



A Guide to the ... **TRITON METHOD**

Version 1

REPLACE TRIAL AND ERROR WITH CONSCIOUS CONTROL

What is the TRITON Method?

A SIMPLE REEF KEEPING RECIPE ...

Designed to reproduce and maintain Natural Seawater in your aquarium so your reef ecosystem can flourish and grow.

How does it work?

3 SIMPLE STEPS ...

- (1) Test your seawater,
- (2) Know what's in it, and,
- (3) Act to fix it.

Do I need to know any chemistry?

NO - WE TAKE CARE OF THAT!

All you need to do is occasionally test your seawater. If you need to take any action we tell you precisely what to add and how much. It's simple and requires no specialised knowledge of chemistry.

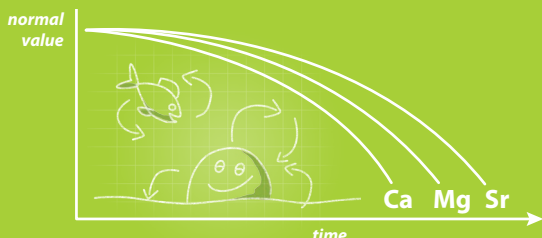


TRITON
APPLIED REEF BIOSCIENCE

About seawater

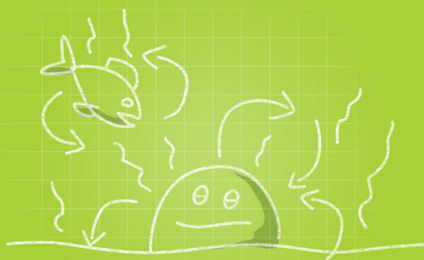
Consumption

Animals, plants, bacteria and biochemical cycles are constantly interacting with the seawater in your aquarium. As reactions occur elements are consumed and their availability in your seawater changes.



Accummulation

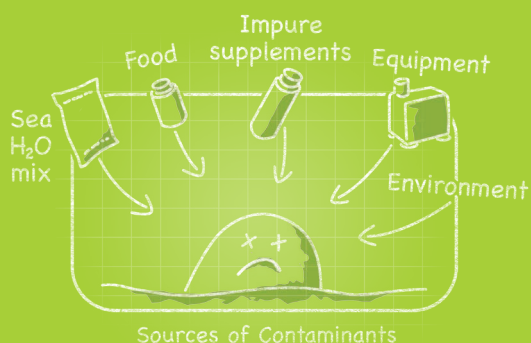
Biochemical reactions also convert elements into new compounds. Over time these can accumulate and alter the balance and liveability of your seawater. Think of your tank as a stuffy room full of people with the windows and doors closed.



Contamination

Another way your aquarium's seawater can depart from Natural Seawater is when undesirable elements are introduced.

This contamination can be introduced by the corrosion of metallic components, using impure supplements, toxins from paint and even what you feed your reef critters.



THE TRITON

Set up your system

A TRITON system requires a sump where you add the dosing solutions (see below) that keep your water chemistry in balance. The sump is also a refuge for algae which remove unwanted nitrate (NO_3) and phosphate (PO_4) from the seawater as they grow.

Note: your sump needs a lighting system suited to the growth of macro algae.

Begin dosing

Dosing replaces the elements consumed by the biological / biochemical activity taking place in system.

Once your aquarium is setup and cycled you can stock it with some hardy corals. Now run a daily test of your water alkalinity - as soon as you measure a drop in alkalinity below 8dKH start dosing Base Elements (or Base Elements CORE7 concentrate) into your sump. If your readings are remain below 8dKH gradually increase the dose (or vice versa). You can reduce the frequency of alkalinity tests once the system has settled in.



Zn		Cd		I		Hg		Cr		P	
Calcium 40		Cadmium 112.41		Iodine 53		Mercury 80		Chromium 24		Phosphorus 15	
120.90		112.41		126.90		200.59		51.996		30.974	
Ca		Cd		I		Hg		Cr		P	
Chlorine 17		Vanadium 23		Arsenic 33							
35.453		50.942		74.922							
Cl		V		As							

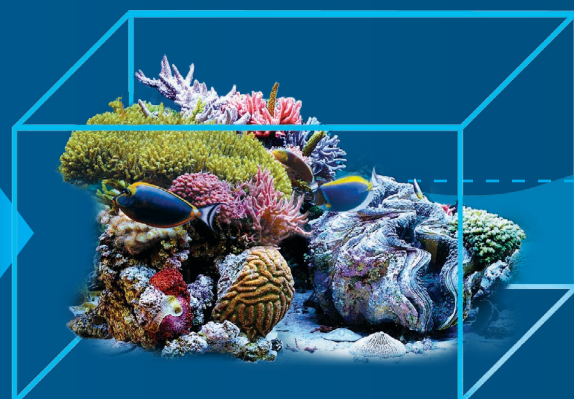
With over 65000 tests completed TRITON understands the chemistry of seawater aquaria better than anybody in the world. With the TRITON Method you do not need to understand chemistry - we do that for you - you just focus on keeping your seawater natural.

