for all corals. Improves polyp extension. Enhances metabolism. Accelerates calcification process.

Dosage

1 measuring spoon per 100 l (27 US gal) of water.

Good to know

It's important to adjust the doses to your coral cast and individual tank needs.



RICCO FOOD

Natural plant mixture. Efficient and easy to prepare. Unique vitamin blend. Improves coloration and speeds up growth. Meets all the needs of Zoanthuses and mushroom corals.

Dosage

1 measuring spoon per 100 l (27 US gal) of water.

Good to know

Corals such as Zoanthus, Ricordea and other mushroom corals should be fed during the day.



AF LPS FOOD

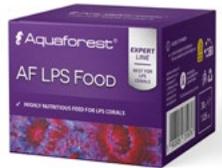
Dedicated to LPS corals. Specially selected nutritional blend. Guarantees healthy growth. Rich in protein and fatty acids.

Dosage

1 measuring spoon per 100 l (27 US gal) of water.

Good to know

The product does not cause water turbidity.



Use one of our supplements to keep your fish in excellent condition:



FISH V

Unique set of most important vitamins. Boosts fish immune system. Supports tissue regeneration. Perfect with frozen foods.

Dosage

1 drop per cube of frozen food or directly into water 1 drop per 100 liters (27 US gal) of water.

Good to know

Fish V contains vitamins A, B1, B2, B6, B12, C, D3, E, K3 and biotin, alanine, choline, cysteine, glutamine, leucine, lysine, serine and tyrosine.



GARLIC OIL

Efficient garlic extract. Vitamins & Omega-3 composition. Effective against viruses & parasites. Recommended during treatment and quarantine.

Dosage: 1 drop per portion of food. 2-3 times a week.

FOOD FOR FISH

Product group designed for demanding aquarists who value the health and beauty of fish. Our perfectly balanced food is available in the form of sinking granules, clips and liquid. Different sizes of pellets make it easy to adjust the feed to the size of the fish you have. Regular use of our food keeps the fauna of your tank in perfect condition. A diet full of Omega-3 acids, algae & crustaceans.



AF ALGAE FEED

Excellent pellet feed dedicated for ornamental herbivorous fish, especially tangs. It ensures proper growth and immunity. AF Algae Feed is a selection of 7 algae varieties. In addition, it has been enriched with phytoplankton, minerals and vitamins to create a complete balanced diet for all types of fish.

AF CALANIDAE CLIP

Highly nutritious feed for all ornamental small fish. Contains Calanus finmarchicus, which is rich in amino acids. Thanks to the high levels of EPA, DHA, SDA and algae fatty acids, it is an excellent supplement for all marine fish. The feed is placed on a clip that can be hung in any part of the aquarium giving the fish the freedom to swim and eat freely. AF Calanidae Clip is the perfect solution for fish that must get used to dry feed e.g. Synchiropus splendidus (Mandarinfish), Chelmon rostratus (Copperband butterflyfish).



AF VEGE CLIP

Nutritional feed intended for herbivorous ornamental fish. In order to provide healthy growth and immunity, AF Vege Clip is made of 7 algae varieties and enriched with phytoplankton, minerals and vitamins to create a completely balanced diet for all types of fish. The feed is placed on the clip so that it can be hung in any part of the aquarium giving the fish the freedom to swim and eat freely.



AF MARINE MIX S/M

Granulated feed recommended for carnivorous ornamental fish, especially Amphiprion (Clownfish/Anemonefish). High protein content of AF Marine Mix provides fish with all the necessary nutrients guaranteeing proper growth and excellent condition. With AF Marine Mix S and L you can also successfully feed your corals.



ANTHIAS PRO FEED

Feed for ornamental fish dedicated especially for Anthias and other carnivorous fish. Mysis Relicta and Calanus are considered as one of the most complete nutrients for all fish, due to its high content of Omega-3, EPA, DHA and amino acids, it promotes proper growth and supports immune system. With AF Anthias Pro Feed you can also successfully feed your corals.

AF COLOR UP

Pellet feed for large ornamental fish. Thanks to the high content of vitamins, proteins and carotenoids, it significantly improves fish coloration.



AF PROTEIN POWER

Feed designed for young ornamental fish. Stimulates fish growth and strengthens their immunity. In addition, thanks to spirulina content, it intensifies colouration. Rich in proteins, it will provide young fish with a wonderful form, high resistance to infection and the proper development of internal organs.



AF TINY FISH FEED

Perfectly balanced feed for small ornamental fish. Rich in protein and fats meets all the nutritional needs of fish providing proper growth and coloration. AF Tiny Fish feed is very well absorbed by fish and other aquarium animals.



AF VEGE STRENGTH

Easily digestible plant feed for large herbivorous ornamental fish. The high fiber content regulates the digestive tract, protecting the intestines of herbivores fish against inflammation. AF Vege Strength, thanks to the content of spirulina, will enhance the coloration of fish.



AF PLANKTON ELIXIR

Liquid feed for ornamental fish, corals and invertebrates. Due to the high content of saturated Omega-3, EPA, DHA and SDA fatty acids, astaxanthin and carotenoids, it has a great impact on the correct growth of fish and invertebrates, giving them beautiful coloration. It strengthens resistance to stress, disease, facilitates proper molt of shrimp and other invertebrates.



