



Type of Report =>	Hair Mineral Analysis								
Report Number =>	H 1	H 2	H3	H4	H5	H6	H7	H8	H9
Date of Test =>	July 2010	July 2011	July 2012	July 2013	July 2014	July 2015	July 2016	July 2017	July 2018
Time Interval =>	Initial	Af 1 Year	Af 2 year	Af 3 Year	Af 4 Year	Af 5 Years	Af 6 Years	Af 7 Years	Af 8 Years
Provoking Agent =>									
Scale =>	µg/g								
<b>Toxic Metals</b>									
Total Toxic Metals %	10.181 100.00	7.681 75.44	7.715 75.78	8.337 81.89	5.582 54.83	4.826 47.40	4.244 41.69	7.179 70.51	4.057 39.85
Arse, Bari, Cadmi, Merc Thall, Tita, Uran %	3.302 100.00	1.238 37.49	1.419 42.97	2.058 62.33	1.298 39.31	1.582 47.91	1.587 48.06	3.055 92.52	1.586 48.03
Reat of the Metals %	6.879 100.00	6.443 93.66	6.296 91.52	6.279 91.28	4.284 62.28	3.244 47.16	2.657 38.62	4.124 59.95	2.471 35.92
Total of Barium, Thallium, Uranium %	1.419 100.00	0.678 47.78	0.909 64.06	0.842 59.34	0.525 37.00	0.557 39.25	0.998 70.33	1.603 112.97	0.676 47.64
<b>Hemoglobin A1C</b>	<b>11.2</b>	<b>10.5</b>	<b>7.7</b>	<b>12.8</b>	<b>11.8</b>	<b>12.8</b>	<b>11.6</b>	<b>9.2</b>	<b>10.9</b>
Arsenic	0.023	0.014	<.01	<.01	0.023	0.026	<.01	0.022	0.02
Barium	1.4	0.66	0.88	0.82	0.48	0.53	0.97	1.6	0.65
Cadmium	0.24	0.086	0.11	0.066	0.39	0.089	0.039	0.24	0.12
Mercury	1.1	0.06	0.08	0.82	0.03	0.45	0.21	0.9	0.44
Thallium	0.001	0.001	0.001	0.002	0.001	0.003	0.003	0.002	0.001
Titanium	0.52	0.4	0.32	0.33	0.33	0.46	0.34	0.29	0.33
Uranium	0.018	0.017	0.028	0.02	0.044	0.024	0.025	0.001	0.025
Aluminum	4.3	4.7	4.2	4.5	3	2.2	2	3	2
Antimony	0.057	0.017	0.019	0.012	0.024	0.014	0.017	0.013	0.01
Beryllium	<.01	<.01	<.01	<.01	<.01	<.01	<.01	<.01	0.01
Bismuth	0.042	0.005	0.007	0.016	<.002	0.01	<.002	<.002	<.002
Lead	1.8	1.4	1.7	1.6	1.1	0.85	0.42	0.9	0.26
Nickel	0.18	0.11	0.18	0.08	0.08	0.11	0.18	0.11	0.09
Platinum	<.003	<.003	<.003	<.003	<.003	<.003	<.003	<.003	<.003
Silver	0.33	0.02	0.01	0.02	0.02	0.01	<.006	0.01	0.01
Thorium	<.001	0.001	<.001	0.001	<.001	<.001	<.001	0.001	0.001
Tin	0.17	0.19	0.18	0.05	0.06	0.05	0.04	0.09	0.09
<b>Hemoglobin A1C</b>	<b>0.112</b>	<b>0.105</b>	<b>0.077</b>	<b>0.128</b>	<b>0.118</b>	<b>0.128</b>	<b>0.116</b>	<b>0.092</b>	<b>10.9</b>