Algae refuge / sump

1. Add **Base Elements** daily to maintain system alkalinity close to 8dKH



Reef System



METHOD MIND MAP

Begin ICP testing

Purchase an ICP test kit from your TRITON stockist. Set up an account on the TRITON LAB website (www.triton-lab.de), create your aquarium profile and register the barcode provided in your test kit. Send the water sample from your aquarium to TRITON Lab for analysis.

The ICP test provides a comprehensive snapshot of all the important chemical elements in your seawater.



Review your results

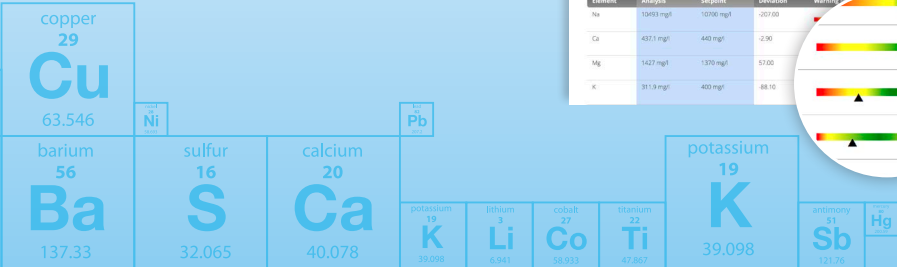
Log in to your account and you will see the concentrations of each element in your seawater compared with TRITON's 'set points' for Natural Seawater developed through extensive scientific research over the last 10 years.

You do not need to understand the chemistry - we do that for you - just follow the easy-to-understand colour codes (green for good, yellow for caution, red for action).

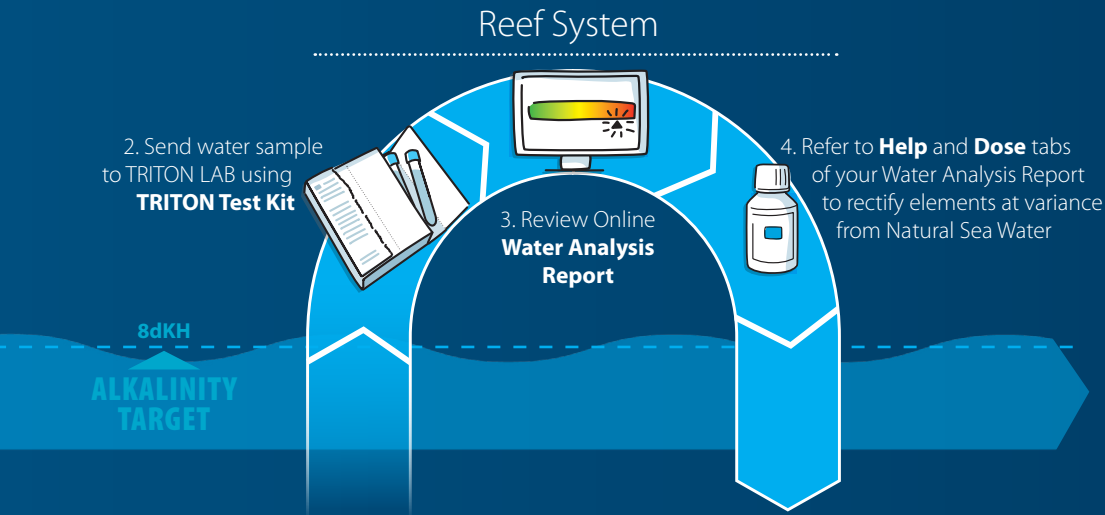
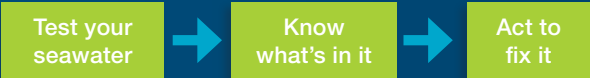
Data	Help	Dose	Visual	
Unwanted heavy metals (2500 Liter)				
Element	Analysis	Setpoint	Deviation	Warning lamp
Hg	0 µg/l	0.1 µg/l	<0.10	
Sr	0 µg/l	0.1 µg/l	<0.10	
Cd	0 µg/l	0.1 µg/l	<0.10	
Sn	0 µg/l	0.1 µg/l	<0.10	
Sb	0 µg/l	0.1 µg/l	<0.10	
As	0 µg/l	0.1 µg/l	<0.10	
Al	10-100 µg/l	2 µg/l	8-10	
Pb	0 µg/l	0.1 µg/l	<0.10	
Ti	0 µg/l	0.1 µg/l	<0.10	
Cu	0 µg/l	0.1 µg/l	<0.10	
Macro-Elements (2500 Liter)				
Element	Analysis	Setpoint	Deviation	Warning
Na	12400 mg/l	12100 mg/l	-207.00	
Ca	457.1 mg/l	440 mg/l	-2.90	
Mg	1427 mg/l	1370 mg/l	-57.00	
K	391.9 mg/l	400 mg/l	-88.10	