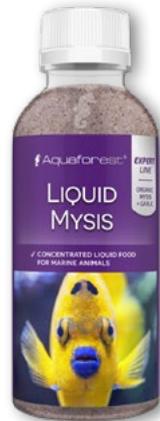


LIQUID ARTEMIA

Concentrated liquid food. It works perfectly as a basic food especially for young fish and other marine organisms. Does not contain harmful preservatives. Transparent and simple composition provides aquarium inhabitants with a diet almost identical to the natural one. It boosts coloration, positively affects the sustainable development of fish. Contrary to the frozen foods available on the market, it's ready to use immediately after opening. The highest quality ingredients from strictly controlled, organic farming guarantee a high content of perfectly assimilate vitamins and minerals. **Usage:** feed in small portions once a day.

LIQUID MYSIS

Perfect food for fish and other marine organisms. It's also perfect as a diet supplement for LPS corals. The unique formula has been enriched with garlic extract, which beneficial effects on marine organisms are known to aquarists all over the world. Positively affects the healthy growth of aquarium inhabitants, boosts coloration and supports tissue development. The highest quality components from controlled, ecological breeding farms guarantee the content of easily absorbable vitamins and minerals. AF Liquid Mysis was designed to provide aquarium inhabitants diet identical to the natural one. **Usage:** feed in small portions once a day.



AF LIQUID ROTIFERS

Concentrated liquid food. It works perfectly as a basic food especially for young marine organisms. Does not contain harmful preservatives. Transparent and simple composition provides aquarium inhabitants with a diet almost identical to the natural one. It boosts coloration, positively affects the sustainable development of fish. Contrary to the frozen foods available on the market, it's ready to use immediately after opening. The highest quality ingredients from strictly controlled, organic farming guarantee a high content of perfectly assimilate vitamins and minerals. **Usage:** feed in small portions once a day.



LIQUID VEGE

Vegetable food made from natural ingredients of the highest quality. This special composition based on spinach and derived from the cleanest waters nori algae was created based on many years of aquarist experience. Spinach is an excellent source of beta-carotene, it contains easily absorbable vitamins K, C, B1, B2, PP, B6, E and folic acid. The rich formula and nori algae additive perfectly complement the diet with minerals such as calcium, magnesium, phosphorus, iron, potassium and iodine. Unlike the other plant foods available on the market, it does not require defrosting. **Usage:** feed in small portions once a day.



The highest accuracy test kits play an important role in daily control of marine aquarium parameters. Chemists developed Aquaforest drop tests, that are easy to use, efficient and can be done at home. Readings provided by these tests can be a perfect indicator for micro and macroelements supplementation and establishing correct water parameters in your aquarium. Remember, that stable water chemistry is the key to your corals well-being and growth.

RECOMMENDED PARAMETERS

Alkalinity:	6,5 – 8,0 dKH	Nitrate:	2 – 5 ppm
Calcium:	380 – 400 ppm	Phosphate:	0 – 0,02 ppm
Magnesium:	1180 – 1460 ppm		

TEST KIT: ALKALINITY

Aquaforest TestPro KH is designed to quickly measure carbonate hardness in the marine aquariums. In order to ensure the proper functioning of the marine aquarium, alkalinity should vary between 6.5-8.0 dKH for Ultra Low Nutrient Systems (ULNS). Higher values are permissible for aquariums with higher nutrients. The set contains enough reagents to perform 78-100 determinations of carbonate hardness.



TEST KIT: CALCIUM

Aquaforest Test kit Calcium is designed to quickly measure the calcium content in the marine aquarium, freshwater aquarium, Ponds or water reservoirs. In order to ensure the proper functioning of the marine aquarium calcium levels should be maintained in the range 380-460 mg / l (ppm). The test kit contains sufficient reagents for 55-60 calcium tests determinations of the required concentration of calcium.



TEST KIT: MAGNESIUM

Test Aquaforest Mg is designed to quickly measure the magnesium content in the marine aquarium. In order to ensure the proper functioning of the marine aquarium magnesium concentrations should be maintained within the limits of 1180-1460 mg/l (ppm). The test kit contains sufficient reagents for 55-60 magnesium tests determinations of the required concentration of magnesium.



TEST KIT: NITRATE

Aquaforest TestPro NO₃ is designed for quick measurement of nitrate ions in marine aquariums. Nitrate in water is the end result of biological filtration. High concentrations of nitrate cause the growth of undesirable algae. Nitrate levels in reef aquariums should be 2-5 mg/l (ppm). This test kit contains sufficient reagents to perform 40 tests of nitrate concentration.



TEST KIT: PHOSPHATE

Aquaforest TestPro PO₄ is designed for quick measurement of phosphate ions in marine aquariums. Phosphate is a breeding ground for the growth of undesired algae, so it is very important to constantly monitor its concentration in marine tanks. In addition, high concentration of phosphate may be harmful to corals. Phosphate levels in the marine aquarium should not exceed 0.02 mg/l (ppm). The Test Kit contains sufficient reagents to perform 40 tests of phosphate concentration.



FILTRATION MEDIA

The next important element of the filtration system when using the probiotic method is the application of efficient protein skimming. When set to 'dry' skimming it helps to keep nitrate and phosphate at a low level and reduce the excess of multiplied bacteria. We also recommend using a phosphate reactor with suitable adsorber. It should not act as a main filtration system in this method and must be disconnected once phosphate get desired levels. Please also note that refills based on alumina must not be used.



CARBON

High quality activated granular carbon. Activated by steam it doesn't contain any phosphate. **Dosage:** 100 ml per 100 l of aquarium water. Rinse with RODI water before use. The recommended water flow is 500 l/h.

