

**Attention: Marcus Pfeil**

Savarin Springs Inc  
1575 Strasburg Rd  
Kitchener, ON  
N2R 1K2

**Report Date: 2015/12/02**

Report #: R3790406

Version: 1 - Final

**CERTIFICATE OF ANALYSIS**

**MAXXAM JOB #: B501495**

**Received: 2015/11/24, 11:39**

Sample Matrix: Water  
# Samples Received: 4

Analyses	Quantity	Date		Laboratory Method	Reference
		Extracted	Analyzed		
Alkalinity	3	N/A	2015/11/27	CAM SOP-00448	SM 22 2320 B m
Alkalinity	1	N/A	2015/11/28	CAM SOP-00448	SM 22 2320 B m
Carbonate, Bicarbonate and Hydroxide	4	N/A	2015/11/30	CAM SOP-00102	APHA 4500-CO2 D
Chloride by Automated Colourimetry	4	N/A	2015/12/01	CAM SOP-00463	EPA 325.2 m
Conductivity	3	N/A	2015/11/27	CAM SOP-00414	SM 22 2510 m
Conductivity	1	N/A	2015/11/28	CAM SOP-00414	SM 22 2510 m
Dissolved Organic Carbon (DOC) (1)	4	N/A	2015/11/26	CAM SOP-00446	SM 22 5310 B m
Hardness (calculated as CaCO3)	4	N/A	2015/12/02	CAM SOP 00102/00408/00447	SM 2340 B
Metals Analysis by ICPMS (as received) (2)	4	2015/12/01	2015/12/01	CAM SOP-00447	EPA 6020A m
Ion Balance (% Difference)	4	N/A	2015/12/02		
Anion and Cation Sum	4	N/A	2015/12/02		
Total Coliforms/ E. coli, CFU/100mL	4	N/A	2015/11/24	CAM SOP-00551	MOE E3407
Heterotrophic plate count, (CFU/mL)	4	N/A	2015/11/24	CAM SOP-00512	SM 9215B
Total Ammonia-N	4	N/A	2015/12/01	CAM SOP-00441	EPA GS I-2522-90 m
Nitrate (NO3) and Nitrite (NO2) in Water (3)	4	N/A	2015/11/29	CAM SOP-00440	SM 22 4500-NO3I/NO2B
pH	3	N/A	2015/11/27	CAM SOP-00413	SM 4500H+ B m
pH	1	N/A	2015/11/28	CAM SOP-00413	SM 4500H+ B m
Orthophosphate	4	N/A	2015/11/30	CAM SOP-00461	EPA 365.1 m
Sat. pH and Langelier Index (@ 20C)	4	N/A	2015/12/02		
Sat. pH and Langelier Index (@ 4C)	4	N/A	2015/12/02		
Sulphate by Automated Colourimetry	4	N/A	2015/11/30	CAM SOP-00464	EPA 375.4 m
Total Dissolved Solids (TDS calc)	4	N/A	2015/12/02		

Reference Method suffix "m" indicates test methods incorporate validated modifications from specific reference methods to improve performance.

(1) Dissolved Organic Carbon (DOC) present in the sample should be considered as non-purgeable DOC.

(2) Metals analysis was performed on the sample 'as received'.

(3) Values for calculated parameters may not appear to add up due to rounding of raw data and significant figures.

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**CERTIFICATE OF ANALYSIS**

**MAXXAM JOB #: B501495**  
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Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.  
Elena Beckett, Customer Service Representative, Food  
Email: EBeckett@maxxam.ca  
Phone# (905) 817-5700

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**RESULTS OF ANALYSES OF WATER**

Maxxam ID		BKH306	BKH307	BKH308	BKH309	
Sampling Date		2015/11/23 13:00	2015/11/23 13:00	2015/11/23 13:00	2015/11/23 13:00	
COC Number		535856-01-01	535856-01-01	535856-01-01	535856-01-01	
	UNITS	RO WATER	DI WATER	DIST. WATER	SPRING WATER	RDL
Anion Sum	me/L	0.188	0.000	0.000	4.85	N/A
Bicarb. Alkalinity (calc. as CaCO3)	mg/L	4.0	ND	ND	220	1.0
Calculated TDS	mg/L	13	ND	ND	250	1.0
Carb. Alkalinity (calc. as CaCO3)	mg/L	ND	ND	ND	2.1	1.0
Cation Sum	me/L	0.211	0.00200	0.00200	5.18	N/A
Hardness (CaCO3)	mg/L	ND	ND	ND	250	1.0
Ion Balance (% Difference)	%	NC	NC	NC	3.34	N/A
Langelier Index (@ 20C)	N/A	NC	NC	NC	0.727	N/A
Langelier Index (@ 4C)	N/A	NC	NC	NC	0.478	N/A
Saturation pH (@ 20C)	N/A	NC	NC	NC	7.29	N/A
Saturation pH (@ 4C)	N/A	NC	NC	NC	7.54	N/A
Ammonia-N	mg/L	ND	ND	ND	ND	0.050
Conductivity	umho/cm	24	1.1	2.5	460	1.0
Organic Carbon	mg/L	ND	ND	ND	0.44	0.20
Orthophosphate (P)	mg/L	ND	ND	ND	ND	0.010
pH	pH	6.45	5.62	6.29	8.02	N/A
Sulphate (SO4)	mg/L	ND	ND	ND	20	1.0
Alkalinity (Total as CaCO3)	mg/L	4.0	ND	ND	220	1.0
Chloride (Cl)	mg/L	3.8	ND	ND	2.5	1.0
Nitrite (N)	mg/L	ND	ND	ND	ND	0.010
Nitrate (N)	mg/L	ND	ND	ND	ND	0.10
RDL = Reportable Detection Limit						
N/A = Not Applicable						
ND = Not detected						