Type of Report =>	Challenged Urine Tests									
Report Number =>	U 1	U 2	U 4	U8	U9	U10	U11	U12	U13	U14
Date of Test =>	27-Sep-10	16-Jun-11	14-Jul-11	17-Jul-12	3-Jul-13	16-Jul-14	19-Sep-16	24-Jul-17	12-Feb-18	4-Sep-18
Time Interval =>	Initial	After 10 Months	After 11 Months	After 2 Years	After 3 Years	After 4 Years	After 6 Years 2 Months	After 7 Years.	After 7 Years and 6 months.	After 8 Years and 2 months.
Provoking Agent =>	DMPS & CaEDTA	DMPS & CaEDTA	ALA & DMSA	ALA & DMSA	ALA & DMSA	ALA & DMSA	ALA & DMSA	ALA & DMSA	DMPS & CaEDTA	DMPS & CaEDTA
Scale =>	µg/g Creatinine									
Toxic Metals										
Total Toxic Metals %	406.97 100.00	106.6 26.19	62.7 15.41	44.4 10.91	92.4 22.70	57.8 14.20	135.8 33.37	149.8 36.81	101.59 24.96	89.3 21.94
Arse, Bari, Cadmi, Merc Thall, Uran %	65.5 100.00	37.1 56.64	9.3 14.20	19.6 29.92	51.7 78.93	25.4 38.78	51 77.86	127.7 194.96	45.5 69.47	41 62.60
Reat of the Metals %	341.47 100.00	69.5 20.35	53.4 15.64	24.8 7.26	40.7 11.92	32.4 9.49	84.8 24.83	22.1 6.47	56.09 16.43	48.3 14.14
Arsenic	33	18	< dl	7.8	27	14	39	110	30	29
Barium	7.6	14	7.5	11	15	8.8	11	16	9.5	6.4
Cadmium	1.4	0.8	0.7	0.5	0.8	0.4	0.6	< dl	0.3	0.5
Mercury	23	3.4	0.8	< dl	8.6	1.8	< dl	1.4	5.4	4.7
Thallium	0.3	0.9	0.3	0.3	0.3	0.4	0.4	0.3	0.3	0.4
Uranium	0.2	< dl	< dl	< dl	< dl	< dl	< dl	< dl	< dl	< dl
Aluminum	260	16	31	5.2	12	3.3	56	< dl	11	8.7
Antimony	0.2	0.6	0.2	< dl	< dl	0.5	< dl	< dl	1.3	0.4
Beryllium	< dl	< dl	< dl	< dl	< dl	< dl	< dl	< dl	< dl	< dl
Bismuth	0.1	3.5	< dl	< dl	< dl	0.2	0.3	< dl	0.6	0.6
Cesium	6.5	5.4	5.5	4.2	7.2	4.8	5	6.7	4.4	5.2
Gadolinium	0.4	< dl	< dl	< dl	< dl	< dl	< dl	< dl	< dl	< dl
Lead	28	15	6.1	7.1	11	16	4.1	1.8	10	12
Nickel	25	19	9.8	7.7	10	6.8	19	13	24	16
Palladium	< dl	< dl	< dl	< dl	< dl	< dl	< dl	< dl	< dl	< dl
Platinum	0.07	< dl	< dl	< dl	< dl	< dl	< dl	< dl	< dl	< dl
Tellurium	< dl	< dl	< dl	< dl	< dl	< dl	< dl	< dl	< dl	< dl
Thorium	< dl	< dl	< dl	< dl	< dl	< dl	< dl	< dl	< dl	< dl
Tin	21	10	0.8	0.4	0.3	0.6	0.3	0.3	4.7	5.2
Tungsten	0.2	< dl	< dl	0.2	0.2	0.2	0.1	0.3	0.09	0.2
Hemoglobin A1C	0.112	0.105	0.105	0.077	0.128	0.118	0.116	0.092	0.108	0.101



**Dynacare**

Medical Laboratories

245 Peel Mill Street, London, Ontario, N6A 1P4  
TEL: (519) 679-7630

COLLECTION TIME  
2010/06/21 N/A

573 67-36524674

FINAL

2010/06/21

2010/06/25

PATIENT: KIRITHARAN, GANA  
10 STONEHILL CRT 307  
SCARBOROUGH  
ONTARIO  
M1W 2X8

1438520023 PD

DR. M. SELVANANTHAN  
CML HEALTHCARE INC.  
6560 KENNEDY RD  
MISSISSAUGA, ON  
L5T 2X4

40126150

DATE OF BIRTH  
1967/09/09

SEX: M AGE: 42 Y

573  
9 A

PHONE: 416-820-8581

LABORATORY ID: KXS55605

PHONE: 800-263-0801

COMMENTS

OUTSIDE  
NORMAL  
LIMITS

CODES TEST DESCRIPTION

RESULTS

REFERENCE RANGE

C H E M I S T R Y

MERCURY

15.4

< 18.0 nmol/L

MERCURY REGULATION (Ontario Ministry of Labor)

Mercury in blood reflects very recent absorption and cannot be considered to reflect chronic exposure.