PHOSPHATE MINUS

Efficient medium for fluidization filters. Its adsorbing capabilities allow bonding large amounts of phosphate without negative influence on the aquarium inhabitants. Do not rinse before use, brown dust is an active phosphate remover and is completely harmless for the aquatic life. Brown colouration of water will disappear after a short time. Rinsing the product in a RODI water will lower its efficiency. **Dosage:** 25-100 ml per 100 l (27 US gal) of water.



ZEO MIX

Specially selected blend of zeolites particularly recommended in tanks with plentiful livestock and/or ULNS tanks. **Dosage:** 100 ml per 100 l of water in the aquarium. Rinse with RODI water before use. It can be used in a media reactor as well as in a filter mesh bag or sock. Zeolites do not require shaking – they can be placed in a fluidised filter. The recommended flow through the bed is 300-500 l/h. Zeo Mix should be replaced every 6 weeks. Zeo Mix does not lower the potassium level in the water. Because of very high adsorption capabilities of zeolites, Zeo Mix should only be used in reef tank by experienced aquarists.

LIFE BIO FIL

Life Bio Fil is a natural biological filtration media. Due to carefully selected bacterial strains it initiates and supports the nitrification process which accelerates maturation. Life Bio Fil is a perfect filtration media for newly established tanks. Life Bio Fil will also increase efficiency of filtration in older and already functioning tanks. Due to the content of bacteria it starts the nitrification process almost immediately – there's no need to wait for the settlement of the medium. Life Bio Fil should be placed in the sump with good water flow. 1000 ml of medium should be used in an aquarium with a capacity of 400 l. We recommend replacing 10 -20 % of Life Bio Fil every 6 weeks.



- Filtration media are the most effective while using media reactors.
- There's no need to shake Zeo Mix.



MEDIA REACTORS

The highest quality universal fluidization filter designed for use with various filtration media. Works with activated carbon, phosphate adsorbents and zeolites. The unique design and the highest water tightness allows the reactor to be located both in the sump chamber and outside the aquarium. Due to this, it also works well when there is no space in the sump for setting the filter. Due to the use of the best materials, it is resistant to discoloration. Ergonomic design and smart-twist system ensure comfort of use and guarantee easy and efficient media replacement. Internal sponges prevent the filter medium from entering the water.



EASY-CHANGE SYSTEM

- Twist to open cover allows easy media replacement
- Simply hose adjustment to save sump space
- Comfortable in long-term use
- Simple & accessible cleaning



DETAILED FILTER SPONGES

- 4 sponges included
- 3 densities for ideal adjustment
- Prevent media from entering the water
- Adjustable sieve heights
- Easily accessible for cleaning
- Fast sponge removal



i AF90 DIMENSIONS

- Capacity: 1300 ml (44 fl. oz.)
- Height: 31 cm (12.2")
- Base diameter: 13 cm (5.1")
- Acrylic tube diameter: 90 mm (3.5")
- Connectors diameter: 16 mm (5/8")

i AF110 DIMENSIONS

- Capacity: 2800 ml (95 fl. oz.)
- Height: 38 cm (15")
- Base diameter: 14.5 cm (5.7")
- Acrylic tube diameter: 110 mm (4.3")
- Connectors diameter: 20 mm (0.8")



AQUAFREST SUMPS

Highly durable PVC sump dedicated even for the most demanding aquariums. These designed by experienced aquarists sump ensures the most efficient filtration to make corals thrive and grow healthy. Cascading chambers combined with quality combs provide perfect conditions for dynamic, but still ultra silent water-flow. Filtration socks chamber allows placing two socks (included in set) with noise suppressing caps or replacing them with media reactors. Aquaforest sump is an outcome of experience and best designers & engineers close cooperation with top aquarists. This smartly designed system of dividers and baffles was thoroughly tested for years in order to ensure that it delivers the highest filtration potential. Having in mind that efficient filtration system is the key to a reefing success, each detail was carefully considered and thoughtfully designed. We strive to deliver the highest quality on every stage of reefing, so we made sure, that our complex of combs and chambers provides optimal noise cancellation by fading out unwanted sounds. Precise welding of elements guarantees the highest tightness. The most reliable combination of aquarist experience, advanced technology and the finest workmanship available in the market!



**NIE CZYŚCIĆ
ALKOHOLEM**

**DO NOT CLEAN
WITH ALCOHOL**

**NICHT MIT ALKOHOHOL
REINIGEN**

**PRZED UŻYCIEM
WYPŁUKAĆ
W CZYSTEJ WODZIE**

**BEFORE USE RINSE
IN A CLEAN WATER**

**VOR GEBRAUCH MIT
SAUBEREM WASSER
SPÜLLEN**



TO MAKE THE PERFECT AQUASCAPE

Our aquascaping products will help you design beautiful underwater landscapes resembling natural coral reefs. Aquaforest aquascaping range is made of friendly components that create a beneficial environment and a perfect habitat for a number of marine organisms.



AF Rock

Created from fully natural ingredients, the highest quality rock designed for marine aquariums. High aesthetics and hand-made manufacturing process, make AF Rock resemble natural rock from coral reefs. Due to the high porosity, it facilitates bacteria settlement and works perfectly as a filtration media. Unlike the rocks commonly found on the market, AF Rock was intended for efficient filtration process. Contrary to the live rock, the use of AF Rock is free of harmful and invasive organisms such as valonia, aiptasia, dinoflagellate, bryopsis, AEFW and undesirable crabs. **AF Rock is an ideal medium for bacteria settlement, so it supports biochemical processes and guarantees long-term biological balance in the tank.** It stabilizes the pH and KH of water, which greatly facilitates the calcification of skeletons and allows faster growth of corals, which in stable parameters build harder and healthier skeletons. In a freshwater aquarium, AF Rock can only be used in water with pH level above 7.0. Rinse rock in RO water before placing in tank. Due to the high porosity, the rock may break during transport, the rock fragments should be joined using Stone Fix.

