Systemic aquarium care

The easy way to a permanently clear aquarium

sera®

The aquarium care system

The aquarium care system by **sera** solves all problems in freshwater aquariums in a few simple steps.

Example
Water care

- ✓ **with improved active agent formula**
- ✓ **easy and effective application**
- ✓ **scientifically tested**

Uncomplicated and safe with **sera**
- for optimal, extensive basic care
- for creating and lastingly maintaining appropriate water conditions
- for effective immediate help

Water testing

Basic precondition for creating optimal living conditions

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Water parameters ✓

Water care

Permanently appropriate water parameters and a stable biological equilibrium Page 8 – 9

Soft water care

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Water parameters ✗

Optimize water parameters

Uncomplicated and lasting immediate help in case of dangerous water parameters Page 12 – 13

Cure diseases

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Water testing

Knowing the relevant water parameters is the basic precondition for permanently providing the freshwater aquarium inhabitants optimal environmental conditions. Direct corrective measures are possible if the values are outside the recommended range. Besides regularly monitoring the standard water parameters, selected parameters for sourcing should be checked immediately in case of suspicious observations.

order code 04002

Checking the water parameters

pH value, carbonate hardness (KH), ammonium and nitrite
are – besides the water temperature – among the most important water parameters. Extreme deviation from the desired values may immediately lead to life threatening situations. Whenever the appearance or the behavior of the fish becomes conspicuous, or other anomalies (such as plants dying suddenly) are observed in the aquarium, you should first check the basic water parameters. The **sera Quick Test** strips are particularly easy to use and can be used for routine controls. We recommend the **sera** liquid test kits for more precise results.

Total hardness (GH), nitrate, phosphate, iron, copper, chlorine, silicate, carbon dioxide and oxygen
Experienced aquarists also know the desired values for these parameters in their aquariums. Checking them every now and then is usually sufficient. In case of a corresponding suspicion (e.g. intoxications, algae growth, gasping for air) the parameters in question must be checked immediately and in a directed way.

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Important water parameters and their desired values

Parameter	Importance	Desired value
pH value	All creatures in aquariums react sensitively towards pH value changes. Depending on the species kept, the pH value should be in the slightly acidic or a neutral (7) to slightly alkaline (8) range. Sudden pH value changes (such as rapidly sinking pH value) are very dangerous.	**6 – 8**
Carbonate hardness (KH)	The KH is defined by the hydrogen carbonate ion concentration in the water. Sufficiently high KH (at least 6°dKH) reliably buffers dangerous pH value variations.	**6 – 10°dKH**
Ammonium/ Ammonia (NH_4/NH_3)	Waste and breakdown product (of proteins), part of the nitrification cycle and a dangerous fish poison! Good biological activity provided, it is ideally not detectable.	**< 0.5 mg/l (better 0 mg/l)**
Nitrite (NO_2)	Waste and breakdown product (of proteins), part of the nitrification cycle and also a dangerous fish poison! Good biological activity provided, it is ideally not detectable.	**< 0.5 mg/l (better 0 mg/l)**
Total hardness (GH)	The GH is formed by the entirety of alkaline earth ions (mainly calcium and magnesium) and serves as an important mineral source.	**6 – 15°dGH**
Nitrate (NO_3)	Breakdown product and component of the nitrogen cycle. Hardly toxic plant nutrient that, however, supports algae growth in higher concentrations.	**< 50 mg/l**
Phosphate (PO_4)	Waste and breakdown product. Hardly toxic plant nutrient that, however – especially in higher concentrations –, is the most important support for uncontrolled algae growth.	**< 1 mg/l**
Copper (Cu)	Heavy metal already toxic in low concentrations, but also essential trace element as well as effective agent in some treatments and biocides.	**< 0.1 mg/l**
Silicate (SiO_3)	Diatoms are characterized by their silicate containing cell walls. Silicate levels above 2 mg/l in the aquarium water support their growth.	**< 2 mg/l**
Oxygen level (O_2)	O_2 is essential for all aquarium inhabitants for breathing, but it is also important for breakdown processes (uneaten food, fish waste, plant parts etc.). It is normal that the saturation changes according to the time of day due to photo synthesis. Good water agitation and not too warm water support the supply.	**> 4 mg/l (better > 6 mg/l)**

Tip: *Certain fish species (e.g. discus, angelfish or African cichlids) require water parameters that differ from these general desired values, especially for breeding. Your retailer knows about the species specific data concerning the optimal water hardness, the suitable pH value and other conditions (e.g. oxygen requirement).*

Your own measurements:

		Desired value							
	Date and time								
Standard measurement	pH								
	KH (°dKH)								
	NH_4 (mg/l)								
	NO_2 (mg/l)								
Test as required	GH (°dGH)								
	NO_3 (mg/l)								
	PO_4 (mg/l)								
	Fe (mg/l)								
	Cu (mg/l)								
	Cl (mg/l)								
	SiO_3 (mg/l)								
	O_2 (mg/l)								
Others (e.g. CO_2, temperature, conductivity)									

Water care

Water quality is the crucial factor for all aquarium inhabitants doing well. The **sera** care products for freshwater aquariums allow obtaining appropriate water parameters, safety against dangerous pollution and a stable biological equilibrium easily and lastingly. The most frequently occurring problems, such as water pollution, disease and algae pests, are prevented in the first place.

