S & N LABS

2021 E. Fourth Street Santa Ana, California 92705 (714) 543-2211

25 May 2018

Job Number:	22478
PO Number:	Verbal

Kathy Forti

REPORT OF ANALYSIS

Two fluid-filled bottles labeled "KJFORTI" were received on 10 May 2018. A portion of the sample was baked to dryness at 100 °C and the nonvolatile residue (NVR) was analyzed using scanning electron microscopy with energy dispersive x-ray spectroscopy (SEM-EDX). The findings are provided in the table below.

Sample	Primary Elemental Composition	Other Elements Detected
KJFORTI – Fluid NVR	Cl, Na, Ca, S, O, Mg, Si	C, K

The fluid and NVR were also analyzed for radioactivity using an IMAGES Scientific Instruments' digital Geiger counter over a period of one minute.

Sample	Counts Per Minute (CPM)
Laboratory Background	13
KJFORTI – Fluid	13
KJFORTI – Fluid NVR	12

A portion of the sample was analyzed for cations and anions using ion chromatography (IC). The results are provided in the tables below.

Sample	Lithium Li^+, µg/mL	Sodium Na^+, µg/mL	Ammonium NH_4^+, µg/mL	Magnesium Mg^{2+}, µg/mL	Calcium Ca^{2+}, µg/mL	Potassium K^+, µg/mL
KJFORTI	ND < 1	390	4	79	160	4

* ND = Not detected at or above the listed detection limit.

Sample	Fluoride F^-, µg/mL	Chloride Cl^-, µg/mL	Nitrite NO_2^-, µg/mL	Bromide Br^-, µg/mL	Nitrate NO_3^-, µg/mL	Phosphate PO_4^{3-}, µg/mL	Sulfate SO_4^{2-}, µg/mL
KJFORTI	ND < 0.01	690	0.48	0.82	1.8	< 0.08	290

* ND = Not detected at or above the listed detection limit.

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One milliliter of the fluid was extracted into methylene chloride and the solvent was analyzed using gas chromatography with mass spectroscopic detection (GC-MS). 2-Methyl-benzenesulfonamide was the only semivolatile organic compound detected.

The pH of the sample was tested using an Orion 420A pH meter calibrated with NIST-traceable standards and was found to be 8.30.

The sample was consistent with mineralized water with its principle inorganic components being sodium chloride (salt) as well as calcium and magnesium sulfate minerals. The presence of these minerals in the water is likely responsible for the mildly basic pH. Heavy metals were not detected above the ≈0.1% w/w EDX detection limit and the sample was not found to be radioactive. The presence of trace-level 2-methyl-benzenesulfonamide was unusual; however, this chemical is commonly used as a plasticizer and preservative in outdoor coatings and may have originated from the sample bottle.

The EDX spectrum and chromatograms are enclosed for your reference.