WHAT'S GREAT ABOUT THIS PRODUCT

- Natural look for a great scape
- Boosts marine organisms growth
- Great filtration capacity
- Perfect weight to volume ratio
- Faster maturation & livestock addition
- Reef safe - no hitchhikers, plagues, parasites
- Only ecological pigments & pure components
- Stabilizes pH & KH



STONE FIX

Quickly bonding, cement-based glue designed for connecting large elements of live or ceramic rock. It does not contain toxic compounds, which makes it perfectly safe for fish and invertebrates. How to use: mix small amount of glue with water until consistency gets homogeneous. Immediately start sticking the elements. Stone Fix is recommended to be used outside the tank. In case of necessity of using underwater, all circulatory and shunt pumps should be switched off. After linking individual pieces leave for bonding for 15 minutes. Temporary haziness of the water is not harmful. Because of possible pH level raise, in tanks with livestock we recommend not to glue more than 2-3 pieces a day.

AQUASCAPING TIPS:

- Make sure your aquascape provides not only space but also light to your corals!
- You can support the rock with various household items before the glue bonds your construction and remove it afterwards
- Break or cut AF Rock to obtain desired shapes
- Place your rock directly on the glass, not on the sand - it will make construction more stable
- When preparing large aquascape, you can use Stone Fix to glue small parts outside the tank and then glue the final form directly in the tank
- When adding AF Rock into the tank, make sure to do it gradually - this way you'll prevent sudden parameter changes

FRAGGING MADE EASY

Harvesting and fragging corals may be really tiresome without quality materials. In fact, without quality products it'll be really hard to place your frags in the aquarium well.

BLEND INTO SCAPE

If it fits your aquarium better, you can also choose our black rocks or natural pink rocks. These will blend better into some aquascapes.



AF FRAG ROCKS

High-quality biologically neutral rocks created for easy corals' fragging. Made of natural, quality materials of the highest porosity, they provide quick settlement of beneficial bacteria and other microorganisms. The addition of dolomite helps to stabilize key marine aquarium parameters such as pH and KH. The use of natural materials guarantees ideal conditions for the development of new life, which are coral frags. These can be easily cut and combined, and placed anywhere on rock or sand. The porous structure guarantees an increase in the filtration surface and maximally resemblance to natural rock. A special dent allows the use of minimal amounts of glue and easy placement of the graft in the desired place, the flat base guarantees stable placement on the rock or grid.

AF PLUG ROCKS

Biologically neutral plugs made to easily fit frags in the frag tanks. The size of AF Plug Rocks fits perfectly most common reef grids sizes. These plugs were made of the highest quality materials to make sure we provide the best environment for your most precious frags.



AF MINI ROCKS

Small-sized rocks created for coral frags. These top-quality rocks are biologically neutral, moreover their porous structure ensures natural rock lookalike, so they easily blend in into the aquarium. The unique properties of the materials used make AF Mini Rocks an excellent filtration medium. These small frag rocks were enriched with dolomite that helps to stabilize crucial marine aquarium parameters such as pH and KH.

AF GEL FIX

AF Gel Fix is a fast and long-lasting gel that glues coral cuttings. AF Gel Fix is designed for precise gluing of small elements. Due to the density of AF Gel Fix, it makes sticking coral frags to rock or plugs easy and effortless. The gel does not contain toxins that are dangerous to sea life. Bonds in 10 seconds.

How to use: apply small amount of AF Gel Fix to the surface to which you want to stick the frag and immediately stick it to the designated place. Let it dry for 3 minutes. After indicated time you can place the coral frag in the tank.



AF POLY GLUE

Polymer adhesive for corals. **How to use:** glue granules should be placed in hot water (about 60°C/140°F); after a few minutes easily forming mass will create, which has the best adhesive properties. The adhesive will become completely solid when placed in the aquarium. We recommend that gluing process is performed out of the water. Coral can be placed in the water 30 seconds after bonding. Unused mass can be used again. Biodegradable product.

AFIX GLUE

Special plastic two-component mass for joining small rocks and attaching stony corals to rocks. It does not cause water impurity and is not toxic for reef animals.

How to use: both components should be mixed in equal amounts outside the aquarium and then used within 30 min.



AF FILTER SOCK & AF MEDIA SOCK

The highest quality socks available in two sizes! Maximum water flow guaranteed. Dedicated for mechanical filtration or filter media.



THE ROLE OF SAND

When building your reef tank, you'll definitely get into a debate whether you should choose bare bottom or adding sand. There are three most common ways of using sand in reef aquarium. Each of them has its own pros and cons.

BARE BOTTOM

It allows you keeping a stronger waterflow, but forces less biodiversity. If you love seeing pods, worms and starfish – bare bottom is definitely not for you. Moreover it's harder to keep stable parameters with no sand at all.

REGULAR SAND BED

The most common way of keeping your reef tank. We recommend keeping approximately 3 cm (1 3/16") layer of sand. This amount not only looks aesthetic, but also creates optimal environment to keep all the sand enjoying tank inhabitants.

DEEP SAND BED

This method assumes creating a thick layer of sand creating an environment for aerobic and anaerobic bacteria. Basically, it's just additional biological filtration in your system.