When a worker exposed to alkyl mercury compounds shows any concentration of mercury, a review of work practices, health status and personal hygiene practices must be made.

If blood test for alkyl mercury exposure shows result >500 nmol/L, a second test must be performed as soon as possible. If elevated level is confirmed, the worker must be removed from exposure. If the worker shows any symptoms of mercury toxicity, he/she must be removed from exposure regardless of blood concentration. Return to work should not be permitted until blood mercury concentration drops below 50 nmol/L.

Environmental exposure:

0.0 - 40.0 nmol/L, individuals consuming large quantities of seafood may have values as high as 998 nmol/L.

Occupational exposure: BEI (Biological Exposure Index): inorganic mercury (sampling time is end of shift at end of work week): 75 nmol/L.

C - CONFIRMED BY OTHER TEST    H - HEMOLYZED    I - INSUFFICIENT QUANTITY    K - ICTERIC  
L - LIPEMIC    N - REPLICATED    T - TELEPHONED

LABORATORY REPORT  
RESULT INQUIRY  
SEE REVERSE



# Anamol

Laboratories

Analyzed by Doctor's Data, Inc.

## Hair Mineral Analysis

Client #: 33379 Doctor: Makoto Trotter, ND Zen-Tai Wellness Center 302-120 Carlton St Toronto, ON M5A 4K2 CANADA	Lab #: H100723-2362-1 Name: Gana Kiritharani ID: KIRITHARANI-G-00001 Sex: Male Age: 42	Hair Location: Head Sample Size: 0.199 g Hair Colour: Black Shampoo: Head And Shoulders Treatment:	Date Collected: 7/19/2010 Date In: 7/23/2010 Date Out: 7/24/2010 Methodology: ICP-MS
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Toxic Elements	Results (µg/g)	Ref Range	Within Range	Above Range	
Aluminum	4.3	< 7.0			Al
Antimony	0.057	< 0.066			Sb
Arsenic	0.023	< 0.080			As
Barium	1.4	< 1.0			Ba
Beryllium	< 0.01	< 0.020			Be
Bismuth	0.042	< 2.0			Bi
Cadmium	0.24	< 0.065			Cd
Lead	1.8	< 0.80			Pb
Mercury	1.1	< 0.80			Hg
Platinum	< 0.003	< 0.005			Pt
Thallium	0.001	< 0.002			Tl
Thorium	< 0.001	< 0.002			Th

Nutritional Elements	Results (µg/g)	Ref Range	Below Range	50 <sup>th</sup> Percentile	Above Range	
Boron	0.61	0.40 - 3.0				B
Calcium	1730	200 - 750				Ca
Chromium	0.39	0.40 - 0.70				Cr
Copper	110	11 - 30				Cu
Iron	14	7.0 - 16				Fe
Magnesium	120	25 - 75				Mg
Manganese	0.26	0.08 - 0.50				Mn
Molybdenum	0.070	0.025 - 0.060				Mo
Phosphorus	209	150 - 220				P
Potassium	49	9 - 80				K
Rubidium	0.084	0.011 - 0.12				Rb
Sulfur	50500	44000 - 50000				S
Selenium	1.3	0.70 - 1.2				Se
Sodium	96	20 - 180				Na
Strontium	5.0	0.30 - 3.5				Sr
Zinc	300	130 - 200				Zn

\* <dl = Less than Detection Limit      Comments: v10.08

Potentially Toxic Elements	Results (µg/g)	Ref Range	Other Elements	Results (µg/g)	Ref Range	Significant Ratios	Results	Ref Range
Nickel	0.18	< 0.20	Cobalt	0.015	0.004 - 0.020	Ca:Mg	14.4	4 - 30
Silver	0.33	< 0.08	Germanium	0.033	0.030 - 0.040	Fe:Cu	0.127	0.2 - 1.3
Tin	0.17	< 0.30	Iodine	0.29	0.25 - 1.8	Na:K	1.96	0.5 - 10
Titanium	0.52	< 0.60	Lithium	0.004	0.007 - 0.020	Zn:Cu	2.73	4 - 20
Uranium	0.018	< 0.060	Vanadium	0.025	0.018 - 0.065	Zn:Cd	> 999	> 800
			Zirconium	0.024	0.020 - 0.44			



# Anamol

Laboratories

Analyzed by Doctor's Data, Inc.