Act to fix problems

If you need to fix a 'red' problem just refer to the **Help** and **Dose** tabs for a description and any actions needed to fix it. This advice recommends any necessary supplements (or treatments) as well as the correct doses calculated for the size of your system.



Read on for detailed information about each of these steps



Checklist

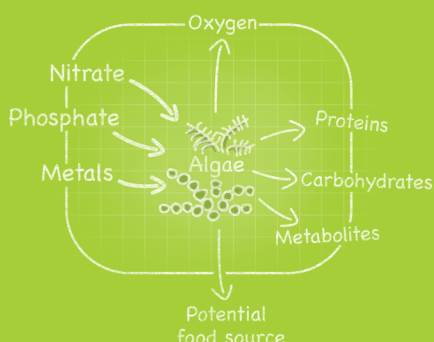
- Sump (TRITON layout preferred, see page 2)
- Return pump capable of producing 10x system turnover
- Strong protein skimmer
- Full spectrum display tank lighting
- Suitable marine algae lamp
- 4 channel dosing pump
- Dosing containers
- Media reactor
- 10 litre storage containers (if using original Base Elements)

Setting up your system

Sumps, pumps and refuges

Putting plants to work

A healthy algae refuge will consume animal waste by-products and some metals while exporting useful proteins, carbohydrates and metabolites.



By using the TRITON Method with an algae sump, Base Elements dosing and regular ICP testing you can eliminate the need for routine water changes.

The TRITON Method requires a sump where you add the dosing solutions (see page 4) that keep your water chemistry in balance. The sump is also a refuge for algae which remove unwanted nitrate (NO_3) and phosphate (PO_4) while producing / releasing amino acids, vitamins and sugars that are beneficial to your system.

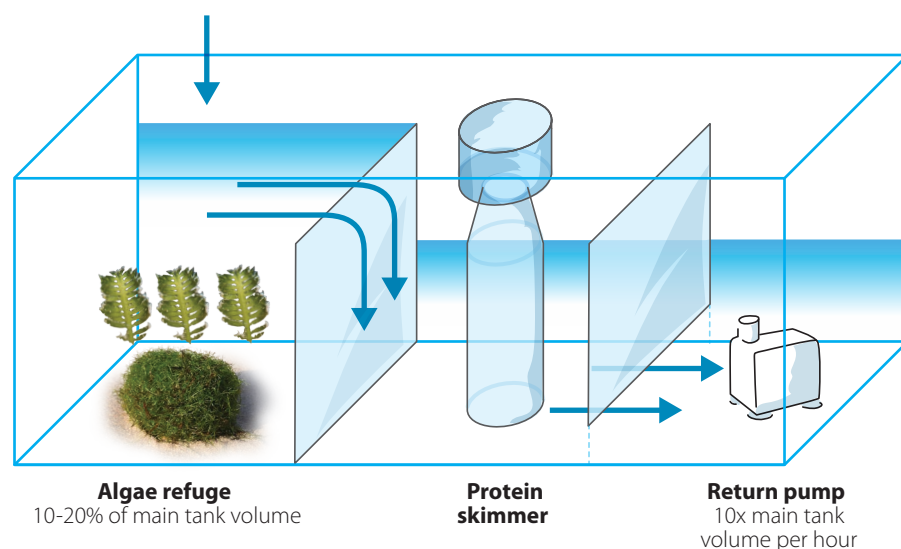
The combination of dosing, regular testing and an efficient algae filter makes the TRITON Method truly holistic and is the reason TRITON systems can run without regular water changes.

The sump is split into 3 compartments. The algae refuge compartment should be as large as practical but at least 10% of the volume of the main display tank. It should house a variety of algae types as each species will have it's own nutrient removal characteristics.

Note: some of the algae should be allowed to die-back, it is during this process that the acids, vitamins, and sugars are released.

