



Aquarium Microbiome Analysis Report

About this report

This report describes the results from DNA analysis of the following sample:

Sample ID	1000037
Sample Name	PNWMAS Free Sample
Tank Name	120gal tank
Sample Date	5/3/2019 20:43

These data provide detailed information on the community of microbes living in your aquarium. Each type of microbe in your sample was identified by comparing DNA sequences from your sample with a database of DNA sequences from known types. The relative abundance of each sequence can be used to compare the relative abundance of each type across samples.



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How to interpret your report

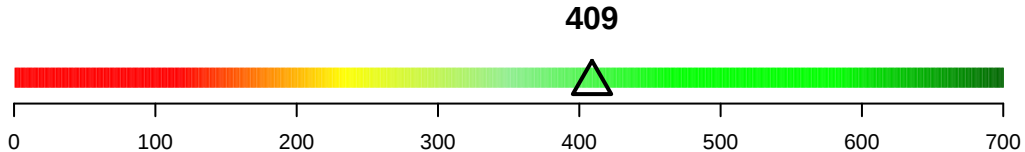
Color Code	Diversity Score & Number of Types	Balance Score
Typical	Your tank has a diverse microbial community, typical for mature reef tanks. <i>Celebrate your success!</i>	Your tank's microbiome is well-balanced, with each type present at the relative levels typical for mature reef tanks. <i>Enjoy your healthy ecosystem!</i>
Marginal	The diversity of your tank's microbiome is at the lower end of the typical range. <i>Continue to monitor.</i>	Differences between your tank's microbiome and the typical profile are greater than the similarities. <i>Continue to monitor.</i>
Low	Your tank's microbiome lacks the kind of diversity found in mature reef tanks. <i>Consider adding biodiversity from live rock or other sources of live microbes.</i>	The balance between different microbial types in your tank is very different from the profile of typical reef tanks. <i>If your tank isn't doing well, considering adjusting your tank's microbiome by modifying nutrient import or export in your system.</i>



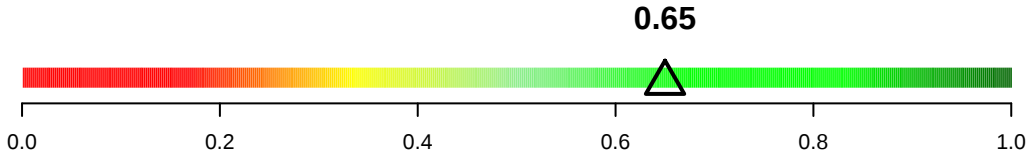
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Part 1: Diversity and balance of your tank's microbiome

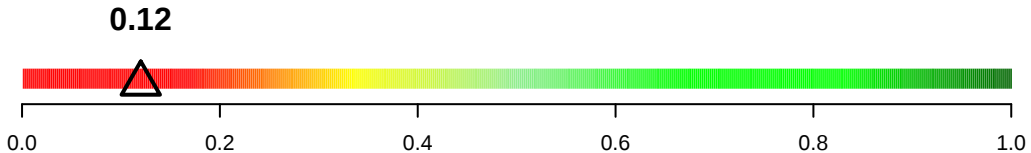
Number of Microbial Types



Diversity Score (Percentile)



Balance Score (Correlation with Typical Abundance)



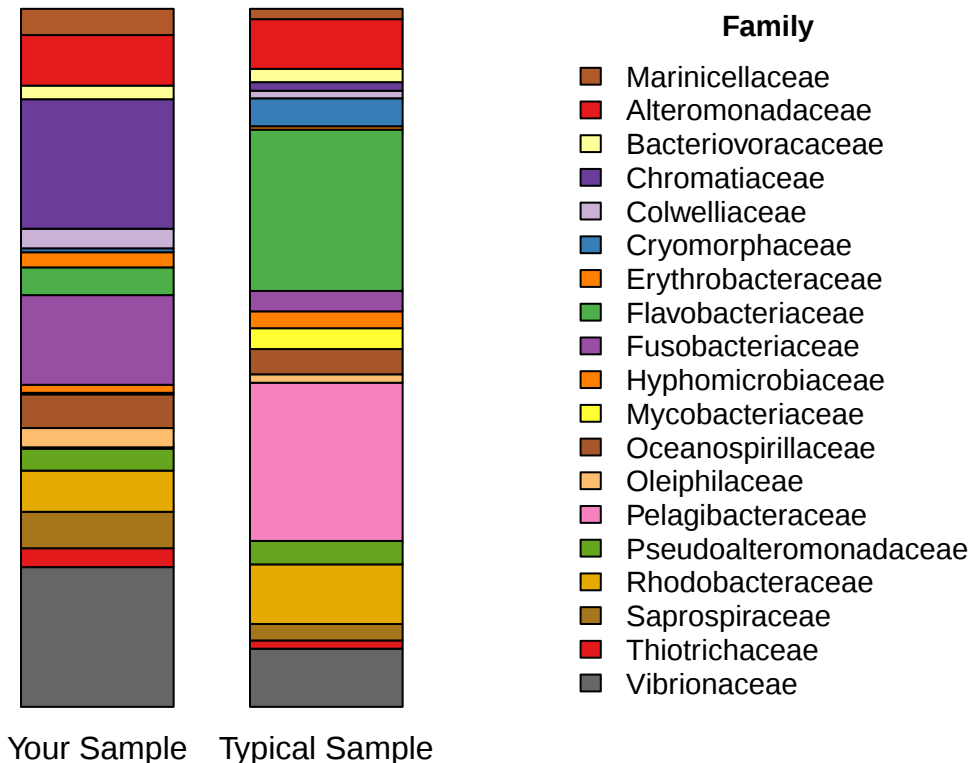
DNA analysis conducted by AquaBiomics LLC.