## Hair Mineral Analysis

Client #: 33379 Doctor: Zen-Tai Wellness Center 302-120 Carlton St Toronto, ON M5A 4K2 CANADA	Lab #: H110714-2346-1 Name: Gana Kiritharan ID: KIRITHARAN-G-00001 Sex: Male Age: 43	Hair Location: Head Sample Size: 0.196 g Hair Colour: Black Shampoo: Head Shoulders Treatment:	Date Collected: 7/8/2011 Date In: 7/14/2011 Date Out: 7/19/2011 Methodology: ICP-MS
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Toxic Elements	Results (µg/g)	Ref Range	Within Range	Above Range	
Aluminum	4.7	< 7.0			Al
Antimony	0.017	< 0.066			Sb
Arsenic	0.014	< 0.080			As
Barium	0.66	< 1.0			Ba
Beryllium	< 0.01	< 0.020			Be
Bismuth	0.005	< 2.0			Bi
Cadmium	0.086	< 0.065			Cd
Lead	1.4	< 0.80			Pb
Mercury	0.06	< 0.80			Hg
Platinum	< 0.003	< 0.005			Pt
Thallium	0.001	< 0.002			Tl
Thorium	0.001	< 0.002			Th

Nutritional Elements	Results (µg/g)	Ref Range	Below Range	50 <sup>th</sup> Percentile	Above Range	
Boron	0.52	0.40 - 3.0				B
Calcium	1260	200 - 750				Ca
Chromium	0.37	0.40 - 0.70				Cr
Copper	110	11 - 30				Cu
Iron	9.3	7.0 - 16				Fe
Magnesium	87	25 - 75				Mg
Manganese	0.19	0.08 - 0.50				Mn
Molybdenum	0.040	0.025 - 0.060				Mo
Phosphorus	197	150 - 220				P
Potassium	34	9 - 80				K
Rubidium	0.072	0.011 - 0.12				Rb
Sulfur	46700	44000 - 50000				S
Selenium	1.2	0.70 - 1.2				Se
Sodium	41	20 - 180				Na
Strontium	2.7	0.30 - 3.5				Sr
Zinc	240	130 - 200				Zn

\* <dl = Less than Detection Limit      Comments: v10.08

Potentially Toxic Elements	Results (µg/g)	Ref Range	Other Elements	Results (µg/g)	Ref Range	Significant Ratios	Results	Ref Range
Nickel	0.11	< 0.20	Cobalt	0.004	0.004 - 0.020	Ca:Mg	14.5	4 - 30
Silver	0.02	< 0.08	Germanium	0.033	0.030 - 0.040	Fe:Cu	0.085	0.2 - 1.3
Tin	0.19	< 0.30	Iodine	0.28	0.25 - 1.8	Na:K	1.21	0.5 - 10
Titanium	0.40	< 0.60	Lithium	< 0.004	0.007 - 0.020	Zn:Cu	2.18	4 - 20
Uranium	0.017	< 0.060	Vanadium	0.019	0.018 - 0.065	Zn:Cd	> 999	> 800
			Zirconium	0.038	0.020 - 0.44			



# Anamol

## Laboratories

Analyzed by Doctor's Data, Inc.

# Hair Mineral Analysis

Client #: 33379 Doctor: Makoto Trotter, ND Zen-Tai Wellness Center 302-120 Carlton St Toronto, ON M5A 4K2 CANADA	Lab #: H120717-2135-1 Name: Gana Kiritharan ID: KIRITHARAN-G-00001 Sex: Male Age: 44	Hair Location: Head Sample Size: 0.196 g Hair Colour: Black Shampoo: Hs Treatment:	Date Collected: 7/13/2012 Date In: 7/17/2012 Date Out: 7/18/2012  Methodology: ICP-MS
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Toxic Elements	Results (µg/g)	Ref Range	Within Range	Above Range	
Aluminum	4.2	< 7.0			Al
Antimony	0.019	< 0.066			Sb
Arsenic	< 0.01	< 0.080			As
Barium	0.88	< 1.0			Ba
Beryllium	< 0.01	< 0.020			Be
Bismuth	0.007	< 2.0			Bi
Cadmium	0.11	< 0.065			Cd
Lead	1.7	< 0.80			Pb
Mercury	0.08	< 0.80			Hg
Platinum	< 0.003	< 0.005			Pt
Thallium	0.001	< 0.002			Tl
Thorium	< 0.001	< 0.002			Th