Chris French, PhD
Sr. Chemist

22478

S&N Labs
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Santa Ana, CA 92705
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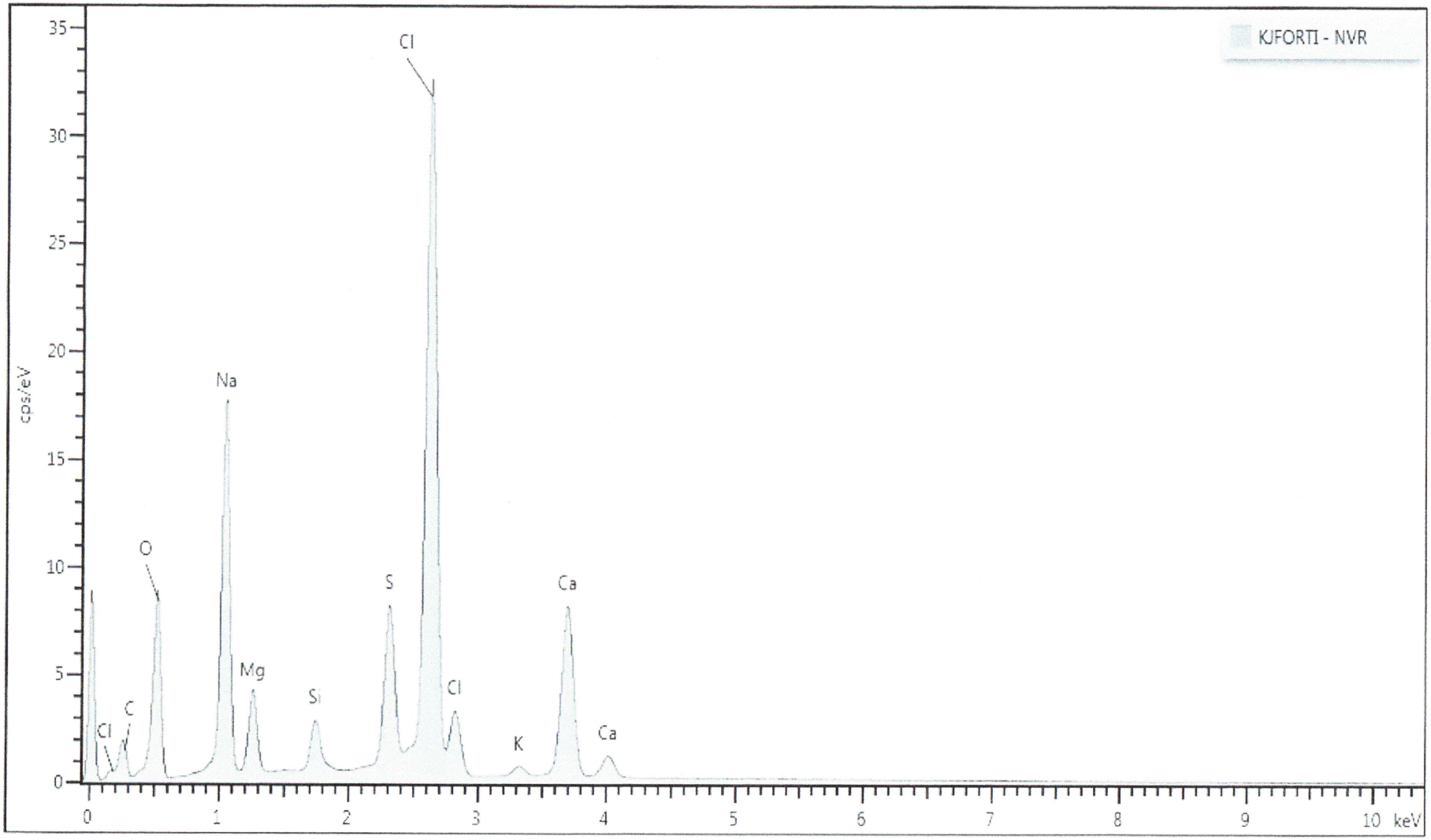
Sample: Water Sample – Nonvolatile Residues
Date: 05/17/2018
Analyst: Chris French

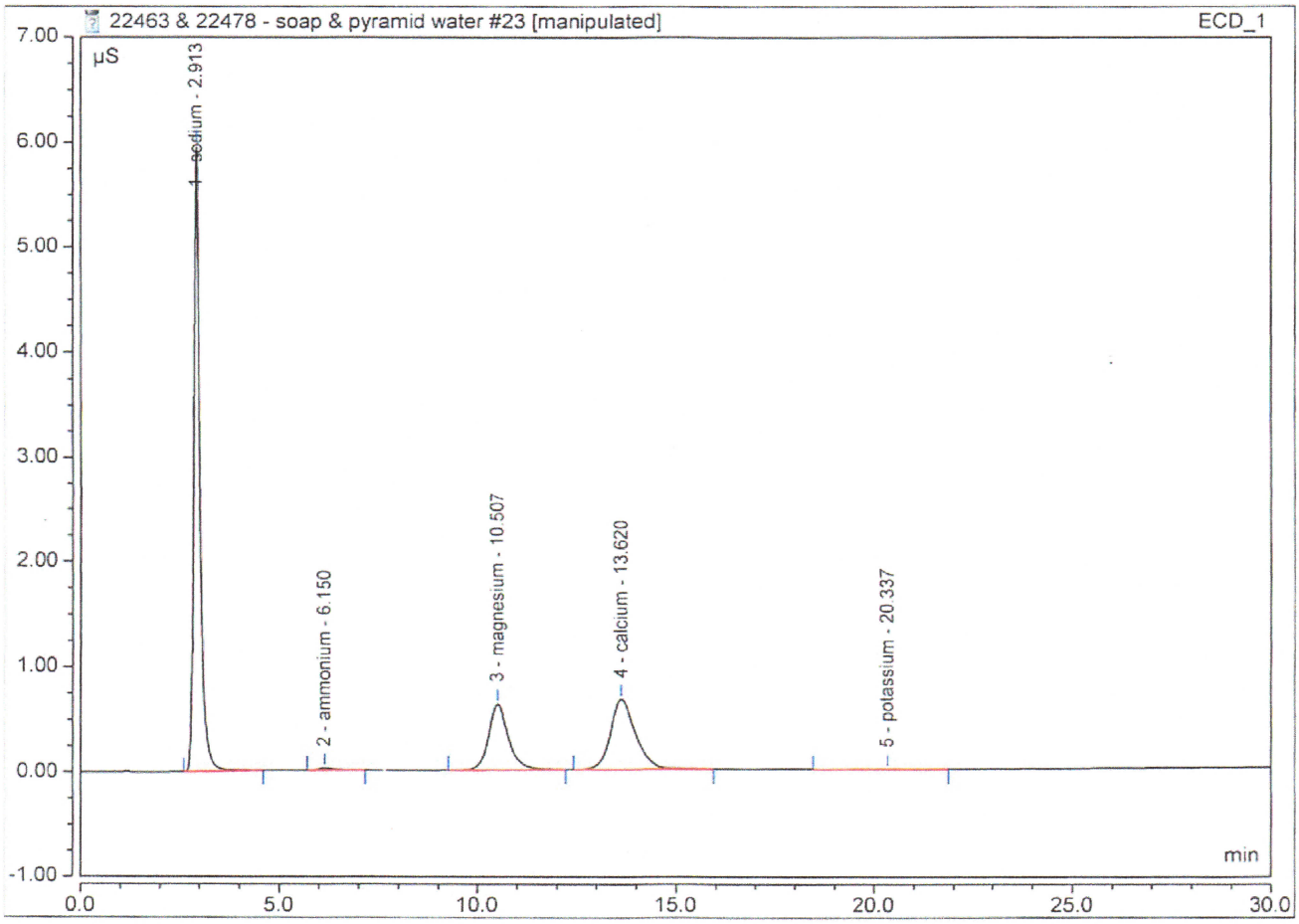
Client:



