Aquarium Microbiome Test Report

About this report

Generated on: Sat May 15 15:28:26 2021

These data provide detailed information on the community of microbes (Bacteria and Archaea) living in your aquarium. For this analyis we extracted DNA from microbes sampled from water and biofilm communities. Universal primers were used to amplify a genetic marker from this combined sample, and thousands of individual DNA molecules from this mixture were sequenced. Each sequence was then compared with public DNA databases to identify its origin.

This report summarizes the different kinds of microbes in your sample, and their relative abundance, with a special focus on beneficial and harmful microbes for the saltwater aquarium industry and hobby.
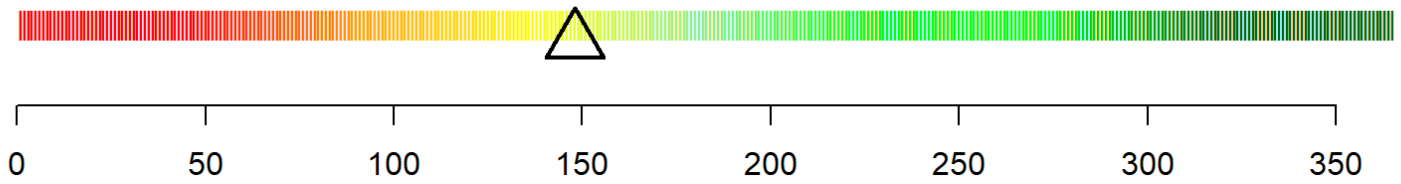
Information about the sample

Sample ID	p517
Sample Name	Tank crashing 4/2021
Tank Name	75 Gallon
Sample Date	2021-04-21 05:45 PM

Diversity

This score is a measurement of the number of different types of Bacteria or Archaea in the sample. Read more about Microbial Diversity here. Please note that we have recently updated the way we calculate diversity, so contact us if you'd like us to update any previous reports for comparison.

Diversity Score (Percentile)
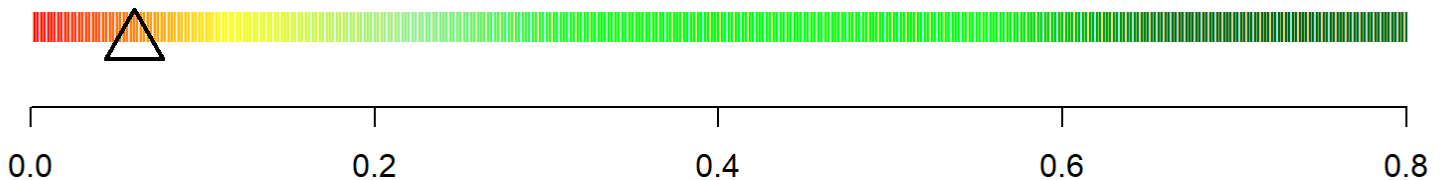
148 (54)

Your sample had a diversity similar to the typical reef tank.

Balance

This score compares the microbiome in your tank with that of a typical reef tank. High scores indicate a typical community, while low scores indicate an atypical community. Read more about this score [here](#).
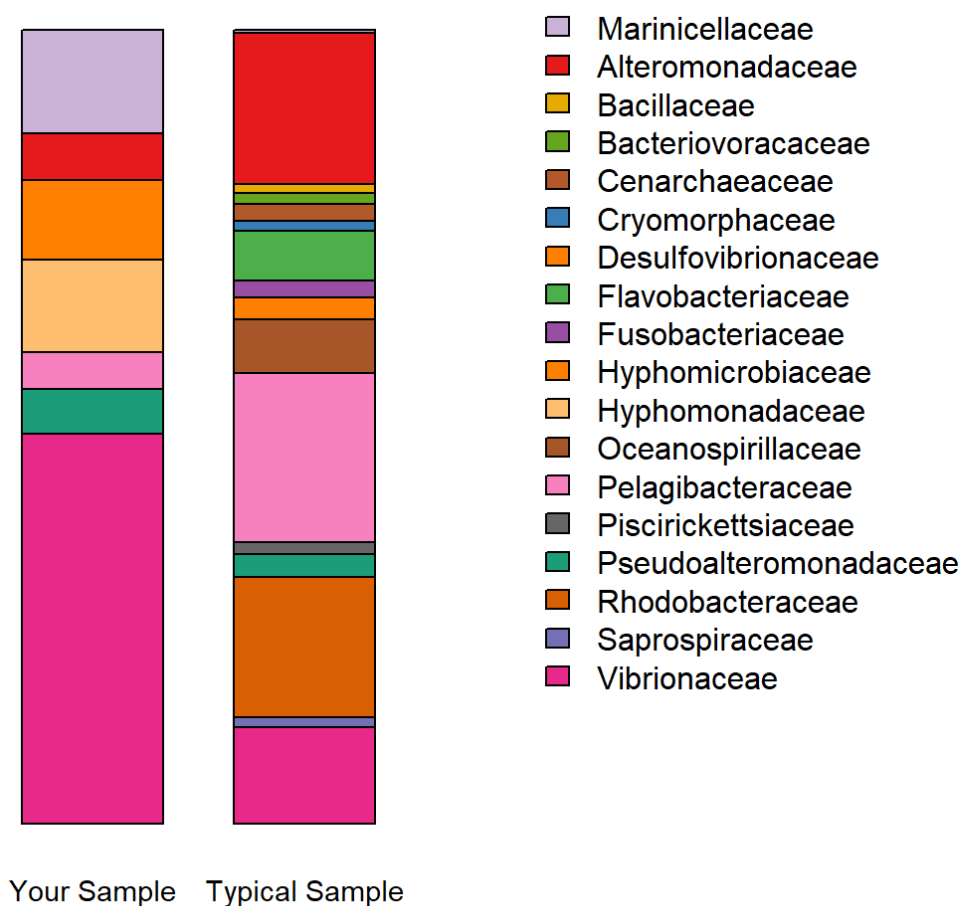
Balance Score (Percentile)

