

# Jaydee Aquatics

## STARTING YOUR FIRST MARINE AQUARIUM

Congratulations on deciding to enter into what is a most rewarding hobby. Keeping a marine aquarium is not too difficult but you do need to follow some guidelines to ensure success. The purpose of this leaflet is to guide you through the first few weeks of your aquarium and to advise you of a few of the things you should do and be aware of, and actions you should take to minimise problems.

***Once you get your tank home you should rinse this with clean water to ensure that any chemicals left over from manufacture are removed.***

Do not use any cleaning agents to do this, normal hot water will suffice.

***Site your aquarium out of direct sunlight and away from any source of direct heat.*** In other words, don't put it in a window or conservatory or over a radiator. The excess light from a window can cause algae growth which can make the aquarium look unsightly and can smother corals etc. Aquariums sited in conservatories can suffer from both excess light and heat and can be extremely difficult to maintain successfully without very sophisticated equipment. It may seem like a good idea to site an aquarium over a radiator as the heat from this will keep the tank warm in winter, however this is uncontrolled heat and an overheated marine aquarium can be a dead marine aquarium.

***Place the aquarium where you can be in complete control of both light and heat.***

***Aquariums are very heavy when full,*** a marine aquarium can be even heavier due to the amount of rock and coral often used, so make sure that it is sited on a proper support. Most aquariums can be purchased with purpose built stands and we recommend that you use one of these. If you are using an existing piece of furniture or a shelf you must assure yourself that it is capable of holding the weight, that it will not sag and that it will not be spoilt if salt water spills on it. Also bear in mind that most manufacturers will only guarantee their aquariums if they are sited on their own stands. ***Always support the aquarium on a strong level surface.***

***Once your aquarium is in position fill it with water and check it is level and does not move.*** If you have purchased ready mixed salt water you can use this for this initial fill. Only fill the aquarium to app  $\frac{3}{4}$  at this stage as you still have to add the live rock and sand.

If you are going to mix your own salt water fill the aquarium almost to the top, leave about 1" for the salt. If you intend to keep a reef aquarium use reverse osmosis filtered water for this. If you only intend to keep fish you can use normal dechlorinated tap water. Add sufficient salt for the volume of water used (you will be able to calculate how much salt to use from the details on the packet.

**When the salt water has been added to the aquarium turn on all pumps, heaters and if possible filtration system and leave for 24 hours.** (If you have only partly filled the aquarium ensure that all pumps, heaters and filter intakes are below the water level).

**Do not add any sand to the aquarium at this stage.** This will be added later after you have introduced the first batch of live rock. If you have purchased live sand keep this in its bag, don't open the bag until you are ready to use it.

**"Cure" your hydrometer.** Follow the initial curing procedure on your hydrometer (if you have purchased one), it is important to do this at this stage as you will need it tomorrow.

**After 24 hours check the salinity with the cured hydrometer and check the temperature of the water.** The ideal salinity should be 1.022 density or 30 ppm. Don't worry if it is just a few points different, at this stage anything between 1.020 (27ppm) or 1.025 (34ppm) is acceptable. If you haven't got a hydrometer obviously you won't be able to check the salinity of the water. If you have purchased ready mixed salt water don't worry, this will have been mixed for you to roughly the correct level. However if you have mixed the water yourself it is imperative you have the salinity checked before you proceed further.

The temperature of the water should be 78f or 25c, if different adjust the thermostat on your heater to correct (turn adjuster knob clockwise to increase, anti-clockwise to reduce, the temperature). If your heater has an adjustment scale check this as you turn the knob. After adjustment leave for a few hours and check the temperature again and adjust again if necessary.

**When salinity and temperature are correct you can add the first batch of live rock.** You may have already purchased live rock as part of your aquarium "deal" if so this will be an initial introduction only, it is not wise to purchase more at this stage. If you are buying the live rock, don't attempt to fill the aquarium with this at this stage. Live rock carries many live animals on and in it, your aquarium is sterile and will not contain enough food to feed all of those animals, so some may die. Those that die will help to feed those that live, by adding more live rock later when the aquarium is more established, you will re-introduce more of those creatures that have died and thus complete the variety of animals necessary to maintain the aquarium. If you have mixed your own salt water and your aquarium is full you will need to take out, and store, sufficient water to allow the addition of the live rock.

When you get your live rock home place this in the aquarium and add the coral sand around the rock. Don't put sand under the rock as problems may occur later if you do. Don't make the sand too deep, 1/2" or 1cm is quite sufficient and a deeper bed may cause water quality problems later.

**You can now top up the aquarium with the remaining salt water,** and turn on any equipment that could not be used with the lower water level.