IMPORTANT

- Too thick sand bed will cause unwanted organic compounds to get stuck there. These will slowly decompose and cause growth of undesirable algae.
- Live sand almost always contains hitchhikers you wouldn't like to meet – parasites & other harmful organisms.
- For tank's stability it's best to add 1 bag/200 litres (54 US gal) of water per 12 hours



AF BIO SAND

AF Bio Sand is a natural white sand derived from the highest quality deposits. It is free of any contaminants and its calcium carbonate content helps to stabilize water chemistry. The latest technology in AF Bio Sand significantly accelerates the maturation process of an aquarium, and allows faster livestock addition in a newly set up tank. The bottles included contain laboratory isolated strains of nitrifying bacteria and a nourishment, facilitating their development and multiplication. Sand granulation is 0.5-1.5 mm.

SIZE OF THE AQUARIUM	3 CM (1 3/16") LAYER
60x60 cm (23.6x23.6")	15 kg (33 lbs)
90x60 cm (35.4x23.6")	22,5 kg (49 lbs)
120x60 cm (47.2x23.6")	30 kg (66 lbs)
150x60 cm (59.1x23.6")	37,5 kg (82 lbs)

- ✓ Ultra-accurate ICP-OES spectrometer
- ✓ Highly qualified specialists
- ✓ Strict & rigorous standards

ADVANCED LABORATORY – WITHIN YOUR REACH!

Basing on our longstanding experience and knowledge of the world-class biologists and chemists, Aquaforest Lab offers a full range of laboratory tested microelements. This group of products is dedicated for all the users that want to create a coral-friendly, stable environment. In order to keep your corals in the best condition, you should firstly take care of water quality. Parameters should be steady and possibly as close to the natural seawater as it is possible, only this way you will achieve perfect colouration and healthy growth of corals. Aquaforest Lab wants to make advanced chemistry easy and available for all the aquatic life passionates.

PERFECT WATER PARAMETERS IN 3 SIMPLE STEPS



1. TEST YOUR WATER

Water testing provides detailed results of 38 water parameters in your aquarium. If you lack any crucial elements, it'll affect negatively your tank inhabitants.



2. ANALYSE RESULTS

Water testing will help you find out what should you supplement your aquarium with. Microelement dosage based on thorough analysis is the easiest & the safest way to keep parameters in range.



3. CHOOSE YOUR PRODUCT

Pick any product you need in order to raise parameter that is too low. Aquaforest products range supplements all the elements crucial for aquatic life. If test results shown any contaminants, just use adequate Aquaforest filtration media, that will help to reduce harmful substances levels.



WE TEST 38 PARAMETERS:

Li, Si, I, Ba, Mo, Ni, Mn, Be,
Cr, Co, Fe, V, Zn, Hg, Se, Cd, Sn,
Sb, As, Al, Pb, Ti, Cu, La, Sc, W,
Na, Ca, Mg, K, Br, B, Sr, S, P,
PO4 + salinity & KH extra!

ICP TEST 1

Professional ICP-OES test of aquarium water.
Analysis of 38 parameters.

ICP TEST 2

Professional ICP-OES test of aquarium
& RO water. Analysis of 38 parameters.

Barium (Ba) - compound of natural seawater, that is constantly consumed in the aquarium. 1 ml increases the barium level by 0.005 mg/l (ppm) in 100 litres (27 US gal) of water. The recommended level of barium in aquarium water is 0.001 - 0.04 mg/l (ppm). We recommend dosage based on the ICP-OES tests results.



Boron (B) - it's involved in calcium metabolism, accelerates the growth of coralline algae and coral skeletons, but also improves coloration. 20 ml of the product increases the boron level by 1 mg/l (ppm) in 100 litres (27 US gal) of water. Recommended level: 4.05 - 5.00 mg/l (ppm). We recommend dosage based on the ICP-OES tests results.

Bromine (Br) - stimulates marine organisms to produce substances protecting them from predators. 10 ml of the product increases the bromine level by 10 mg/l (ppm) in 100 litres (27 US gal) of water. Recommended level: 55.00 - 74.00 mg/l (ppm). We recommend dosage based on the ICP-OES tests results.



Calcium (Ca) - supports calcification and provides corals healthy growth. 10 ml of the product increases the calcium level by 20 mg/l (ppm) in 100 litres (27 US gal) of water. Recommended level: 380 - 460 mg/l (ppm). We recommend dosage based on the individual tank's needs.

Magnesium (Mg) - necessary for healthy and balanced growth of corals. The appropriate level of magnesium in the water provides corals better absorption of calcium. 10 ml of the product increases the magnesium level by 10 mg/l (ppm) in 100 litres (27 US gal) of water. Recommended level: 1180 - 1460 mg/l (ppm). We recommend dosage based on the individual tank's needs.



KH Plus - the proper value of carbonate ions is necessary for healthy coral growth and for building skeletons. Due to the presence of carbonate ions, maintaining stable pH level is possible. 10 ml of KH Plus raises carbonate hardness by 0.5 dKH in 100 l (27 US gal) of water. Recommended level: 6.5 - 8.5 dKH. We recommend dosage based on the individual tank's needs.

Fluorine (F) - participates in the calcification process and supports skeletal tissue. 10 ml of the product increases the fluorine level by 0.1 mg/l (ppm) in 100 litres (27 US gal) of water. Recommended level: 1.2-1.4 mg/l (ppm). Recommended dosage: 0.3 ml/100 l (27 US gal) of water daily.