Nutritional Elements	Results (µg/g)	Ref Range	Below Range	50 <sup>th</sup> Percentile	Above Range	
Boron	0.81	0.40- 3.0				B
Calcium	1490	200- 750				Ca
Chromium	0.36	0.40- 0.70				Cr
Copper	72	11- 30				Cu
Iron	9.8	7.0- 16				Fe
Magnesium	110	25- 75				Mg
Manganese	0.21	0.08- 0.50				Mn
Molybdenum	0.043	0.025- 0.060				Mo
Phosphorus	195	150- 220				P
Potassium	32	9- 80				K
Rubidium	0.053	0.011- 0.12				Rb
Sulfur	47000	44000- 50000				S
Selenium	0.95	0.70- 1.2				Se
Sodium	100	20- 180				Na
Strontium	4.3	0.30- 3.5				Sr
Zinc	290	130- 200				Zn

\* <dl = Less than Detection Limit      Comments: v10.08

Potentially Toxic Elements	Results (µg/g)	Ref Range		Other Elements	Results (µg/g)	Ref Range		Significant Ratios	Results	Ref Range
Nickel	0.18	< 0.20	Ni	Cobalt	0.007	0.004- 0.020	Co	Ca:Mg	13.5	4- 30
Silver	0.01	< 0.08	Ag	Germanium	0.029	0.030- 0.040	Ge	Fe:Cu	0.136	0.2-1.3
Tin	0.18	< 0.30	Sn	Iodine	0.26	0.25- 1.8	I	Na:K	3.13	0.5- 10
Titanium	0.32	< 0.60	Ti	Lithium	0.005	0.007- 0.020	Li	Zn:Cu	4.03	4- 20
Uranium	0.028	< 0.060	U	Vanadium	0.022	0.018- 0.065	V	Zn:Cd	> 999	> 800
				Zirconium	0.014	0.020- 0.44	Zr			



# Anamol

Laboratories

Analyzed by Doctor's Data, Inc.

## Hair Mineral Analysis

Client #: 33379 Doctor: Makoto Trotter, ND Zen-Tai Wellness Center 302-120 Carlton St Toronto, ON M5A 4K2 CANADA	Lab #: H130716-2194-1 Name: Gana Kiritharan ID: KIRITHARAN-G-00001 Sex: Male Age: 45	Hair Location: Head Sample Size: 0.195 g Hair Colour: Black Shampoo: Hs Treatment:	Date Collected: 07/12/2013 Date In: 07/16/2013 Date Out: 07/17/2013  Methodology: ICP-MS
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Toxic Elements	Results (µg/g)	Ref Range	Within Range	Above Range	
Aluminum	4.5	< 7.0			Al
Antimony	0.012	< 0.066			Sb
Arsenic	< 0.01	< 0.080			As
Barium	0.82	< 1.0			Ba
Beryllium	< 0.01	< 0.020			Be
Bismuth	0.016	< 2.0			Bi
Cadmium	0.066	< 0.065			Cd
Lead	1.6	< 0.80			Pb
Mercury	0.82	< 0.80			Hg
Platinum	< 0.003	< 0.005			Pt
Thallium	0.002	< 0.002			Tl
Thorium	0.001	< 0.002			Th

Nutritional Elements	Results (µg/g)	Ref Range	Below Range	50 <sup>th</sup> Percentile	Above Range	
Boron	0.76	0.40- 3.0				B
Calcium	1340	200- 750				Ca
Chromium	0.37	0.40- 0.70				Cr
Copper	61	11- 30				Cu
Iron	8.7	7.0- 16				Fe
Magnesium	120	25- 75				Mg
Manganese	0.15	0.08- 0.50				Mn
Molybdenum	0.042	0.025- 0.060				Mo
Phosphorus	179	150- 220				P
Potassium	21	9- 80				K
Rubidium	0.042	0.011- 0.12				Rb
Sulfur	46800	44000- 50000				S
Selenium	1.2	0.70- 1.2				Se
Sodium	99	20- 180				Na
Strontium	3.5	0.30- 3.5				Sr
Zinc	500	130- 200				Zn

\* <dl = Less than Detection Limit      Comments: v10.08

Potentially Toxic Elements	Results (µg/g)	Ref Range	Other Elements	Results (µg/g)	Ref Range	Significant Ratios	Results	Ref Range
Nickel	0.08	< 0.20	Cobalt	0.006	0.004- 0.020	Ca:Mg	11.2	4- 30
Silver	0.02	< 0.08	Germanium	0.030	0.030- 0.040	Fe:Cu	0.143	0.2-1.3
Tin	0.05	< 0.30	Iodine	0.24	0.25- 1.8	Na:K	4.71	0.5- 10
Titanium	0.33	< 0.60	Lithium	< 0.004	0.007- 0.020	Zn:Cu	8.2	4- 20
Uranium	0.020	< 0.060	Vanadium	0.014	0.018- 0.065	Zn:Cd	> 999	> 800
			Zirconium	0.028	0.020- 0.44			





# Anamol

Laboratories

Analyzed by Doctor's Data, Inc.