Peak Integration Report

Sample Name:	**22478 - pyramid water (50µl/10ml dilution)**	*Inj. Vol.:*	**100.00**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Program:	**CS15 column - standard method (+)**	*Operator:*	**Chemist**
Inj. Date / Time:	**21-May-2018 / 23:56**	*Run Time:*	**30.00**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount µg/ml
1	2.91	sodium	BMB*	1.063	5.970	1.9500
2	6.15	ammonium	BMB*	0.011	0.021	0.0190
3	10.51	magnesium	BMB*	0.362	0.627	0.3904
4	13.62	calcium	BMB*	0.487	0.665	0.7694
5	20.34	potassium	BMB*	0.003	0.002	0.0194
TOTAL:				1.93	7.28	3.15

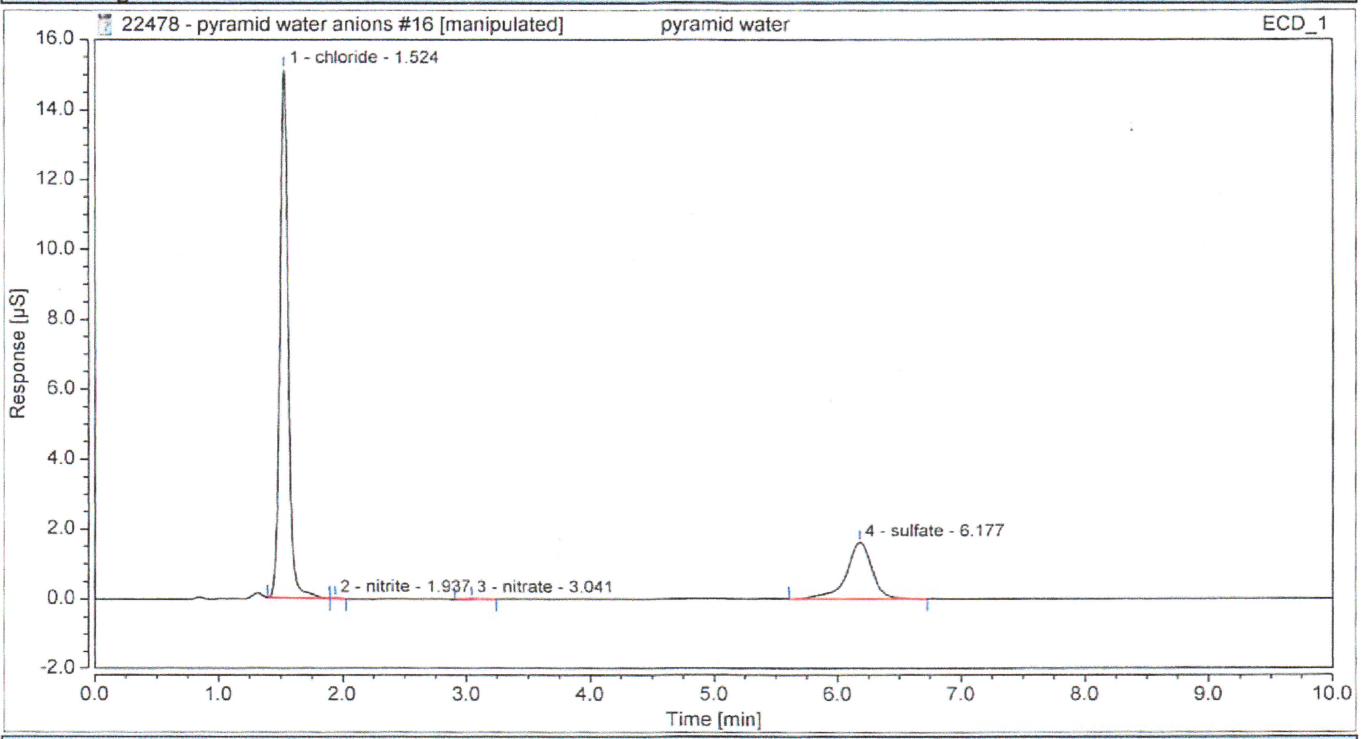


Chromatogram and Results

Injection Details

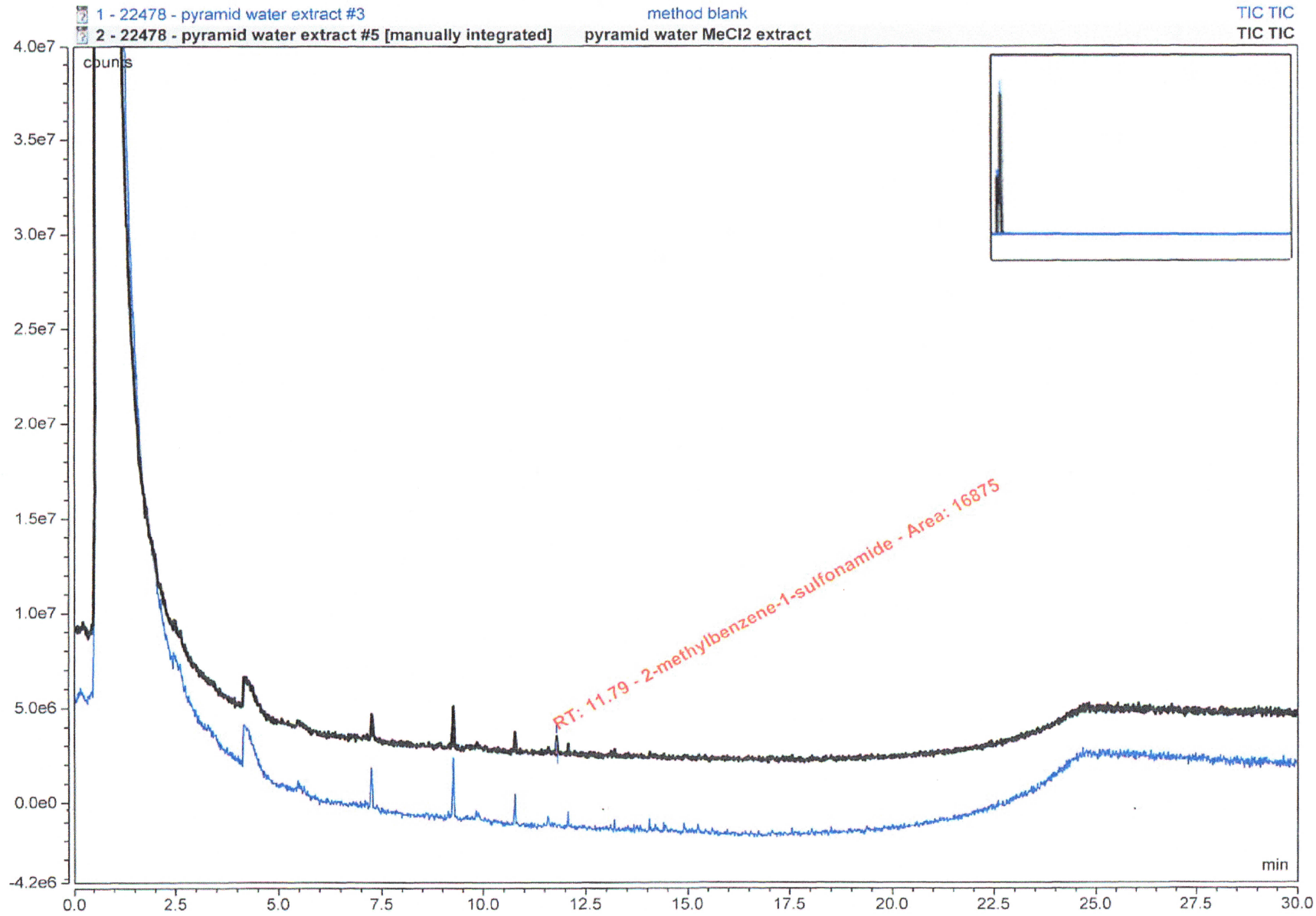
Injection Name:	**pyramid water**	*Run Time (min):*	**10.00**
Vial Number:	**13**	*Injection Volume:*	**2000.00**
Injection Type:	**Unknown**	*Channel:*	**ECD_1**
Calibration Level:		*Wavelength:*	**n.a.**
Instrument Method:	**AS4A column - 2ml method (-)**	*Bandwidth:*	**n.a.**
Processing Method:	**AS4A column - standard method (-)**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/May/18 17:08**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area µS*min	Height µS	Relative Area %	Relative Height %	Amount µg/ml
n.a.	fluoride	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
1	chloride	1.524	1.163	15.110	75.01	90.22	3.4346
2	nitrite	1.937	0.001	0.010	0.05	0.06	0.0033
n.a.	bromide	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
3	nitrate	3.041	0.002	0.014	0.12	0.09	0.0093
n.a.	phosphate	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
4	sulfate	6.177	0.385	1.613	24.81	9.63	1.4473
Total:			**1.550**	**16.748**	**100.00**	**100.00**	


