

**Attention: Marcus Pfeil**

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

**Report Date: 2017/12/18**

Report #: R4914010

Version: 1 - Final

**CERTIFICATE OF ANALYSIS**

**MAXXAM JOB #: B7R7656**

**Received: 2017/12/07, 13:25**

Sample Matrix: Water  
# Samples Received: 1

Analyses	Date		Laboratory Method	Reference
	Quantity	Extracted		
Alkalinity	1	N/A	2017/12/12 CAM SOP-00448	SM 22 2320 B m
Carbonate, Bicarbonate and Hydroxide	1	N/A	2017/12/13 CAM SOP-00102	APHA 4500-CO2 D
Chloride by Automated Colourimetry	1	N/A	2017/12/13 CAM SOP-00463	EPA 325.2 m
Conductivity	1	N/A	2017/12/12 CAM SOP-00414	SM 22 2510 m
Dissolved Organic Carbon (DOC) (1)	1	N/A	2017/12/11 CAM SOP-00446	SM 22 5310 B m
Hardness (calculated as CaCO3)	1	N/A	2017/12/11 CAM SOP 00102/00408/00447	SM 2340 B
Metals Analysis by ICPMS (as received) (2)	1	N/A	2017/12/11 CAM SOP-00447	EPA 6020B m
Ion Balance (% Difference)	1	N/A	2017/12/13	
Anion and Cation Sum	1	N/A	2017/12/13	
Total Ammonia-N	1	N/A	2017/12/15 CAM SOP-00441	EPA GS I-2522-90 m
Nitrate (NO3) and Nitrite (NO2) in Water (3)	1	N/A	2017/12/15 CAM SOP-00440	SM 22 4500-NO3I/NO2B
pH	1	N/A	2017/12/12 CAM SOP-00413	SM 4500H+ B m
Orthophosphate	1	N/A	2017/12/13 CAM SOP-00461	EPA 365.1 m
Sat. pH and Langelier Index (@ 20C)	1	N/A	2017/12/13	
Sat. pH and Langelier Index (@ 4C)	1	N/A	2017/12/13	
Sulphate by Automated Colourimetry	1	N/A	2017/12/13 CAM SOP-00464	EPA 375.4 m
Total Dissolved Solids (TDS calc)	1	N/A	2017/12/13	

**Remarks:**

**Scope Statement:**

The analysis detailed in this document is intended to assist you, the Client, in your efforts and responsibility to produce safe food. The analysis may be for contaminants or adulterants that are known to be or may potentially be harmful, or that may impact on the quality or desired characteristics of the product. The results are representative of the samples at the time and condition of submission, and as determined by the indicated method(s). Any inference as to their applicability to any particular product, production lot, intermediate, ingredient or facility should be made by an individual with relevant expertise, based on an understanding of the product and the suitability of the sampling protocol.

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.

Your C.O.C. #: 097530

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Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.  
Jared Bowers, Customer Service Representative  
Email: JBowers@maxxam.ca  
Phone# (905)817-5834

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This report has been generated and distributed using a secure automated process.  
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**RESULTS OF ANALYSES OF WATER**

Maxxam ID		FSG935	
Sampling Date		2017/12/07 06:00	
COC Number		097530	
	UNITS	DI WATER	RDL
Anion Sum	me/L	0.0280	N/A
Bicarb. Alkalinity (calc. as CaCO3)	mg/L	1.4	1.0
Calculated TDS	mg/L	1.0	1.0
Carb. Alkalinity (calc. as CaCO3)	mg/L	ND	1.0
Cation Sum	me/L	0.00100	N/A
Hardness (CaCO3)	mg/L	ND	1.0
Ion Balance (% Difference)	%	NC	N/A
Langelier Index (@ 20C)	N/A	NC	N/A
Langelier Index (@ 4C)	N/A	NC	N/A
Saturation pH (@ 20C)	N/A	NC	N/A
Saturation pH (@ 4C)	N/A	NC	N/A
Ammonia-N	mg/L	ND	0.050
Conductivity	umho/cm	1.3	1.0
Organic Carbon	mg/L	ND	0.50
Orthophosphate (P)	mg/L	ND	0.010
pH	pH	6.29	N/A
Sulphate (SO4)	mg/L	ND	1.0
Alkalinity (Total as CaCO3)	mg/L	1.4	1.0
Chloride (Cl)	mg/L	ND	1.0
Nitrite (N)	mg/L	ND	0.010
Nitrate (N)	mg/L	ND	0.10
RDL = Reportable Detection Limit N/A = Not Applicable ND = Not detected			

**ELEMENTS BY ATOMIC SPECTROSCOPY (WATER)**

<b>Maxxam ID</b>		FSG935	
<b>Sampling Date</b>		2017/12/07 06:00	
<b>COC Number</b>		097530	
	<b>UNITS</b>	<b>DI WATER</b>	<b>RDL</b>
Aluminum (Al)	ug/L	ND	5.0
Antimony (Sb)	ug/L	ND	0.50
Arsenic (As)	ug/L	ND	1.0
Barium (Ba)	ug/L	ND	2.0
Beryllium (Be)	ug/L	ND	0.50
Boron (B)	ug/L	ND	10
Cadmium (Cd)	ug/L	ND	0.10
Calcium (Ca)	ug/L	ND	200
Chromium (Cr)	ug/L	ND	5.0
Cobalt (Co)	ug/L	ND	0.50
Copper (Cu)	ug/L	ND	1.0
Iron (Fe)	ug/L	ND	100
Lead (Pb)	ug/L	ND	0.50
Magnesium (Mg)	ug/L	ND	50
Manganese (Mn)	ug/L	ND	2.0
Molybdenum (Mo)	ug/L	ND	0.50
Nickel (Ni)	ug/L	ND	1.0
Phosphorus (P)	ug/L	ND	100
Potassium (K)	ug/L	ND	200
Selenium (Se)	ug/L	ND	2.0
Silicon (Si)	ug/L	ND	50
Silver (Ag)	ug/L	ND	0.10
Sodium (Na)	ug/L	ND	100
Strontium (Sr)	ug/L	ND	1.0
Thallium (Tl)	ug/L	ND	0.050
Titanium (Ti)	ug/L	ND	5.0
Uranium (U)	ug/L	ND	0.10
Vanadium (V)	ug/L	ND	0.50
Zinc (Zn)	ug/L	ND	5.0
RDL = Reportable Detection Limit ND = Not detected			

**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 Service Specialist

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