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Analysis Report

Date of Analysis:	08.05.2026	**Customer:**	Jason Hatfield
Analysis No:	OMR250406	**Customer ID:**	8815
Date of Sampling:	27.04.2026 – 14:14	**Tank:**	0 L /

Targeted Analysis

Underlined parameters contain links for further information about the substance

Pesticides

Parameter	Measured Value	Ideal Value	Rating
Abamectin	n.n.	n.n.	✓
(E) - Fenpyroximate	n.n.	n.n.	✓
Daminozid	n.n.	n.n.	✓
Etoxazole	n.n.	n.n.	✓
Ethoprophos	n.n.	n.n.	✓
Dichlorvos	n.n.	n.n.	✓
Carbaryl	n.n.	n.n.	✓
Diazinon	n.n.	n.n.	✓
Acephate	n.n.	n.n.	✓
Acetamiprid	n.n.	n.n.	✓
Spirotetramat	n.n.	n.n.	✓
Thiamethoxam	n.n.	n.n.	✓
Metalaxyl	n.n.	n.n.	✓
Hexythiazox	n.n.	n.n.	✓
Tebuconazole	n.n.	n.n.	✓
Aldicarb	n.n.	n.n.	✓
Azoxystrobin	n.n.	n.n.	✓
Bifenthrin	n.n.	n.n.	✓
Propoxur	n.n.	n.n.	✓
Oxamyl	n.n.	n.n.	✓
Chlorpyrifos	n.n.	n.n.	✓
Boscalid	n.n.	n.n.	✓
MGK - 264	n.n.	n.n.	✓
Carbofuran	n.n.	n.n.	✓
Etofenprox	n.n.	n.n.	✓
Malathion	n.n.	n.n.	✓
Methomyl	n.n.	n.n.	✓
Pyridaben	n.n.	n.n.	✓
Cyfluthrin	n.n.	n.n.	✓
Naled	n.n.	n.n.	✓
Spiromesifen	n.n.	n.n.	✓

Paclobutrazol	n.n.	n.n.	✓
Kresoxim - methyl	n.n.	n.n.	✓
Propiconazole	n.n.	n.n.	✓
Chlorantraniliprol	n.n.	n.n.	✓
Cypermethrin	n.n.	n.n.	✓
Fenoxycarb	n.n.	n.n.	✓
Fipronil	n.n.	n.n.	✓
Flonicamid	n.n.	n.n.	✓
Fludioxonil	n.n.	n.n.	✓
Imazalil	n.n.	n.n.	✓
Imidacloprid	n.n.	n.n.	✓
Methiocarb	n.n.	n.n.	✓
Myclobutanil	n.n.	n.n.	✓
Spinosyn A	n.n.	n.n.	✓
Spinosyn D	n.n.	n.n.	✓
Thiacloprid	n.n.	n.n.	✓
Trifloxystrobin	n.n.	n.n.	✓

Herbicides/Pesticides

Parameter	Measured Value	Ideal Value	Rating
Atrazine	n.n.	n.n.	✓
Atrazine - desethyl	n.n.	n.n.	✓
Atrazine - desisopropyl	n.n.	n.n.	✓
Bromacil	n.n.	n.n.	✓
Carbetamide	n.n.	n.n.	✓
Chloridazon	n.n.	n.n.	✓
Chlorotoluron	n.n.	n.n.	✓
Chloroxuron	n.n.	n.n.	✓
Dimefuron	n.n.	n.n.	✓
Diuron	n.n.	n.n.	✓
Ethidimuron	n.n.	n.n.	✓
Ethofumesate	n.n.	n.n.	✓
Isoproturon	n.n.	n.n.	✓
Linuron	n.n.	n.n.	✓
Metamitron	n.n.	n.n.	✓
Metazachlor	n.n.	n.n.	✓
Methabenzthiazuron	n.n.	n.n.	✓
Metobromuron	n.n.	n.n.	✓
Metolachlor	n.n.	n.n.	✓
Metoxuron	n.n.	n.n.	✓
Monolinuron	n.n.	n.n.	✓
Prometryn	n.n.	n.n.	✓
Simazine	n.n.	n.n.	✓
Terbuthylazine	n.n.	n.n.	✓
Terbuthylazine - desethyl	n.n.	n.n.	✓
Terbutryne	n.n.	n.n.	✓