**You may now turn on the aquarium lights if you wish,** it is not necessary to do this for the live rock but it is nice to see the aquarium working. If you do turn them on only have them on for about 6 hours a day. The lights should be on for a continuous period and it is wise to put them on a timer so that they come on and go off at the same time each day, your animals will then get used to this pattern. Once your aquarium is lit algae will start to develop, this will be most obvious on the front glass. This is completely natural and can be cleaned using a special magnet cleaner. If you don't have one of these ask the Jaydee staff to show one to you.

**Leave your aquarium to settle for at least a week before adding any further animals to it.** You will notice that there will be some small shrimps, worms and possibly crabs coming out of the live rock. If you have any crabs it is probably best to remove them at this stage as they may cause you problems later. Don't destroy them, it isn't their fault they have ended up in your aquarium, bring them back to Jaydee and we will give them a home where they can't do any damage.

**Throughout this first week it is wise to check water parameters regularly.** If you have a test kit you will need to check the following:

**Ammonia** – this should be zero

**Nitrite** - this should be zero

**pH** – the ideal level is 8.3 but anything between 7.9 and 8.4 is acceptable at this stage

**Density** – between 1.020 (27ppm) and 1.025 (34ppm)

***You may find that the water level in the aquarium has dropped through evaporation and the density has risen.*** If this has happened you should add pure (RO) water to the aquarium to return this to its original level. Do not add salt water as the salt and other components of the water do not evaporate and if you do add salt water you may increase these above acceptable levels.

***If ammonia or nitrite are above zero you may need to take remedial action before adding any further livestock to the aquarium, discuss this with Jaydee staff.***

If you don't have a test kit you will need to bring a sample of water to Jaydee for testing, a small charge may be made for this.

***At the end of the first week if all parameters are stable you may add your first animals to the aquarium.*** It is very tempting to put fish in at this stage, but this is not a wise thing to do, your aquarium is still unstable and adding fish could cause water quality problems. We recommend that you add a "Clean-up crew" consisting of turbo snails and hermit crabs. These will help to clean the live rock of any unwanted algae, etc before you add the real inhabitants of the aquarium. The number of these to be added will vary according to the size of the aquarium but as a general rule 3 of each for each 30 litres of water is normal.

***When you get your first animals home it is important that you add them to the aquarium carefully.*** Turn off the aquarium lights and float the bags unopened in the aquarium. Take care to ensure that the extra water you are now adding to the aquarium does not cause this to overflow. Float the bags for 15 – 20 minutes before opening them, this will allow temperatures inside the bags to equal that in your aquarium. After 15 - 20 minutes open the bags and roll down the tops to form a floatation collar around the bag. Add ½ cupful of aquarium water to each bag, repeat this at 5 minute intervals for at least 30 minutes. This allows the animals to slowly adjust to your aquarium water and is very important to ensure their survival. After this time you can release them into the aquarium, do this by sinking the bags below the surface of the water and removing the animals by hand and placing them on the rockwork. Try not to remove them from the water. Turbo snails and hermit crabs should be placed the right way up (shell upwards) on the rockwork as they sometimes have difficulty righting themselves if upsidown. After you have added them to the aquarium you can if you wish turn the lights back on

You should at this stage extend the lighting period to 9 hours a day.

***You will not need to add any food to the aquarium for the snails and crabs*** as you want them to "work" on the live rock.

***Hermit crabs shed their outer skeleton in order to grow*** and it is not unusual to see empty skins in the aquarium. If you do see this don't take the empty snail shell the crab was living in out of the water, the crab may well still be inside waiting for its new skin to harden. Also leave the old skin in the aquarium, its good food for the crab and other animals.

***Throughout the following week it is again important to check water parameters regularly (as above) and take any action necessary.*** As you now have livestock in the aquarium it is important to take prompt remedial action if parameters are incorrect. Talk to Jaydee staff about this if necessary

***At the end of the second week if parameters are still stable you may proceed to stock the aquarium.*** Take things slowly however, don't be tempted to fill the aquarium with fish, only add one or two and take careful advice about which to buy. Some fish are not compatible with one another, some eat corals and other invertebrates. It is wise to make up a list of those fish you like, buy a book or look at fish sites on the internet, check their habits and feeding requirements, also take advice from Jaydee staff. Have a plan as its best to add some fish before others and knowing what you want in the aquarium can save expensive mistakes in the future.

If you want to add corals at this stage there are some which will be suitable, talk to Jaydee staff about this.

***You will also need to buy food appropriate for the animals.*** Discuss this with Jaydee staff.

***If you have bought corals or other invertebrates follow the same introduction procedure outlined above for snails and crabs.***

***If you have bought fish follow the same introduction procedure outlined above for snails and crabs but do not turn the lights on until the following day.***

***Now you have added other animals to the aquarium you will need to feed them.*** Once a day is adequate, ensure all the food is eaten within 5 minutes. If any is left try to remove this and do not feed so much next time. This is very important as any uneaten food will cause water quality problems.