## Hair Mineral Analysis

Client #: 33379 Doctor: Zen-Tai Wellness Center 302-120 Carlton St Toronto, ON M5A 4K2 CANADA	Lab #: H140731-2336-1 Name: Gana Kiritharan ID: KIRITHARAN-G-00001 Sex: Male Age: 46	Hair Location: Head Sample Size: 0.195 g Hair Colour: Black Shampoo: Nizoral Treatment:	Date Collected: 07/25/2014 Date In: 07/31/2014 Date Out: 08/01/2014  Methodology: ICP-MS
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Toxic Elements	Results (µg/g)	Ref Range	Within Range	Above Range	
Aluminum	3.0	< 7.0			Al
Antimony	0.024	< 0.066			Sb
Arsenic	0.023	< 0.080			As
Barium	0.48	< 1.0			Ba
Beryllium	< 0.01	< 0.020			Be
Bismuth	< 0.002	< 2.0			Bi
Cadmium	0.39	< 0.065			Cd
Lead	1.1	< 0.80			Pb
Mercury	0.03	< 0.80			Hg
Platinum	< 0.003	< 0.005			Pt
Thallium	0.001	< 0.002			Tl
Thorium	< 0.001	< 0.002			Th

Nutritional Elements	Results (µg/g)	Ref Range	Below Range	50 <sup>th</sup> Percentile	Above Range	
Boron	0.73	0.40- 3.0				B
Calcium	935	200- 750				Ca
Chromium	0.36	0.40- 0.70				Cr
Copper	33	11- 30				Cu
Iron	9.4	7.0- 16				Fe
Magnesium	64	25- 75				Mg
Manganese	0.15	0.08- 0.50				Mn
Molybdenum	0.041	0.025- 0.060				Mo
Phosphorus	181	150- 220				P
Potassium	62	9- 80				K
Rubidium	0.098	0.011- 0.12				Rb
Sulfur	49200	44000- 50000				S
Selenium	0.90	0.70- 1.2				Se
Sodium	110	20- 180				Na
Strontium	1.7	0.30- 3.5				Sr
Zinc	190	130- 200				Zn

\* <dl = Less than Detection Limit      Comments: v10.08

Potentially Toxic Elements	Results (µg/g)	Ref Range	Other Elements	Results (µg/g)	Ref Range	Significant Ratios	Results	Ref Range
Nickel	0.08	< 0.20	Cobalt	0.005	0.004- 0.020	Ca:Mg	14.6	4- 30
Silver	0.02	< 0.08	Germanium	0.026	0.030- 0.040	Fe:Cu	0.285	0.2-1.3
Tin	0.06	< 0.30	Iodine	0.45	0.25- 1.8	Na:K	1.77	0.5- 10
Titanium	0.33	< 0.60	Lithium	< 0.004	0.007- 0.020	Zn:Cu	5.76	4- 20
Uranium	0.044	< 0.060	Vanadium	0.025	0.018- 0.065	Zn:Cd	487	> 800
			Zirconium	0.021	0.020- 0.44			



LAB #: H150721-2268-1  
 PATIENT: Gana Kiritharan  
 ID: KIRITHARAN-G-00001  
 SEX: Male  
 AGE: 47

CLIENT #: 41676  
 DOCTOR: Makoto Trotter, ND  
 In-Common Laboratories  
 57 Gervais Drive  
 North York, ON M3C 1Z2 CANADA