Antibiotics

Parameter	Measured Value	Ideal Value	Rating
Ciprofloxacin	0.872 µg/l	n.n.	✓
Erythromycine	n.n.	n.n.	✓
Metronidazole	n.n.	n.n.	✓

Pharmaceutical Residues

Parameter	Measured Value	Ideal Value	Rating
Atropine	n.n.	n.n.	✓
Ambroxol	n.n.	n.n.	✓
Chloroquin	n.n.	n.n.	✓
Quinine	n.n.	n.n.	✓
Caffeine	0.108 µg/l	n.n.	✓
Clotrimazole	n.n.	n.n.	✓
Clobetasol propionate	n.n.	n.n.	✓
Citalopram	n.n.	n.n.	✓
Cyclosporine	n.n.	n.n.	✓
Diclofenac	n.n.	n.n.	✓
Diphenhydramine	n.n.	n.n.	✓
Lidocaine	n.n.	n.n.	✓
Fenbendazole	n.n.	n.n.	✓
Fluconazole	n.n.	n.n.	✓
Ibuprofen	n.n.	n.n.	✓
Ketamine	n.n.	n.n.	✓
Scopolamine	n.n.	n.n.	✓
Minoxidil	n.n.	n.n.	✓
Praziquantel	n.n.	n.n.	✓

Marine Toxins

Parameter	Measured Value	Ideal Value	Rating
Palytoxin	n.n.	n.n.	✓
Domoic acid	n.n.	n.n.	✓

Biogenic Amines

Parameter	Measured Value	Ideal Value	Rating
Cadaverine	0.05 µg/l	n.n.	✓
Putrescine	0.036 µg/l	n.n.	✓

Vitamines

Parameter	Measured Value	Ideal Value	Rating
Folic acid	n.n.	µg/l	✓
Riboflavin	n.n.	0.3 µg/l	✓
Cyancobalamine	n.n.	0.2 µg/l	✓
Pyridoxine	n.n.	0.2 µg/l	✓

Nicotinamide	0.062	µg/l	µg/l	
Pantothenic acid	n.n.		µg/l	
Nicotinicacid	n.n.		µg/l	
Thiamine	n.n.		µg/l	

Amino Acids

Parameter	Measured Value		Ideal Value	Rating
Alanine	0.046	µg/l	0.45 µg/l	
Arginine	0.004	µg/l	0.70 µg/l	
Glycine	0.052	µg/l	1 µg/l	
Glutamine	0.092	µg/l	0.5 µg/l	
Asparagine	0.01	µg/l	0.5 µg/l	
Histidine	0.029	µg/l	µg/l	
Aspartic Acid	2.93	µg/l	1.06 µg/l	
Glutamic acid	1.8	µg/l	0.74 µg/l	
Lysine	0.013	µg/l	1.17 µg/l	
Methionine	0.001	µg/l	0.75 µg/l	
Ornithine	n.n.		0.5 µg/l	
Phenylalanine	0.012	µg/l	0.25 µg/l	
Proline	0.035	µg/l	0.23 µg/l	
Serine	0.121	µg/l	1.05 µg/l	
Threonine	0.028	µg/l	0.54 µg/l	
Tryptophane	0.01	µg/l	0.20 µg/l	
Tyrosine	0.009	µg/l	0.36 µg/l	
Valine	0.03	µg/l	0.12 µg/l	
Leucine + Isoleucine	0.07	µg/l	0.2 µg/l	
Taurine	0.93	µg/l	0.2 µg/l	