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Part 2: Abundance of each microbial family in your sample





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Part 3: Microbial groups of interest

Ammonia-oxidizing groups

Group	Your.Frequency	Typical.Range
Ammonia-oxidizing community, total	0.11671	0.0032 – 0.0265
Nitrosomonadaceae	0	0–0.0008
Nitrosococcus	0.10978	0–0.0178
Cenarchaeaceae	0.00692	0.0054–0.0109



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Nitrite-oxidizing groups

Group	Your.Frequency	Typical.Range
Nitrite-oxidizing community, total	0.00707	0.0003 – 0.0021
Nitrobacter	0.00707	0–0.0011
Nitrospinaceae	0	0–0.0002
Nitrococcus	0	0–0
Nitrospiraceae	0	0.0001–0.0012
Gallionellaceae	0	0–0



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Cyanobacteria, by family

Group	Your.Frequency	Typical.Range
Cyanobacteria, total	0	0.0011 – 0.0021
Acaryochloridaceae	0	0–0.001
Chlorarachniophyceae	0	0–0
Cyanobacteriaceae	0	0–0.0001
Gloeobacteraceae	0	0–0
Phormidiaceae	0	0–0.0027
Pseudanabaenaceae	0	0–0.0006
Spirulinaceae	0	0–0.0001
Synechococcaceae	0	0–0.0003
Ulvophyceae	0	0–0.0025
Xenococcaceae	0	0–0.0011



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Fish pathogens

Group	Your.Frequency	Typical.Range
Fish pathogens, total	0.01111	0 – 0.0019
Eubacterium tarantellae	0	0–0
Lactococcus garvieae	0	0–0
Enterococcus seriolicida	0	0–0
Streptococcus parauberis	0	0–0
Streptococcus iniae	0	0–0
Mycobacterium chelonae	0	0–0
Mycobacterium fortuitum,	0	0–0
Mycobacterium marinum	0	0–0
Mycobacterium neoaurum	0	0–0
Nocardia asteroides	0	0–0
Nocardia salmonicida	0	0–0
Nocardia seriolae	0	0–0
Renibacterium salmoninarum	0	0–0
Aeromonas jandaei	0	0–0
Aeromonas salmonicida	0	0–0
Serratia liquefaciens	0	0–0
Chryseobacterium balustinum	0	0–0

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Fish pathogens (continued)

Group	Your.Frequency	Typical.Range
Chryseobacterium scophthalmum	0	0–0
Tenacibaculum maritimus	0	0–0
Tenacibaculum ovolyticus	0	0–0
Pasteurella skyensis	0	0–0
Pseudomonas anguilliseptica	0	0–0
Moritella marina	0	0–0
Moritella viscosa	0	0–0
Photobacterium damsela	0.01111	0–0.0019
Shewanella putrefaciens	0	0–0
Vibrio alginolyticus	0	0–0
Vibrio cholerae	0	0–0
Vibrio fischeri	0	0–0
Vibrio furnissii	0	0–0
Vibrio harveyi	0	0–0
Vibrio carchariae	0	0–0
Vibrio trachuri	0	0–0
Vibrio ichthyenteri	0	0–0
Vibrio logei	0	0–0

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Fish pathogens (continued)

Group	Your.Frequency	Typical.Range
Vibrio ordalii	0	0-0
Vibrio pelagius	0	0-0
Vibrio salmonicida	0	0-0
Vibrio splendidus	0	0-0
Halomonas cupida	0	0-0
Piscirickettsia salmonis	0	0-0.0001



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Coral pathogens

Group	Your.Frequency	Typical.Range
Coral pathogens, total	0	0 – 0
Vibrio shiloi	0	0–0
Vibrio coralliilyticus	0	0–0
Vibrio harveyi	0	0–0
Aurantimonas coralicida	0	0–0
Vibrio rotiferianus	0	0–0
Vibrio alginolyticus	0	0–0
Vibrio proteolyticus	0	0–0
Vibrio charcharvina	0	0–0
Serratia marscens	0	0–0

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