There should be no sand bed in the algae refuge compartment however a few small pieces of live rock (and the beasties they shelter) are beneficial.

The water enters the sump directly into the algae refuge compartment, TRITON does not recommend the use of filter socks/floss as they remove beneficial ingredients that algae require.



Any detritus that builds up can be removed as and when required. The water should leave the algae refuge compartment over the first baffle and down into the skimmer compartment. Your skimmer should be rated to easily cope with the size and load of your system (ask your LFS). You may find that, with time, your skimmer produces less waste because your system becomes more balanced. This is because a stable ecosystem has fewer microorganisms living / dying unnecessarily.

As the water leaves the skimmer compartment it should pass under the next baffle. This ensures the skimmer has more contact time with the proteins in the water which are prone to rise. Additional baffles may be used as bubble traps and to maintain the water level in the skimmer compartment. Without the additional baffle the water height can be set and maintained by the Automatic Top Up (ATU) float should you have one. The final compartment houses the return pump. Reactors for Phosphate removal can also be housed in here. An additional ATU reservoir may be added if required.

The algae refuge should be lit on a **reverse cycle** (i.e. the algae refuge light comes on when main tank lights go out) to aid in preventing a pH swing occurring. TRITON recommends lighting the algae refuge with T5's using a mix of the blue and white spectrum. Success can also be had with other light sources such as CFL or full spectrum LEDs.

The return pump should be capable of providing a minimum flow of 10x the total system volume per hour after taking into account any head loss, taps for reactors etc. This is to ensure that the whole system water is flushed through the sump regularly. Note: too much flow through the sump will reduce the efficiency of the algae bed and the skimmer. TRITON does not recommend the use of UV sterilisers or Ozone as they do not differentiate between good or bad microorganisms.

*The TRITON Method
lets you spend more time
enjoying your reef tank.*



Dosing

Cycling:

New reef tanks need to kick start the nitrogen biochemical cycle before they are safe for reef creatures! Google 'cycling a saltwater aquarium' for details.

Tip:

As the inhabitants in your reef tank grow the uptake of the Base Elements will increase also.

Over time ICP testing may detect one particular element in your seawater is being consumed at levels greater than the quantity supplied by the dosing elements. This may be due to the particular biochemical preferences or stocking levels of a species and can be remedied by individual dosing of that element using TRITON Supplements (see page 8).

Replacing the elements consumed by your living system

Once your tank has been **cycled** and you have observed a drop in alkalinity below 8dKH, it's time to start dosing. The four TRITON Base Elements dosing solutions are a collection of ionically balanced elements and compounds designed to provide (replace) everything the bacteria, plants, invertebrates and fish in your ecosystem need. A rough guide for your first dose with Base Elements is 10ml per 100L of the display tank volume for each bottle (Base Elements 1, 2, 3a and 3b). If you are using the Base Elements CORE7 concentrate the starting dose will be ~2ml per 100L.

Note: these starting doses are based on a lightly stocked system with little consumption. As your stocking levels increase so will your daily dose.

Now begin daily monitoring of alkalinity (dKH).

Alkalinity

When setting up your system your goal is to create stable water chemistry that approximates Natural Seawater and stays that way! Every reef tank is a unique combination of seawater, substrate and biology. The target alkalinity is around 8dKH, which you control by dosing with the Base Elements solutions. The balanced nature of these solutions ensures all of your other parameters remain as they should. Should your alkalinity drop, gradually increase the dosage of all of the Base Elements equally until the required level returns, if it goes up then reduce the dose.

Don't obsess about achieving a constant reading of 8dKH, stability is the goal, if your tank maintains a stable dKH of 7.3 then that is just as good as 8.

Note: for users of Base Elements CORE7 we recommend a target dKH of 7.

Monitor the alkalinity daily for a week, or until the system settles, after which you can test at longer intervals. Once you have a stable alkalinity / dosing regime it is time to send a sample of tank water off for ICP testing - see page 6.

Base Elements CORE7 dosing solutions use an improved formulation and are more convenient / sustainable at a cheaper price.

Base Elements are a suite of ionically balanced dosing solutions that supply the essential macro and trace elements consumed in the daily function of your reef system.



How to dose

The original Base Elements solutions (see opposite page) come in 4 x 1 litre concentrated bottles that make up 4 x 10 litre solutions Base Elements 1, 2, 3a & 3b when mixed with RO/DI water (see below). Note: 10 litre containers are also available through your LFS or TRITON supplier.