Strontium (Sr) - supports the formation of hard coral skeletal tissue and significantly improves the calcium absorption. Supports the growth of soft corals. 10 ml of the product increases the strontium level by 1 mg/l (ppm) in 100 litres (27 US gal) of water. Recommended level: 6.00 - 10.00 mg/l (ppm). Recommended dosage: 0.5 ml/100 l (27 US gal) of water daily.

Cobalt (Co) - supports the coloring of fish and plays crucial role in the growth of some beneficial algae, bacteria and animals. Cobalt is essential for metabolic changes and is a part of vitamin B12. 1 ml of the product increases the cobalt level by 0.0005 mg/l (ppm) in 100 litres (27 US gal) of water. Recommended level: 0.0001 - 0.0006 mg/l (ppm). We recommend dosage based on the ICP-OES tests results.



Iron (Fe) - plays an important role in the process of photosynthesis, therefore its supplementation improves the coral nutrition process. Supports green colouration. 1 ml of the product increases the iron level by 0.001 mg/l (ppm) in 100 litres (27 US gal) of water. Recommended level: 0.002 - 0.006 mg/l (ppm). Recommended dosage: 0.25 ml/100 l (27 US gal) of water daily.

Chromium (Cr) - natural compound of a seawater, that is quickly consumed by marine organisms. 1 ml of the product increases the chromium level by 0.0005 mg/l (ppm) in 100 litres (27 US gal) of water. Recommended level: 0.0001 - 0.0004 mg/l (ppm). We recommend dosage based on the ICP-OES tests results.



Iodine (I) - used by corals for synthesizing pigments which allow them to adapt to variable lighting conditions and protect the fragile coral tissues from UV radiation. Intensifies dark blue and purple colouration. 10 ml of the product increases the iodine level by 0.1 mg/l (ppm) in 100 litres (27 US gal) of water. Recommended level: 0.055 - 0.07 mg/l (ppm). Recommended dosage: 1 ml/100 l (27 US gal) of water daily

Lithium (Li) - naturally occurs in the seawater, and its deposits are systematically consumed by the aquarium inhabitants. 1 ml of the product increases the lithium level by 0.01 mg/l (ppm) in 100 litres (27 US gal) of water. Recommended level: 0.15 - 0.20 mg/l (ppm). We recommend dosage based on the ICP-OES tests results.



Manganese (Mn) - used during photosynthesis, making it crucial element for proper coral nutrition. 1 ml of the product increases the manganese level by 0.001 mg/l (ppm) in 100 litres (27 US gal) of water. Recommended level: 0.001 - 0.0022 mg/l (ppm). We recommend dosage based on the ICP-OES tests results.

Molybdenum (Mo) - occurs naturally in seawater and participates in the transformation and binding of nitrogen, proteins biosynthesis and the biosynthesis of vitamin C. 1 ml of the product increases the molybdenum level by 0.001 mg/l (ppm) in 100 litres (27 US gal) of water. Recommended level: 0.0045 - 0.012 mg/l (ppm). We recommend dosage based on the ICP-OES tests results.



Nickel (Ni) - necessary for functioning almost all microorganisms. Its deficiency results in depleted metabolism of nitrogen and iron. 1 ml of the product increases the nickel level by 0.001 mg/l (ppm) in 100 litres (27 US gal) of water. Recommended level: 0.001 - 0.01 mg/l (ppm). We recommend dosage based on the ICP-OES tests results.

Rubidium (Rb) - this element naturally occurs in the seawater. 1 ml of the product increases the rubidium level by 0.002 mg/l (ppm) in 100 litres (27 US gal) of water. Recommended level: 0.10 - 0.14 mg/l (ppm). We recommend dosage based on the ICP-OES tests results.



Vanadium (V) - it's an important activator of enzymes, it participates in carbohydrates metabolism and skeletal mineralization. 1 ml of the product increases the vanadium level by 0.001 mg/l (ppm) in 100 litres (27 US gal) of water. Recommended level: 0.001 - 0.0025 mg/l (ppm). We recommend dosage based on the ICP-OES tests results.

Zinc (Zn) - component of many enzymes that are responsible, among others, for protein metabolism, it also affects cell division, tissue repair and stimulates growth. 1 ml of the product increases the zinc level by 0.001 mg/l (ppm) in 100 litres (27 US gal) of water. Recommended level: 0.001 - 0.007 mg/l (ppm). We recommend dosage based on the ICP-OES tests results.



Component Pro - The Components Pro formula was created by qualified specialists based on many years of experience. Regularly dosed fluids provide adequate levels of carbonate hardness, magnesium and calcium (KH 6.5-8.5, Ca 380-460 ppm, Mg 1180-1460 ppm).

Dosage: all the fluids should be dosed equally based on Ca, KH and Mg consumption. Regularly test your water and establish the optimal dose basing on analysis results. **With average SPS corals stock, the recommended Components Pro dose is 12 ml per 100 liters of water daily.** When water parameters aren't in the recommended range use one of the Aquaforest Lab additives (Ca Plus, Mg Plus, KH Plus) until reaching the desired levels.

Component 1 Pro contains: Ca, Sr, Fe, Mn, Cu, Zn, Ni, Cr, Co, Mo (25 ml/100 l raises Ca by 9 ppm).

Component 2 Pro contains: HCO₃⁻, F, I (25 ml/100 l raises KH by 1.3 dKH - Alk 0.46 meq/l).

Component 3 Pro contains: mineral salts, Mg, S, K, B, Sr, Li (25 ml/100 l increases Mg by 0.76 ppm). Due to the high concentration of the product, we recommend regular maintenance of the dosing lines.