Plasticisers/Plastic additives

Parameter	Measured Value		Ideal Value	Rating
Benzylbutylphthalate	n.n.		n.n.	
Bisbutoxyethylphthalate	n.n.		n.n.	
Biscyclohexylphthalate	n.n.		n.n.	
Bisethoxyethylphthalate	n.n.		n.n.	
Bisisobutylphthalate	0.17	µg/l	n.n.	
Bismethylglycolphthalate	n.n.		n.n.	
Bismethylphthalate	0.295	µg/l	n.n.	
Bispentylphthalat	n.n.		n.n.	
Bisphenylphthalate	n.n.		n.n.	
Dibutylphthalate	0.307	µg/l	n.n.	
Diethylphthalate	1.8	µg/l	n.n.	

Environmental Contaminants

Parameter	Measured Value	Ideal Value	Rating
6PPD	n.n.	n.n.	

6PPD - Quinone	n.n.	n.n.	✓
Octinoxate	n.n.	n.n.	✓
Octocrylen	n.n.	n.n.	✓
Oxybenzone	n.n.	n.n.	✓

Preservatives

Parameter	Measured Value	Ideal Value	Rating
Methylparaben	n.n.	n.n.	✓
Ethylparaben	n.n.	n.n.	✓
Propylparaben	n.n.	n.n.	✓
Butylparaben	n.n.	n.n.	✓

PFAS - "Forever-chemicals"

Parameter	Measured Value	Ideal Value	Rating
PFOA	n.n.	n.n.	✓
PFOS	n.n.	n.n.	✓

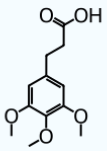
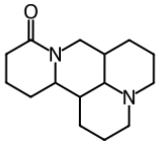
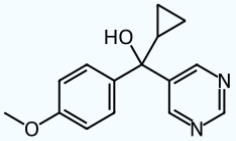
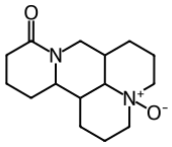
Other

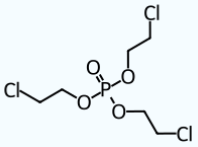
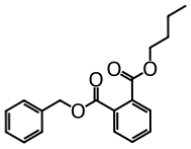
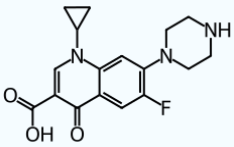
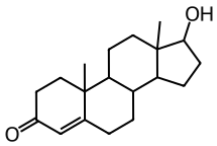
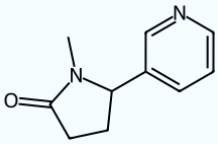
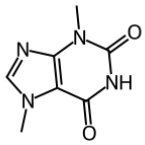
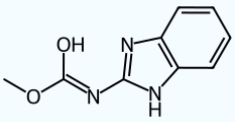
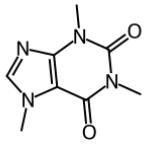
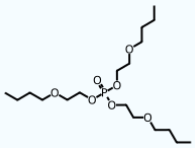
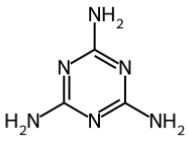
Parameter	Measured Value	Ideal Value	Rating
Chlorpropham	n.n.	n.n.	✓
Betaine	0.703 µg/l	µg/l	✓
Dimethylsulfopropionate (DMSP)	0.0904 µg/l	µg/l	✓

Untargeted Analysis

Underlined parameters contain links for further information about the substance

Non-Targeted Screening

Substance	Structure	Messwert	Rating
3-(3,4,5-trimethoxyphenyl)propanoic acid		1584653.6 counts	Natural Products/Medicines
Sophoridine		8808657.1 counts	Natural Products/Medicines
Ancymidol		3243014.4 counts	Pesticides/Herbicides
Sophoridine N-oxide		6932791.0 counts	