**ELEMENTS BY ATOMIC SPECTROSCOPY (WATER)**

Maxxam ID		BKH306	BKH307	BKH308	BKH309	
Sampling Date		2015/11/23 13:00	2015/11/23 13:00	2015/11/23 13:00	2015/11/23 13:00	
COC Number		535856-01-01	535856-01-01	535856-01-01	535856-01-01	
	UNITS	RO WATER	DI WATER	DIST. WATER	SPRING WATER	RDL
Aluminum (Al)	ug/L	ND	ND	9.8	ND	5.0
Antimony (Sb)	ug/L	ND	ND	ND	ND	0.50
Arsenic (As)	ug/L	ND	ND	ND	ND	1.0
Barium (Ba)	ug/L	ND	ND	ND	280	2.0
Beryllium (Be)	ug/L	ND	ND	ND	ND	0.50
Boron (B)	ug/L	31	ND	ND	16	10
Cadmium (Cd)	ug/L	ND	ND	ND	ND	0.10
Calcium (Ca)	ug/L	ND	ND	ND	60000	200
Chromium (Cr)	ug/L	ND	ND	ND	ND	5.0
Cobalt (Co)	ug/L	ND	ND	ND	ND	0.50
Copper (Cu)	ug/L	ND	ND	1.1	ND	1.0
Iron (Fe)	ug/L	ND	ND	ND	ND	100
Lead (Pb)	ug/L	ND	ND	ND	ND	0.50
Magnesium (Mg)	ug/L	ND	ND	ND	25000	50
Manganese (Mn)	ug/L	ND	ND	ND	2.9	2.0
Molybdenum (Mo)	ug/L	ND	ND	ND	1.7	0.50
Nickel (Ni)	ug/L	ND	ND	ND	ND	1.0
Phosphorus (P)	ug/L	ND	ND	ND	ND	100
Potassium (K)	ug/L	ND	ND	ND	950	200
Selenium (Se)	ug/L	ND	ND	ND	ND	2.0
Silicon (Si)	ug/L	720	ND	ND	3400	50
Silver (Ag)	ug/L	ND	ND	ND	ND	0.10
Sodium (Na)	ug/L	4800	ND	ND	3300	100
Strontium (Sr)	ug/L	ND	ND	ND	1000	1.0
Thallium (Tl)	ug/L	ND	ND	ND	ND	0.050
Titanium (Ti)	ug/L	ND	ND	ND	ND	5.0
Uranium (U)	ug/L	ND	ND	ND	0.58	0.10
Vanadium (V)	ug/L	ND	ND	ND	ND	0.50
Zinc (Zn)	ug/L	ND	ND	ND	ND	5.0
RDL = Reportable Detection Limit ND = Not detected						

**MICROBIOLOGY (WATER)**

Maxxam ID		BKH306	BKH307	BKH308	BKH309
Sampling Date		2015/11/23 13:00	2015/11/23 13:00	2015/11/23 13:00	2015/11/23 13:00
COC Number		535856-01-01	535856-01-01	535856-01-01	535856-01-01
	UNITS	RO WATER	DI WATER	DIST. WATER	SPRING WATER
Heterotrophic plate count	CFU/mL	0	1	0	0
Background	CFU/100mL	0	0	0	0
Total Coliforms	CFU/100mL	0	0	0	0
Escherichia coli	CFU/100mL	0	0	0	0

**GENERAL COMMENTS**

**Results relate only to the items tested.**

**VALIDATION SIGNATURE PAGE**

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).

*Cristina Carriere*

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Cristina Carriere, Scientific Services

*Ranju*

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Ranju Chaudhari

*Vimukthi*

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Vimukthi Gunawardhan

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