Base Elements 1 is in powder form and should be mixed with approximately 9.75L of RO/DI to make up 10L, this is done with the aid of a small pump in a bucket for a few hours (or until all of the powder has dissolved), adding a heater to the mix can aid the process.

Base Elements 2, 3a and 3b should be added to 9 litres of RO/DI water respectively. It should be noted that only the best RO/DI water should be used in mixing the Base Elements with a total dissolved solids (TDS) reading of zero.

Base Elements CORE7 solutions are 7 times more concentrated than standard Base Elements. All four bottles are liquid solutions which can be dosed undiluted saving time, space and waste. Just take your empty bottles to your LFS and use one of our TRITON Refill Stations. Base Elements CORE7 dosing solutions use an improved formulation and are more convenient / sustainable at a cheaper price.

Solutions should be dosed into an area of **high flow** in the sump with an **interval** between each solution to prevent them reacting with each other. This can be achieved using an automated dosing pump to enable the solutions to be scheduled throughout the day.

No two reef tanks are the same in terms of dosing. One 200L reef system may use 50ml of each Base Elements solution / day while another may only use 25ml. The daily dose is determined by your stocking level and the unique combination of living creatures in your system.

Note: keep dosing tubes **above the water** surface to prevent back siphoning and the solutions reacting with the tank water which can cause the tubes to block. CORE7 solutions 3a and 3b react when mixing with salt water - this is normal.

Converting a reef tank to the TRITON Method

If you are converting an existing system to the TRITON Method it is a good idea to get an ICP test done before you start to understand the state of balance of your seawater. Alternatively, if you are confident of your seawater's parameters just start dosing the Base Elements solutions. Converting from a different method may result in some parameters (Alkalinity, Calcium, Magnesium, Potassium) having elevated levels so a follow up ICP test is highly recommended so you can make informed decisions during the transition period. If you have elevated parameters, lower the alkalinity over a number of days to avoid 'crashing' the system.

Converting from Base Elements to CORE7

CORE7 is 7 times more concentrated, has an improved formulation and does not require mixing with RO/DI before use. When switching from dosing with Base Elements to CORE7 divide your current dose by 7.

What's RO/DI?

RO/DI stands for reverse osmosis and deionization - a method for purifying tap water. RO/DI removes undesirable impurities (e.g. metals, chlorine compounds) from tap water. Using RO/DI water for dosing solutions and seawater mixes minimises a source of contamination in your system.

Important!

If the system you are converting to the TRITON Method did not use an algae sump for nutrient control then it is important that you make the transition **slowly**. It is best to run existing filter systems beside the algae sump to allow time for the algae to build up enough capacity to handle the nutrient load.

Note:

You may observe an initial increase in uptake when switching over as Core7 operates at a high pH than the original Base Elements, this usually settles back down after a number of weeks.

Avoid contamination by creating pure, deionized water for your seawater mixes and top ups.
Suitable for any method.
Note: never add directly to the aquarium.





Test your seawater

Using ICP testing to take a snapshot of your seawater chemistry

ICP a.k.a. *Inductively Coupled Plasma - Optical Emission Spectrometry*

(Don't panic, you do not need to understand it!)

ICP is a powerful scientific instrument capable of detecting and precisely measuring the following elements in your seawater:

Mercury (Hg) Antimony (Sb) Titanium (Ti)
Calcium (Ca) Boron (B) Lithium (Li) Vanadium (V)
Chromium (Cr) Beryllium (Be) Selenium (Se)
Arsenic (As) Copper (Cu) Magnesium (Mg)
Strontium (Sr) Nickel (Ni) Zinc (Zn) Cobalt (Co)
Silicon (Si) Cadmium (Cd) Aluminium (Al)
Scandium (Sc) Potassium (K) Sulphate (S)
Molybdenum (Mo) Manganese (Mn) Iron (Fe)
Phosphorous (P) - also displayed as ()
Tin (Sn) Lead (Pb) Sodium (Na) Bromine (Br)
Tungsten (W) Lanthanum (La) Iodine (I)
Barium (Ba)

(Don't panic, we interpret the chemistry for you!)