0.06 (24)

The balance of microbial groups in your tank is very different than most tanks we've tested. If you're interested in increasing this score, please see [these notes](#).

Community Composition

This figure shows the reasons for your balance score. Compare your sample with the typical community to identify families that are unusually high or low in your sample. Read more about the major families of microbes in reef tanks [here](#).

Your Sample   Typical Sample

The size of each bar indicates the relative abundance of each microbial family, coded by color. For clarity, only the families accounting for at least 1% of either community are shown here.

Your sample showed differences in the relative abundance of one or more of the major microbial families, compared with the typical reef tank. Learn more about these families here or at the links below.

Higher than typical

Vibrionaceae

Hyphomonadaceae

Desulfovibrionaceae

[Marinicellaceae]

Lower than typical

Rhodobacteraceae

Pelagibacteraceae

Oceanospirillaceae

Flavobacteriaceae

Alteromonadaceae

Nitrifying Community

These communities include ammonia-oxidizing Bacteria (AOB), ammonia-oxidizing Archaea (AOA), and nitrite-oxidizing Bacteria (NOB). Although present at detectable levels in most tanks, there turns out to be more variation in the levels of these groups than many aquarists expected.

Ammonia-Oxidizing Microbes

Group	Your Frequency	Typical Range
Total	**0.00281**	**0.00083 - 0.04964**
Nitrosococcus	0	0 - 0
Nitrosomonadaceae	0.00281	0 - 0.00177
Nitrososphaeraceae	0	0 - 0
Cenarchaeaceae	0	0.00083 - 0.04787

Note:
Typical range is between the 10th and 90th percentiles. High levels (>50th percentile) are color coded green, intermediate levels (between 10th and 50th percentiles) are coded yellow, and low levels (< 10th percentile) are coded red.

Nitrite-Oxidizing Bacteria

Group	Your Frequency	Typical Range
Total	**0**	**0 - 0.00354**
Nitrobacter	0	0 - 0
Nitrococcus	0	0 - 0
Nitrotoga	0	0 - 0
Nitrospinaceae	0	0 - 0
Nitrospiraceae	0	0 - 0.00354
Nitrolancea	0	0 - 0

Note:
Typical range is between the 10th and 90th percentiles. High levels (>50th percentile) are

color coded green, intermediate levels (between 10th and 50th percentiles) are coded yellow, and low levels (< 10th percentile) are coded red.

The nitrifying community in your tank is less abundant than most tanks we've tested. If you're interested in increasing these levels, please see [these notes](#).

Cyanobacteria

Group	Your Frequency	Typical Range
Total	**0**	**0 - 0.00055**
Acaryochloridaceae	0	0 - 0.00055
Chlorarachniophyceae	0	0 - 0
Cyanobacteriaceae	0	0 - 0
Nostocaceae	0	0 - 0
Oscillatoriaceae	0	0 - 0
Phormidiaceae	0	0 - 0
Prochloraceae	0	0 - 0
Pseudanabaenaceae	0	0 - 0
Rivulariaceae	0	0 - 0
Spirulinaceae	0	0 - 0
Schizotrichaceae	0	0 - 0
Scytonemataceae	0	0 - 0
Synechococcaceae	0	0 - 0
Xenococcaceae	0	0 - 0

Note:
Typical range is between the 10th and 90th percentiles. High levels (>90th percentile) are color coded red, intermediate levels (between 50th and 90th percentiles) are coded yellow, and low levels (< 50th percentile) are coded green.

Your sample showed little or no evidence of Cyanobacteria.

Fish Pathogens

Type	Frequency	Name
709	**0.0087**	**Photobacterium damselae**

Your sample contained one or more Bacterial pathogens of fish. To read more about whether this is a concern, and how you might address it, please see [these notes](#).

▶ View the full table

Coral Pathogens

None of the DNA sequences from this sample matched known coral pathogens.

▶ View the full table

DNA analysis conducted by [AquaBiomics LLC](#).