Condition water:

sera aquatan

Substances toxic for fish, such as chlorine and heavy metals, can get into the aquarium water with every water change. **sera aquatan** immediately removes the pollutants and conditions the water to fish friendly aquarium water rich in minerals for fish, invertebrates, plants as well as useful micro organisms.

In case of new setups, partial water changes and other stress situations

In case of new setups, partial water changes, new additions and filter cleaning

Create an equilibrium:

sera bio nitrivec

The dangerous toxic substances ammonium and nitrite are permanently formed in aquarium water as waste and breakdown products. The liquid biofilter medium **sera bio nitrivec** contains millions of purification bacteria that help create a stable biological equilibrium and thus continuously break down the arising toxic substances.

Raise KH/pH:

sera KH/pH-plus

Most fish species in community aquariums prefer slightly harder water (at least 6°dKH). **sera KH/pH-plus** gently raises the KH and the pH value and stabilizes them lastingly. Under these circumstances, the aquarium turns out particularly durable and easy to maintain. Dangerous pH variations are buffered safely.

In case of carbonate hardness below 6

For providing minerals and trace elements

Provide minerals:

sera mineral salt

Essential minerals and trace elements are often not sufficiently present in aquarium water. **sera mineral salt** provides all important trace elements as well as valuable calcium, magnesium and potassium in a directed way without increasing the KH. This closes the supply gap and stabilizes the mineral balance.

Soft water care

Some fish species (e.g. angelfish and discus fish) are accommodated to living environments with soft water and a generally acidic pH value. **sera** has developed the easy-to-use special "Soft water care" product range for creating and lastingly maintaining the optimal environmental conditions for them. Keeping the animals under conditions as natural as possible considerably increases their liveliness, their good health and, last not least, their successful reproduction.

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In case of new setups, partial water changes and other stress situations

In case of new setups, partial water changes, new additions and filter cleaning

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Lower pH/KH:
sera pH/KH-minus

Some fish species (e.g. discus and angelfish) are accommodated to soft water and require these conditions in particular for reproducing. In case the water is too hard or the pH value has risen due to natural metabolism processes, **sera pH/KH-minus** allows lowering the pH value and the carbonate hardness (KH) precisely and thus creating appropriate keeping conditions.

In case of too high pH and KH values

For lastingly stable softwater conditions

Permanently pH < 7:
sera super peat

After having adjusted the KH and the pH value with **sera pH/KH-minus**, **sera super peat** keeps the water permanently soft and slightly acidic. The functional granulate consisting of natural black peat releases valuable humic and fulvic acids for a long period of time. The blackwater effect achieved this way provides optimal breeding conditions for many fish species.

Optimize water parameters

In spite of effective care, imbalances may occasionally occur in an aquarium. Acutely life threatening water conditions may result from this. There are many possible causes – besides the usual startup difficulties with new setups, these include larger maintenance and cleaning measures, disease treatments and overfeeding. The **sera** “Optimize water parameters” care product range provides the suitable products for removing the problem as quickly as possible, in an uncomplicated way and lastingly, and for obtaining optimal environmental conditions again.

Remove pollutants:

sera toxivec

Destabilizing factors, such as overfeeding, overstocking or new additions, may lead to sudden and massive pollution peaks by ichthyotoxic pollutants such as ammonia and nitrite in the aquarium water. In such emergency situations, **sera toxivec** immediately removes these toxic substances, as well as other dangerous substances such as chlorine and heavy metals. This makes emergency water changes, which mean stress for the fish, unnecessary.

In case of acute water pollution

In case of new setups, partial water changes, new additions and filter cleaning

Create an equilibrium:

sera bio nitrivec

The dangerous toxic substances ammonium and nitrite are permanently formed in aquarium water as waste and breakdown products. The liquid biofilter medium **sera bio nitrivec** contains millions of purification bacteria that help create a stable biological equilibrium and thus continuously break down the arising toxic substances.