Tris(2-chloroethyl) phosphate		431227.43	counts	Textile Chemicals/Auxiliary/Dyes
Benzyl butyl phthalate		2023015.8	counts	Industrial Chemicals
Ciprofloxacin		50093832.0	counts	Therapeutics/Prescription Drugs
Epitestosterone		641043.68	counts	Sports Doping Drugs
Cotinine		3272500.6	counts	Pesticides/Herbicides
Theobromine		2692588.0	counts	Endogenous Metabolites
Carbendazim		670133.31	counts	Pesticides/Herbicides
Caffeine		8377921.4	counts	Endogenous Metabolites
Tris(2-butoxyethyl) phosphate		688855.61	counts	
Melamine		11156156.0	counts	Industrial Chemicals

No action required
Need for action
Urgent need for action

n.n Not found
n.b Not measured

Hello Jason,

thanks for sending in your water sample. The overall picture is mixed: the system is free from most major targeted contaminants, but there are several notable findings that point toward external contamination and a biologically stressed or nutrient-limited organic environment.

The pesticide and herbicide panels are largely clean in the targeted analysis. PFAS, marine toxins, parabens and most pharmaceutical residues were also not detected, which is positive.

The most important targeted finding is ciprofloxacin at 0.872 µg/l. This is a significant detection for a reef aquarium, especially since you reported that no medications are being used. Ciprofloxacin is a fluoroquinolone antibiotic and can strongly affect bacterial populations in the aquarium, including beneficial microbial communities associated with nutrient processing and coral surfaces. Even if it was not intentionally dosed, this concentration is high enough that it may influence microbial stability.

Possible entry routes include contaminated frozen food, cross-contamination from handling or equipment, contaminated source water, or accidental transfer from human/veterinary medication environments. Since ciprofloxacin is also strongly confirmed in the NTS section with a very large signal, this is a reliable finding rather than a trace artifact.

Caffeine was also detected in both targeted and untargeted analysis, although at a much lower level than ciprofloxacin. Together with cotinine (a nicotine metabolite) in the NTS section, this points toward environmental or handling-related contamination. This often comes from household exposure, aerosols, smoke/vape residues, contaminated hands, dust, or food preparation areas near aquarium equipment.

The amino acid profile is unusual. Most amino acids are extremely depleted, far below the suggested reference range, while taurine is elevated and both aspartic acid and glutamic acid are significantly increased.

Almost all vitamins were undetectable except for a small nicotinamide signal.

Biogenic amines (cadaverine and putrescine) were detectable. These compounds are associated with protein decomposition and microbial degradation processes. The levels are not extreme, but they support the impression that some organic material is breaking down in the system.

Plasticizers are present at moderate levels, especially diethylphthalate at 1.8 µg/l, together with dibutylphthalate, bismethylphthalate and bisisobutylphthalate. These are not catastrophic concentrations, but they indicate ongoing material-derived contamination from plastics, tubing, pumps, dosing lines, food packaging, or similar sources.

The NTS section adds several interesting findings:

- Ciprofloxacin is strongly confirmed.
- Cotinine indicates nicotine exposure somewhere in the environment.
- Caffeine and theobromine are common human-environment markers and often correlate with food or household contamination.
- Tris(2-chloroethyl) phosphate and tris(2-butoxyethyl) phosphate are industrial/plastic additives that support the interpretation of material-related contamination.
- Melamine is another common industrial/plastic-associated marker.
- Ancymidol and carbendazim are pesticide/growth regulator related compounds.
- Sophoridine and sophoridine N-oxide are alkaloid-type natural product compounds that can originate from plant-based materials, additives, or feed-related inputs (Matrine feeds)

Running carbon is advised!

The DMSP value is moderate and does not indicate a strong coral stress release signal at the time of sampling.

In case of questions, I am happy to help!

Best regards,

Christoph