

# Maintaining Proper Water Quality in the Home Aquarium

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Ensuring appropriate water parameters and environmental requirements is fundamental to reduce tank mortality.

## Freshwater Parameters

The following chart provides acceptable water parameter ranges for different types of freshwater aquariums, brackish water aquariums, and ponds. The water parameters listed serve as a general guideline for maintaining each specific type of aquarium or pond. Some species of fish, plants, or invertebrates may have more specific requirements, so please review each individual species description for more information.



Parameter	<u>Freshwater Community</u>	<u>African Cichlid</u>	<u>Freshwater Plants &amp; Discus</u>	<u>Brackish</u>	<u>Pond</u>
<b>Temperature</b>	72 - 82°F	72 - 82°F	76 - 86°F	72 - 82°F	33 - 86°F
<b>pH</b>	6.5 - 7.5	7.8 - 8.5	6.0 - 7.5	7.5 - 8.4	6.5 - 7.5
<b>Ammonia</b>	0.0	0.0	0.0	0.0	0.0
<b>Nitrite</b>	0.0	0.0	0.0	0.0	0.0

<b>Nitrate</b>	< 50 ppm	< 50 ppm	< 30 ppm	< 50 ppm	< 50 ppm
<b>Alkalinity (Carbonate Hardness)</b>	4 - 8 KH	10 - 18 KH	3 - 8 KH	10 - 18 KH	4 - 8 KH
<b>General Hardness</b>	4 - 12 GH	12 - 20 GH	3 - 8 GH	12 - 20 GH	4 - 12 GH

### Marine Parameters

The following chart is a general guideline of acceptable water parameter ranges for different types of tropical [marine](#) aquariums. Some types of displays such as FOWLR (Fish Only With Live Rock) aquariums have a broader range of parameters than a reef aquarium. This is due to the delicate nature of corals and invertebrates that are commonly maintained in a reef aquarium. Some species of fish, plants, or invertebrates may have special requirements, so please review each individual species description for more specific information. For reference we have also provided the average water conditions measured on tropical coral reefs across the world.



Parameter	Suggested Level: Reef Aquarium	Suggested Level: FOWLR Aquarium	Average Level: Coral Reefs
<b>Specific Gravity</b>	1.023 - 1.025	1.020 - 1.025	1.025
<b>Temperature</b>	72 - 78°F	72 - 78°F	82°F
<b>pH</b>	8.1 - 8.4	8.1 - 8.4	8.0 - 8.5
<b>Alkalinity</b>	8 - 12 dKH	8 - 12 dKH	6 - 8 dKH
<b>Ammonia (NH3)</b>	Undetectable	Undetectable	Near Zero
<b>Nitrite (NO2)</b>	Undetectable	Undetectable	Near Zero
<b>Nitrate - Nitrogen (NO3)</b>	< 1.0 ppm	< 30 ppm	0.25 ppm
<b>Phosphate (PO4)</b>	< 0.2 ppm	< 1.0 ppm	0.13 ppm
<b>Calcium</b>	350 - 450 ppm	350 - 450 ppm	380 - 420 ppm
<b>Magnesium</b>	1250 - 1350 ppm	1150 - 1350 ppm	1300 ppm

<b>Iodine</b>	0.06 - 0.10 ppm	0.04 - 0.10 ppm	0.06 ppm
<b>Strontium</b>	8 - 14 ppm	4 - 10 ppm	8 - 10 ppm