For removing cloudiness and phosphate

In case of acute oxygen deficiency

Remove cloudiness and phosphate:

sera phosvec·clear

Mineral as well as dead organic material may lead to cloudiness. The latter may additionally increase the phosphate level in the water and thus support algae growth. **sera phosvec·clear** binds cloudiness, removes excess phosphate and thus prevents algae growth.

Supply oxygen:

sera O_2 plus

The breath of the inhabitants and other natural breakdown processes constantly consume oxygen in the aquarium. While even slight under supply already causes stress, extreme oxygen deficiency is quickly fatal. **sera O_2 plus** immediately adds oxygen and thus improves the living conditions for all aquarium inhabitants.

Cure diseases

Good keeping conditions are the best disease prevention. In spite of all efforts, however, diseases can not entirely be avoided. Quick and consistent reaction is required, regardless of having introduced the pathogens by new additions or plants, or other factors being responsible for the disease outbreak. The **sera** range of disease treatments “Cure diseases” accompany the therapy from supporting preparation via the treatment itself with specialized, effective **sera** treatments, up to cleaning and biologically activating the water after a successful treatment.

Prepare water:

sera ectopur

The salt blend **sera ectopur** releases active oxygen. Breathing is alleviated, and stress is being reduced. The contained salt stimulates the new formation of mucous membranes and thus supports the removal of pathogens on or within the skin. The efficacy of disease treatments is being supported, and regeneration is considerably accelerated.

Before disease treatments and in case of stress

Create an equilibrium:

sera bio nitrivec

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In case of new setups, partial water changes, new additions and filter cleaning

Treat diseases:

sera Phyto med
sera med Professional
sera med

Occurring diseases can be reduced by good care conditions, but unfortunately it can never be entirely excluded. Proceeding quickly and consistently is crucial if ever the fish are ill. **sera** provides a full range of effective treatments for the directed treatment of the most frequently occurring diseases of fish in freshwater aquariums.

In case of aquarium fish diseases

After disease treatments and in case of intoxications

Tip: *The guide "Healthy aquarium fish" (www.sera.de/en) provides more specific advice for using the* **sera** *treatments correctly and safely.*

Remove pollutants:

sera super carbon

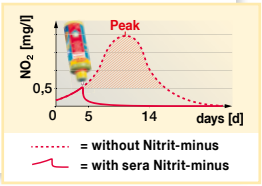
The phosphate free special active carbon **sera super carbon** not only removes treatment remainders, but also other dangerous toxic substances and tints. It does so quickly, effectively, without side effects, and without affecting the pH value. When bound in the pellets, these substances can simply be disposed of water neutrally and environmentally friendly with the domestic waste.

Water care special

Prevent new tank syndrome:

sera Nitrite-minus

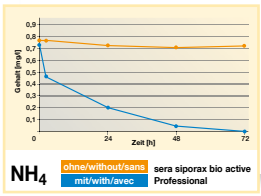
Dangerous accumulation of toxic nitrite (so-called new tank syndrome) is a threat during the starting phase, after a disease treatment or a complete filter change – thus always when the biological filtration is (not yet) fully active. **sera Nitrite-minus** removes up to 1.5 mg/l (ppm) nitrite even with a single dosage. This reliably allows preventing new tank syndrome and removing nitrite in case of acutely elevated levels before animals get harmed permanently or even die.



The “dry water conditioner”:

sera siporax bio active Professional

The unique “dry water conditioner” combines stabilizing biological filtration and effective and quick water conditioning pollutant removal. Pollutant utilizing bacteria remove pollutants such as ammonium and nitrite from the water already soon after the first contact with water. Sludge is broken down more quickly, and a critical pollutant depot is thus rendered harmless. The biological equilibrium is stabilized, and maintenance intervals are prolonged.



Increasing water hardness:

sera GH/KH-plus

Water hardness is an important environmental factor in the aquarium. The total hardness (GH) provides essential minerals such as magnesium and calcium while sufficient carbonate hardness (KH) prevents dangerous variations of the pH value. Some fish species such as cichlids from Lake Tanganyika require rather hard water for doing well. **sera GH/KH plus** gently and lastingly increases both GH and KH in a simple step. This allows hardening R/O or soft tap water in a directed way, adjusting parameters for fish preferring hardness and compensating the natural consumption of hardness forming minerals.