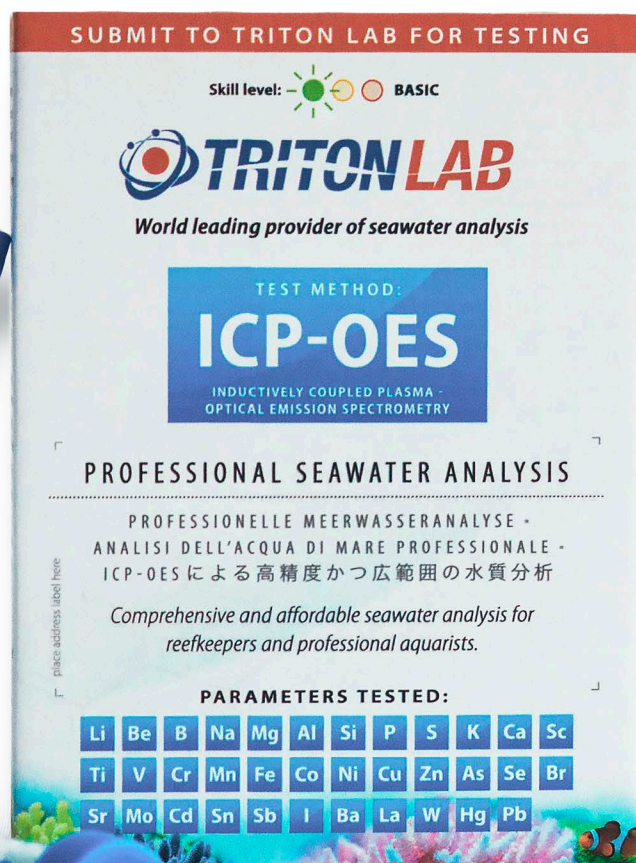


TRITON LAB offers comprehensive, affordable, professional analysis of your seawater so you can monitor the health of your reef system. Each test is a snapshot of the elements (and their precise quantities) found in your seawater at that time. By comparing your results to Natural Seawater the elements being **consumed** by your living system can be identified. Likewise, undesirable elements entering your system **as contamination** will also be detected. Testing can be done as often or as little as you like. Typically it is a good idea to run a series of regular tests while setting your system up then fall back to periodic maintenance testing to make sure you catch problems **before** they become lethal / expensive.

The point is that testing puts you in control of your system and without it you are flying blind.

Testing involves sending a sample of your seawater to the TRITON lab for analysis. First purchase a pre-packaged test kit from your official TRITON stockist, register with the TRITON LAB website, create your aquarium profile and then assign the barcode from your test kit to your relevant aquarium profile. Now sample your aquarium, remembering to rinse the sample tubes in tank water. Always sample before feeding to avoid contamination of the sample. Pack the sample in the provided envelope or box and attach the label and required postage.

**Comprehensive, affordable
professional grade
ICP-powered laboratory
seawater analysis.**





Know what's in it

How TRITON makes your results easy to understand

You will receive emails updating you on the status of your sample on its way to TRITON Lab: one when it arrives at the regional hub, another when it arrives at the lab and finally when your results are ready to view. Note: if you have sent the sample direct to the lab then you will not get the hub email. Add this email address info@triton-lab.de to your contacts so your results don't land in your junk folder!!

Log in to your account to see your results expressed as the concentration of each element in your seawater compared with the expected values, or 'set points', for Natural Seawater. You do not need to understand the chemistry - we do that for you - just follow the easy-to-understand colour codes (green for good, yellow for caution, red for action). The **colour gradient** gives you a sense of the urgency for resolving a problem. Our recommended action required to fix a problem can be found under the **Help** and **Dose** tabs at the top of the page.

Set points

Set points describe the acceptable concentration range for any given element in typical reef aquarium seawater as measured by your ICP test. TRITON set points are based on over 65 000 seawater analyses performed on samples from customer reef tanks, wild reefs around the world and research carried out in our own aquaria.

Single View for Evaluation ICP-OES

Data Help Dose Visual

Unwanted heavy metals (2500 Liter)

Element	Analysis	Setpoint	Deviation	Warning lamp
Pb	0 µg/l	0.1 µg/l	<-10	
Sr	0 µg/l	0.1 µg/l	<-10	
Cr	0 µg/l	0.1 µg/l	<-10	
Sn	0 µg/l	0.1 µg/l	<-10	
Sb	0 µg/l	0.1 µg/l	<-10	
Al	0 µg/l	0.1 µg/l	<-10	
K	10.102 µg/l	2 µg/l	8.10	
PH	0 µg/l	0.1 µg/l	<-10	
Bi	0 µg/l	0.1 µg/l	<-10	
Cu	0 µg/l	0.1 µg/l	<-10	

Macro-Elements (2500 Liter)

Element	Analysis	Setpoint	Deviation	Warning lamp
Na	10493 mg/l	10700 mg/l	-207.00	
Ca	437.1 mg/l	440 mg/l	-2.90	
Mg	1427 mg/l	1370 mg/l	57.00	
K	311.9 mg/l	400 mg/l	-88.10	
Br	46.747 mg/l	62 mg/l	-15.25	
B	3.259 mg/l	4.5 mg/l	-1.24	
Sr	2.197 mg/l	8 mg/l	-5.80	
S	667.6 mg/l	900 mg/l	-232.40	