1 - 22478 - pyramid water extract #3
method blank
TIC TIC
2 - 22478 - pyramid water extract #5 [manually integrated]
pyramid water MeCl2 extract
TIC TIC
counts
4.0e7
3.5e7
3.0e7
2.5e7
2.0e7
1.5e7
1.0e7
5.0e6
0.0e0
-4.2e6
RT: 11.79 - 2-methylbenzene-1-sulfonamide - Area: 16875
min
0.0
2.5
5.0
7.5
10.0
12.5
15.0
17.5
20.0
22.5
25.0
27.5
30.0

Analysis of Water Report from Under Giza Pyramid

By Sal Giandinoto, Ph.D.

June 10, 2018

Dr. Kathy Forti collected a water sample from under the Giza Pyramid. She contacted me regarding what types of analyses I thought would be best to examine the chemical composition of the sample. As a Ph.D. chemist who has worked extensively in both analytical and synthetic organic laboratories throughout my career, I recommended the following analyses to determine the elemental composition of the sample:

1. SEM/EDX (Scanning Electron Microscope with Energy Dispersive X-ray spectroscopy)
2. Ion Chromatography
3. GC/MS (Gas Chromatography/Mass Spectrometry)
4. Radioactivity analysis with Geiger counter

As a result of the SEM/EDX analysis, the water sample was found to have the following elemental composition: Sodium, Chlorine, Magnesium, Calcium, Sulphur and Silicon. Ion chromatography showed the existence of the following ions: Chloride, Sodium, Calcium, Magnesium and Sulfate as major component ions, and only trace amounts of ammonium, potassium, nitrite, bromide and phosphate ions.

The laboratory also performed a quantitative analysis of the aforementioned ions and found the following amounts in weight percent present in the sample:

Sodium – 0.04%
Chloride – 0.07%
Calcium – 0.016%
Sulfate – 0.03%
Magnesium – 0.01%
Others - Trace

This suggested to me that this sample was of salt water origin due to the types and amounts of ions present in the sample. Typical seawater, according to Wikipedia, contains the following elements in the following quantities:

Sodium – 1.08%
Chloride – 1.94%
Calcium – 0.04%
Sulfate – 0.10%
Magnesium – 0.13%
Others - Trace

The percentages of salts in the sample indicated to me that the sample was not from seawater, but rather, from brackish water. Brackish water is water which has more salinity than fresh water but less salinity than seawater. It may be the result of the mixing of seawater with fresh water as in estuaries or it may occur in brackish water aquifers. It is my professional opinion that the water was not a mixture of seawater and fresh water but rather water from a

nearby source such as a lake or other type of source. I base this opinion on the fact that the absolute ratios of ions in seawater and in the sample are very different. If the sample was merely a mixture of seawater and freshwater, the absolute ratio of ions in the sample would be similar to those of seawater, but they are not.

The question then arises as to where did the water source originate from? It's possible that there were underground channels or tunnels where water from a nearby source made its way to under the pyramids. What I can say for sure is that the salt in the water sample could not have originated from rocks common to that area.

So, in summary, it appears that saline or brackish water from an unknown source somehow made its way under the pyramids.

Sal Giandinoto, Ph.D.