DOSAGE OF AQUAFOREST PRODUCTS

MARINE SALTS		
PROBIOTIC REEF SALT	Fully synthetic marine salt for SPS and LPS Corals (probiotic inside)	390 g (13.75 oz)/10 l (2.7 US gal) to 33 ppt
REEF SALT	Fully synthetic marine salt for SPS and LPS Corals	390 g (13.75 oz)/10 l (2.7 US gal) to 33 ppt
SEA SALT	Fully synthetic marine salt created for fish tanks	345 g (12.16 oz)/10 l (2.7 US gal) to 30 ppt
PROBIOTICS & NITRIFICATION		
BIO S	Nitrifying bacteria for Start-Up & ammonia reduction	1 drop per 100 l (27 US gal) 
PRO BIO F	Probiotic bacteria with culture medium for NO ₃ PO ₄ reduction	1 measuring spoon per 100 l (27 US gal)
PRO BIO S	Probiotic bacteria for NO ₃ PO ₄ reduction	1 drop per 100 l (27 US gal)  
-NP PRO	Liquid Polymer - Media for a growth of probiotic bacteria	1 drop per 100 l (27 US gal) 
NITRA PHOS MINUS	Effectively removes excess nitrate & phosphate from the water, restores chemical balance	Depends on NO ₃ and PO ₄ levels
SUPPLEMENTS & FOODS		
AF AMINO MIX	Aminoacids - energy source for corals	1 drop per 100 l (27 US gal)   
AF BUILD	Growth acceleration	1 drop per 100 l (27 US gal)   
AF ENERGY	Highly nutritious food for corals	1 drop per 100 l (27 US gal)  
AF VITALITY	Vitamins for vitality & health	1 drop per 100 l (27 US gal)  
AF PHYTO MIX	Liquid feed	10 drops per 100 l (27 US gal)  
AF POWER FOOD	Powdered feed for sps and lps corals	1 measuring spoon per 100 l (27 US gal) 
RICCO FOOD	Powdered feed for corals of the Ricordea family	1 measuring spoon per 100 l (27 US gal) 
GARLIC OIL	Vitamins Omega-3 acid garlic extract	1 drop per food cube 
FISH V	Vitamins for fish vitality & health	1 drop per food cube 
AF PURE FOOD	100% natural food for the coral, which supports the calcification of calcium thus ensures proper development and growth	1 measuring spoon per 100 l (27 US gal)  
AF LPS FOOD	Granular food dedicated especially for LPS corals	1 measuring spoon per 100 l (27 US gal)
AF GROWTH BOOST	Supplement for all types of coral. It contains high quality amino acids	1 measuring spoon per 100 l (27 US gal)
PELLETS FOR FISH	All foods for fish	Small portions once or several times a day
AF LIFE SOURCE	100% natural deposit derived from the cleanest waters of the Pacific. It is perfect as a buffer to enhance microbiology in saltwater aquariums	We recommend that you use it a minimum of once a week, adding 10 ml/100 l (27 US gal)
MICROELEMENTS		
IODUM	Supplement for blue and purple colour enhancement	1 drop per 100 l (27 US gal)
MICRO E	Complex of heavy metals for marine organisms	1 drop per 100 l (27 US gal)
WATER CHEMISTRY + ADDITIVES		
COMPONENT 1+2+3+	Micro and macronutrients	The dosage varies depending on aquarium types and lifecycle stages.
COMPONENT A	Replenishment of barium and strontium levels	10 ml per 200 l 19 drops for 5 US gal
COMPONENT B	Replenishment of heavy metals levels	10 ml per 200 l 19 drops for 5 US gal
COMPONENT C	Replenishment of Iodine and fluorine levels	10 ml per 200 l 19 drops for 5 US gal
CALCIUM	Maintains constant levels of calcium in coral reef aquaria	50 g per 1 l 13 tbsps/1 US gal
MAGNESIUM	Maintains constant levels of magnesium in coral reef aquaria	10 g per 1 l 2.4 tbsps/1 US gal
KH BUFFER	Maintains constant levels of carbonate hardness in coral reef aquaria	80 g per 1 l 1.28 cups/1 US gal
REEF MINERAL SALT	Maintains constant levels of minerals in coral reef aquaria	25 g per 1 l 6.14 tbsps/1 US gal
COMPONENTS STRONG	Supplement containing all microelements required in coral reef aquaria	5 ml per 1 l 19ml/ 1 US gal
PROTECT DIP	Specialist solution for bathing corals. Thoroughly cleanses the surface of coral	Dosage according to the product manual