***It is very important to continue to carry out regular water parameter tests and essential to take prompt remedial action if ammonia or nitrite levels rise above zero. Both of these are very toxic in salt water and can quickly kill fish.***

***You should also check your fish regularly to ensure they are healthy,*** fish with spots, fish which rub themselves on rock or other surfaces, or which look "down" need help. As a beginner you will not always notice problems developing but if you do it is important to take action quickly as fish diseases can take hold very quickly and become difficult to treat if left too long.

***The most common disease problems you will encounter are:***

**Marine White Spot** – although this appears to be the same as white spot in freshwater it is caused by a different pathogen with a totally different life-cycle. It can be quickly cured by using copper sulphate but as this is fatal to invertebrates, and to the bacteria in your filter and on your live rock, it may not be the best cure for your aquarium. There are other treatments e.g. Octozin and Exodin which are suitable for use in aquariums which contain invertebrates and you should use one of these if you have, or intend to introduce, any corals or other invertebrates in the future.

**Oodinium or Clownfish Disease** – Although referred to by some books as clownfish disease it does not only affect clownfish but most marine fish. It is a very quick killer and will decimate a marine aquarium if allowed to. A lot of marine fish carry the parasite as part of their natural body flora/fauna and they have a natural immunity to it. However the stress of moving to a new aquarium can lower the fishes immune levels and allow the parasite to take over. The symptoms are easily overlooked in the early stages and you should be very vigilant to ensure that you can take action if and when necessary. If any of your fish constantly rub themselves against rockwork etc., but you cannot see any signs of parasites, if they appear to be breathing faster than normal, are constantly swimming into the outflow from pumps or gasping at the surface there is reason for concern. If these symptoms are coupled with a loss of colour (the fish look paler) and a look of general discomfort, but you can't see anything on the body of the fish then they probably are suffering from the Oodinium parasite and must be treated immediately.

Oodinium will wipe out all the fish in an aquarium very quickly once it gets a hold and the same treatment as for white spot must be administered immediately.

Hopefully you won't encounter any parasites or diseases but constant vigilance is very important and will enable you to spot these and other problems quickly and to take advice from Jaydee staff on how to deal with them.

***Now you have added fish to your aquarium it is time to think about adding more live rock.*** You must remember that live rock is a critical part of most marine filtration systems and is vital to the day to day operation of the aquarium it is important therefore that you balance the amount of live rock to the other livestock in the aquarium and add new live rock regularly. You do not need to fill the tank at this stage but the addition of future live rock must be treated with the same importance as you would give to other additions to the aquarium

By now your aquarium should be operating well and you should be settling into the routine of testing and glass cleaning. But your aquarium is a living thing and must go through various stages before it settles into a permanent routine. After the aquarium has been running for 5 – 6 weeks you may notice the sand and rocks are starting to turn brown and look unsightly. Don't panic, this is part of the cycle every marine aquarium goes through, the brown is caused by a diatom which eats silicate. Silicate is present in most marine aquariums, it comes from the water supply (it is added by water companies to protect pipes), from the glass in new aquariums and from the coral sand. This diatom is brown, it feeds only off silicate and doesn't eat anything else, it ties up the silicate into an internal shell which locks it up for good, because it can't eat anything else when the silicate is gone the diatom dies and the brown goes away. This can take 2 – 3 weeks but you can speed it up, or stop it altogether, by using a silicate remover, ask Jaydee staff for details.

**You may have purchased a protein skimmer and may be wondering why you haven't been told to set this up.** If you have one you can, by all means, connect this to the aquarium, in fact if you have bought a "system" aquarium the protein skimmer is an integral part of the filtration system and you will probably have already connected this when setting up the aquarium filter. However if you haven't yet connected the skimmer, or don't have one, don't worry, most marine aquariums will run quite happily for the first three or so months without needing protein skimming. Your aquarium will tell you when a skimmer is needed, you will notice a film developing on the water surface. As soon as you see this you need a skimmer. If you don't have one talk to Jaydee staff who will advise on the most suitable model for your aquarium.

### ***General maintenance***

After your aquarium has been running for 4 – 5 weeks it is time to think about a partial water change and a general clean-up. Syphon off about 10% of the water, taking the opportunity to siphon any dirt from the sand and rocks at the same time and replace this with new salt water to the same salinity and temperature as your aquarium. You should try to do this once a month. The animals in the aquarium are constantly removing some of the trace elements from the water, by doing regular water changes you replace these elements and maintain your aquarium in peak condition.

There is much more to the successful long term maintenance of your marine aquarium than we have tried to cover in this article. Jaydee staff are always happy to answer your questions and advise you in detail about this fascinating hobby, don't be afraid to ask. No matter how trivial you may think your question is, it could be the most important question you have ever asked..