Li-Group (2500 Liter)

Element	Analysis	Setpoint	Deviation	Warning lamp
Li	185.4 µg/l	200 µg/l	-14.60	
Ni	1.288 µg/l	5 µg/l	-3.76	
Mn	7.154 µg/l	12 µg/l	-4.85	

I-Group (2500 Liter)

Element	Analysis	Setpoint	Deviation	Warning lamp
I	0 µg/l	1.2 µg/l	-1.20	
Zn	0 µg/l	4 µg/l	-4.00	
Mh	0 µg/l	2 µg/l	-2.00	
I	0 µg/l	20 µg/l	-20.00	

Fe-Group (2500 Liter)

Element	Analysis	Setpoint	Deviation	Warning lamp
Cr	0 µg/l	0.1 µg/l	<-10	
Cu	0 µg/l	0.1 µg/l	<-10	
Fe	0 µg/l	0.1 µg/l	<-10	

Be-Group (2500 Liter)

Element	Analysis	Setpoint	Deviation	Warning lamp
Be	22.56 µg/l	10 µg/l	12.56	
Sb	0 µg/l	0.1 µg/l	<-10	

Si-Group (2500 Liter)

Element	Analysis	Setpoint	Deviation	Warning lamp
Si	208.8 µg/l	100 µg/l	108.80	

Nutrient-Group (2500 Liter)

Element	Analysis	Setpoint	Deviation	Warning lamp
P	4.82 µg/l	5 µg/l	-0.18	
PO4	0.0147492 mg/l	0.01836 mg/l	-0.0036	

View your results, advice and dosing actions via these tabs.

TRITON Online Water Analysis Report

The colour code system makes it easy to see problems and their severity.

Dosing instructions

Total 6 days
500 ml/day for 5 days
323.72 ml for 1 day



The Help and Dose tabs provide advice and details of any action you need to take.



Act to fix it

Using TRITON's built in **Help** and **Dose** reports to solve problems

There are two general categories of action.

(1) Supplementing elements that have been identified as 'low' relative to natural seawater. This is most likely due to natural consumption by the livestock in your system. Just follow the advice of your **Help** and **Dose** reports and dose with the relevant TRITON Supplement.

(2) Treating contamination: an example of a contamination error would be a build up of an unwanted heavy metal like copper which is detrimental to corals and other invertebrates. The first action is to locate the cause / source of the copper contamination: e.g. a broken piece of equipment or copper wire exposed to the water. With the source removed now take urgent remedial action using TRITON Detox treatment followed by activated Carbon and corrective water changes. See opposite page for some typical treatments.

Supplements vs. treatments

Supplements are macro or trace elements which you add to your system to replace or 'top up' those consumed by natural biochemical processes in your system.

Treatments are usually remedies to external chemical contamination of your system. Typically they involve a chemical reaction that 'scrubs' the contaminant from your seawater.

For a full list of TRITON supplements and treatments see the backpage.



Supplements

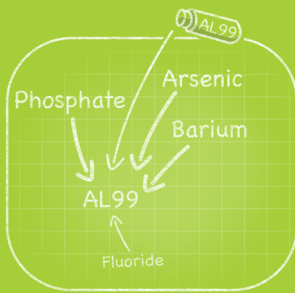


Only TRITON supplements are guaranteed contamination free by using ICP testing in TRITON Lab.

Treatments

TRITON AL99

Phosphate remover does exactly what it says on the bottle, removes phosphate. TRITON AL99 phosphate remover is an aluminium based 'pellet' which is best used in a reactor. The AL99 should be washed in RO/DI prior to use and only have a slow flow passing over it. Do not tumble. You may find with continued use that your AL levels start to rise on your ICP test, if this is the case then it is recommended to alternate AL99 with a different product. A list of recommended products can be found on our website.



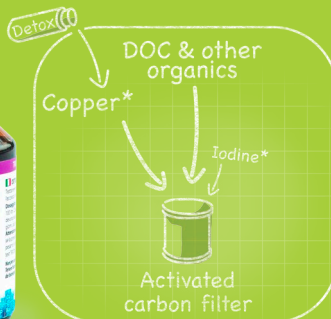
Note: as an aluminium based phosphate remover AL99 will also bind arsenic, barium and fluoride.



TRITON Detox

TRITON Detox is a useful treatment for the removal of excess heavy metals.