FILTRATION MEDIA		
CARBON	Removes undesired chemicals from marine and freshwater aquaria	100 ml per 100 l (27 US gal)
PHOSPHATE MINUS	Adsorbing and reducing phosphates and silicates	25-100 ml/100 l (27 US gal)
ZEO MIX	Specially selected blend of zeolites	100-500 ml per 100 l 3.5 oz.-17.5 oz./27 US gal
LIFE BIO FIL	Natural biological filter medium. Increases filtration efficiency in existing aquariums and is an excellent filter media for newly established ones	Replace 10% - 20% of the filling every 6 weeks
AQUAFORST LAB		
COMPONENTS PRO	Double-concentration micro and macroelements.	12 ml/100 l (27 US gal)
BARIIUM	Compound of natural seawater, that is constantly consumed in the aquarium.	Based on the ICP-OES tests results.
BORIUM	Involved in calcium metabolism, accelerates the growth of coralline algae and coral skeletons.	Based on the ICP-OES tests results.
CA PLUS	Supports calcification and provides corals healthy growth.	Based on the consumption.
COBALTUM	Plays crucial role in the growth of some beneficial algae, bacteria and animals.	Based on the ICP-OES tests results.
CHROMIUM	Natural compound of a seawater.	Based on the ICP-OES tests results.
FLUORUM	Participates in the calcification process and supports skeletal tissue.	0.3 ml/100 l (27 US gal)
FERRUM	Plays an important role in the process of photosynthesis.	0.25 ml/100 l (27 US gal)
IODUM	Used by corals for synthesizing pigments.	1 ml/100 l (27 US gal)
KALIUM	Responsible for neurological functions.	0.1 ml/100 l (27 US gal)
KH PLUS	Necessary for healthy coral growth and for building skeletons.	Based on the consumption.
LITHIUM	Naturally occurs in the seawater.	Based on the ICP-OES tests results.
MG PLUS	Necessary for healthy and balanced growth of corals.	Based on the consumption.
MANGANUM	Used during photosynthesis.	Based on the ICP-OES tests results.
MOLYBDENUM	Participates in the transformation and binding of nitrogen and proteins biosynthesis.	Based on the ICP-OES tests results.
NICCOLUM	Necessary for functioning almost all microorganisms.	Based on the ICP-OES tests results.
RUBIDIUM	This element naturally occurs in the seawater.	Based on the ICP-OES tests results.
STRONTIUM	Supports the formation of skeletal tissue and improves the calcium absorption.	0.5 ml/100 l (27 US gal)
VANADIUM	Participates in carbohydrates metabolism and skeletal mineralization.	Based on the ICP-OES tests results.
ZINCUM	Component of many enzymes that are responsible for protein metabolism.	Based on the ICP-OES tests results.

Dosage outlined above is based on our own experience and has been tested in Aquaforest Coral Farm. Each aquarium has its own very specific set of conditions, so the actual dosage should be adjusted to individual needs and tank lifecycle stages. The demand for supplementing changes depends on your aquarium type, therefore dosage in SPS reef tanks will be different than in fish only or in soft coral aquariums. We recommend that you start with half of the indicated dosage and that you watch your aquarium carefully before and after supplementing with any product.

Modern technologies combined with years of aquarium experience allowed us to create the AF Aquariums. Each element of this carefully designed set has been created to meet the most rigorous quality standards. It is the result of cooperation between the best engineers and aquarists, with whom we've created the best reefing solutions.

WHAT MAKES US UNIQUE?



GUARANTEED SAFETY

- no quality compromise - marine yacht technology applied
- proper installation and thorough tests - hardwood plywood construction delivered assembled
- high-resistance joints, connections, screws and hinges
- waterproof materials only - no deformations or deflections
- proper glass thickness and silicone created for reefing purposes
- 10 times more durable!

EXPERIENCE BASED SOLUTIONS TO MAKE YOUR CORALS THRIVE

- designed by top aquarists focused on sharing their success with others
- we know what's important - efficient filtration guaranteed by adequate pipe diameters
- quality gate valve to precisely adjust water levels
- solutions developed to provide the most demanding corals optimal habitat
- easy to clean & maintain - removable overflow grid, spacious cabinet
- smartly designed cascading chambers to support filtration process
- always be prepared - in case of blackout check valve prevents water from flowing into the sump

ULTRA SILENT FOR YOUR MAXIMUM COMFORT

- anti-vibration foam both on sump and display
- self-leveling downflow with silencing cover on the overflow
- smartly designed sump chambers to reduce waterflow noises
- precise water level adjustment & noise-cancellation provided by gate valve



REDESIGNING EASIER THAN EVER



CARBON BLACK



CLOUDY CARAMEL



WARM SAND



RHIND



CRUSHED ICE



ULTRA WHITE

- Removable external panels come separately in **6 different colors**
- Completely waterproof with laser finish
- 20 years long UV resistance, no fading guaranteed
- Wide range of colors make the cabinet fit any interior



AQUAFORST **AQUARIUM JOURNAL**

Date:				Time:				
Temp:	Salinity:	pH	KH	NO ₂	NO ₃	PO ₄	Ca	Mg

Recommendations:

Date:				Time:				
Temp:	Salinity:	pH	KH	NO ₂	NO ₃	PO ₄	Ca	Mg

Recommendations:

Date:				Time:				
Temp:	Salinity:	pH	KH	NO ₂	NO ₃	PO ₄	Ca	Mg

Recommendations:

Date:				Time:				
Temp:	Salinity:	pH	KH	NO ₂	NO ₃	PO ₄	Ca	Mg

Recommendations:

Date:				Time:				
Temp:	Salinity:	pH	KH	NO ₂	NO ₃	PO ₄	Ca	Mg

Recommendations:

AQUAFORREST **AQUARIUM JOURNAL**

Date:				Time:				
Temp:	Salinity:	pH	KH	NO ₂	NO ₃	PO ₄	Ca	Mg

Recommendations:

Date:				Time:				
Temp:	Salinity:	pH	KH	NO ₂	NO ₃	PO ₄	Ca	Mg

Recommendations:

Date:				Time:				
Temp:	Salinity:	pH	KH	NO ₂	NO ₃	PO ₄	Ca	Mg

Recommendations:

Date:				Time:				
Temp:	Salinity:	pH	KH	NO ₂	NO ₃	PO ₄	Ca	Mg

Recommendations:

Date:				Time:				
Temp:	Salinity:	pH	KH	NO ₂	NO ₃	PO ₄	Ca	Mg

Recommendations:



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**PRODUCED
IN LABORATORY
CONDITIONS**

ICP-OES technology & quality control