Blackwater – entirely natural

Tropic aquarium fish, shrimps and crayfish often originate from so-called blackwater biotopes. The water has a dark tint caused by dissolved humic and fulvic acids there. Many of these substances dissolved from forest ground or swamps have stress reducing and growth enhancing properties. Besides the special filter medium **sera super peat**, **sera** offers three more products that imitate these beneficial biotope conditions in a natural way.

sera blackwater aquatan

It reliably and lastingly creates a blackwater effect without affecting the pH value. Toxic heavy metals are bound immediately. The amber colored, clear water has a stress reducing effect on the animals, and they will display their most beautiful colors. The light filtration also has an inhibiting effect on algae growth.

sera Catappa Leaves

The tropical almond leaves support the natural behavior and readiness to spawn of many aquarium inhabitants. The released substances help preventing bacterial and fungal infections and have an astringent effect so injuries can heal more quickly. Shrimps, crayfish and catfish also like grazing off the leaves very much.

sera Alder Cones

The alder cones release substances that give the water a slightly brownish tint and condition it in a way close to nature. The pH value is gently lowered, and fungal infections and spawn fungus are prevented in a natural way. Readiness to spawn and natural behavior are supported.

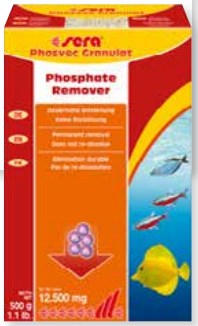
Sustainable algae control

Algae are a natural and usually useful component of the living community in an aquarium. They only become a nuisance if their growth becomes excessive due to certain environmental conditions. Good general water hygiene, especially sufficient partial water changes while removing sludge and uneaten food as well as preventing overfeeding, provided, abundantly growing plants (as nutrient competitors for algae), suitable lighting and adding sole algae eating animals are in most cases already sufficient for preventing visible algae growth in the aquarium. However, algae supporting living conditions may arise with new setups or other destabilizing events despite being very careful. **sera** provides a number of products for algae prevention that prevent unsightly and often stressing mass multiplication without using a “chemical hammer”.

Lasting phosphate removal:

sera Phosvec Granulat

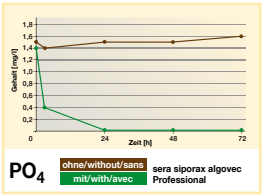
Only small amounts of the important plant nutrient phosphate need to be dissolved in the water for allowing the plants to grow well. In case of elevated levels – especially from uneaten food and fish waste – phosphate often causes algae problems. The absorbing **sera Phosvec Granulat** filter medium easily and safely removes phosphate with permanent effect.



Effective nutrient competition:

sera siporax algovec Professional

This biologically activated filter medium prevents excess algae growth in a natural way. The nutrient utilizing bacteria applied in a stable dormant form take up their work and start multiplying within shortest time upon contact with water and remain active lastingly. The **sera siporax** carrier material optimizes the performance of the bacteria as its complex surface structure creates ideal settling conditions for the bacteria. Excess polluting and algae supporting substances such as phosphate are removed in a natural way.



Lasting silicate removal:

sera Silicate Clear

Mass multiplication of diatoms frequently occurs especially during the unstable start phase of an aquarium. The absorbing **sera Silicate Clear** filter medium quickly and lastingly removes excess silicate, which the diatoms require for building their shells, from the water. It thus prevents the growth of these unpopular and unsightly brown layers.

Physical water clarification:

sera UV-C Systems

The **sera UV-C Systems** irradiate the water flowing by with hard ultraviolet radiation. This destroys algae stages, pathogens and parasites in an entirely physical way. Due to the lower pathogen pressure, fish health is lastingly enhanced, and the algae population is effectively reduced, entirely without toxic biocides. The incapacitated algae cells coagulate and are removed from the water current by the mechanical filter media.

Forward-looking mechanical filtration:

sera crystal clear Professional

Due to its innovative patented 3-D fiber structure, the high performance filter medium for mechanical filtration removes even smallest particles above 10 µm (e.g. floating algae, sludge) within shortest time. Unlike common filter wool, the filter balls keep their shape and can be washed out several times. **sera crystal clear Professional** is the perfect addition to the biological **sera siporax Professional** filter medium.

The aquarium care system by sera solves all problems in freshwater aquariums in a few simple steps

Water testing

Water parameters alright

Water care

- Condition water — sera aquatan
- Raise KH/pH — sera KH/pH-plus
- Provide minerals — sera mineral salt
- Create an equilibrium — sera bio nitrivec

Soft water care

- Condition water — sera aquatan
- Lower pH/KH — sera pH/KH-minus
- Permanently pH < 7 — sera super peat
- Create an equilibrium — sera bio nitrivec

Water parameters not alright

Optimize water parameters

- Remove pollutants — sera toxivec
- Remove cloudiness and phosphate — sera phosvec·clear
- Supply oxygen — sera O_2 plus
- Create an equilibrium — sera bio nitrivec

Cure diseases

- Prepare water — sera ectopur
- Treat diseases — sera treatments
- Remove pollutants — sera super carbon
- Create an equilibrium — sera bio nitrivec

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sera®

We Love Fish

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