When Detox is added it binds with metals like copper and lead which can then be removed with a carbon filter.



***Note:** chemical filtration (e.g. activated carbon) is a useful tool to treat copper contamination. However, excessive use of activated carbon can remove Iodine from your water. This can be replaced via individual element dosing.

Activated Carbon

Activated carbon is well known in the hobby for removing pollutants from the water and the TRITON Method is no different. Carbon can be used in its own reactor or simply in a bag, placed in an area of good flow. Again this should be washed in RO/DI prior to use.



Triton recommends ICP testing after prolonged treatments.

Maintenance checklist

The following routine maintenance is good practice:

- Clean dosing containers and refill Base Elements solutions when required
- Inspect dosing hoses for blockages
- Replace AL99 every other month or when required
- Replace Carbon every month or when required
- Clean Skimmer regularly
- Prune Algae when required to prevent excess die back
- Syphon detritus out of sump every 3 – 6 months
- Routine ICP-OES testing every 2 – 3 months or when required to detect problems before they become lethal / expensive

Conclusion

We hope you enjoy using the TRITON Method of Reefkeeping and the benefits it brings:

- a stable ecosystem that combines peace-of-mind with ease-of-use
- the knowledge to replace trial and error with conscious control
- no more water changes!

The TRITON Method brings significant cost savings (from avoided system crashes / water changes) way in excess of the cost of the occasional ICP test.

Remember:

Test your seawater



Know what's in it



Act to fix it

Water changes

If you follow the TRITON Method (with algae sump and Base Elements dosing) then regular ICP testing will detect problems early making routine water changes a thing of the past. However, when contamination does occur a water change is a useful tool for rapid recovery. Only use good quality salts such as TRITON Pure Salt (which is guaranteed without impurities) or Tropic Marin Pro. Keep in mind that many salt manufacturers run their salts at elevated levels, so care should be taken in picking your brand. You can use an ICP test to quality assure your choice in which case mix the entire bucket before sampling to get a true representation of the mix.

TRITON MINDMAP



Comprehensive, affordable ICP-powered
full range laboratory seawater analysis



Quality assured reagents for creating, supplementing
and treating seawater

SEAWATER ANALYSIS

Inductively Coupled Plasma -
Optical Emission Spectrometry testing



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

... more coming soon

CORECHEM PRODUCTS

Base Elements

BASE ELEMENTS 1	BASE ELEMENTS 2
BASE ELEMENTS 3a	BASE ELEMENTS 3b

Base Elements CORE7 (7x concentrate)

CORE7 (1)	CORE7 (2)
CORE7 (3a)	CORE7 (3b)

TRITON PURE 2.0 Salt

PURE 2.0

Reef Supplements CORE7 (7x concentrate)

CORE7 (1)	CORE7 (2)
CORE7 (3a)	CORE7 (3b)

Salts for Balling and other methods

NaHCO ₃
CaCl ₂ Dihydrate
MgCl ₂ Hexahydrate

SUPPLEMENTS FOR SEAWATER

Trace elements

Co	Cr	Fe	I	Li	Ni
Mn	Mo	V	Zn		

Macro elements

B	Br	Ca	F	K	Mg
S	Sr				

TREATMENTS FOR SEAWATER

Phosphate remover

AL 99

Deionising resin for creating
very pure water

DI

Excess heavy metal remover

DETOX

Activated carbon for uptake of toxins
and other unwanted molecules

CARBON

Alkalinity Increaser CO₃

CO₃

manganese 25 Mn 54.938	boron 5 B 10.811	nickel 28 Ni 58.693	phosphorus 15 P 30.974	bromine 35 Br 79.904	aluminum 13 Al 26.981	sodium 11 Na 22.990	iodine 53 I 126.90	mercury 80 Hg 200.59	chromium 24 Cr 51.996	chlorine 17 Cl 35.453	vanadium 23 V 50.942	arsenic 33 As 74.922	copper 29 Cu 63.546	barium 56 Ba 137.33	nickel 28 Ni 58.693	sulfur 16 S 32.065
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TRITON METHOD

Test your
sea water



Know
what's in it



Act to
fix it

The TRITON Method is a holistic reefkeeping system that
combines the benefits of TRITON's research into advanced
elemental analysis of seawater (TRITON Lab) with highly pure

reagents for supplementing and treating seawater
(TRITON Reagents). Together with our famous customer support
TRITON innovation makes reefkeeping a pleasure, not a chore.



Franchise your own full range seawater analysis laboratory in-house



Free resources and tutorials for the reefkeeper (coming soon)

THE INVENTOR OF MODERN REEFKEEPING

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