## Toxic & Essential Elements; Hair

TOXIC METALS				
		RESULT µg/g	REFERENCE INTERVAL	PERCENTILE 68 <sup>th</sup> 95 <sup>th</sup>
Aluminum (Al)		2.2	< 7.0	
Antimony (Sb)		0.014	< 0.066	
Arsenic (As)		0.026	< 0.080	
Barium (Ba)		0.53	< 1.0	
Beryllium (Be)		< 0.01	< 0.020	
Bismuth (Bi)		0.010	< 2.0	
Cadmium (Cd)		0.089	< 0.065	
Lead (Pb)		0.85	< 0.80	
Mercury (Hg)		0.45	< 0.80	
Platinum (Pt)		< 0.003	< 0.005	
Thallium (Tl)		0.003	< 0.002	
Thorium (Th)		< 0.001	< 0.002	
Uranium (U)		0.024	< 0.060	
Nickel (Ni)		0.11	< 0.20	
Silver (Ag)		0.01	< 0.08	
Tin (Sn)		0.05	< 0.30	
Titanium (Ti)		0.46	< 0.60	
Total Toxic Representation				

ESSENTIAL AND OTHER ELEMENTS					
		RESULT µg/g	REFERENCE INTERVAL	PERCENTILE 2.5 <sup>th</sup> 16 <sup>th</sup> 50 <sup>th</sup> 84 <sup>th</sup> 97.5 <sup>th</sup>	
Calcium (Ca)		1040	200- 750		
Magnesium (Mg)		84	25- 75		
Sodium (Na)		89	20- 180		
Potassium (K)		25	9- 80		
Copper (Cu)		15	11- 30		
Zinc (Zn)		390	130- 200		
Manganese (Mn)		0.22	0.08- 0.50		
Chromium (Cr)		0.34	0.40- 0.70		
Vanadium (V)		0.017	0.018- 0.065		
Molybdenum (Mo)		0.042	0.025- 0.060		
Boron (B)		0.85	0.40- 3.0		
Iodine (I)		0.63	0.25- 1.8		
Lithium (Li)		0.004	0.007- 0.020		
Phosphorus (P)		201	150- 220		
Selenium (Se)		0.95	0.70- 1.2		
Strontium (Sr)		2.4	0.30- 3.5		
Sulfur (S)		49600	44000- 50000		
Cobalt (Co)		0.008	0.004- 0.020		
Iron (Fe)		9.0	7.0- 16		
Germanium (Ge)		0.029	0.030- 0.040		
Rubidium (Rb)		0.047	0.011- 0.12		
Zirconium (Zr)		0.019	0.020- 0.44		

SPECIMEN DATA		RATIOS	
<b>COMMENTS:</b>		ELEMENTS	RATIOS
Date Collected: 07/16/2015	Sample Size: 0.198 g	Ca/Mg	12.4
Date Received: 07/21/2015	Sample Type: Head	Ca/P	5.17
Date Completed: 07/23/2015	Hair Color: Black	Na/K	3.56
Methodology: ICP/MS	Treatment:	Zn/Cu	26
	Shampoo: Head Shoulders	Zn/Cd	> 999
		RANGE	
			4- 30
			0.8- 8
			0.5- 10
			4- 20
			> 800



LAB #: H160726-2290-1  
 PATIENT: Gana Kiritharan  
 ID: KIRITHARAN-G-00001  
 SEX: Male  
 AGE: 48

CLIENT #: 41676  
 DOCTOR: Makoto Trotter, ND  
 In-Common Laboratories  
 57 Gervais Drive  
 North York, ON M3C 1Z2 CANADA

### Toxic & Essential Elements; Hair

TOXIC METALS			
	RESULT µg/g	REFERENCE INTERVAL	PERCENTILE 68 <sup>th</sup> 95 <sup>th</sup>
Aluminum (Al)	2.0	< 7.0	
Antimony (Sb)	0.017	< 0.066	
Arsenic (As)	< 0.01	< 0.080	
Barium (Ba)	0.97	< 1.0	
Beryllium (Be)	< 0.01	< 0.020	
Bismuth (Bi)	< 0.002	< 2.0	
Cadmium (Cd)	0.039	< 0.065	
Lead (Pb)	0.42	< 0.80	
Mercury (Hg)	0.21	< 0.80	
Platinum (Pt)	< 0.003	< 0.005	
Thallium (Tl)	0.003	< 0.002	
Thorium (Th)	< 0.001	< 0.002	
Uranium (U)	0.025	< 0.060	
Nickel (Ni)	0.18	< 0.20	
Silver (Ag)	< 0.006	< 0.08	
Tin (Sn)	0.04	< 0.30	
Titanium (Ti)	0.34	< 0.60	
Total Toxic Representation			

ESSENTIAL AND OTHER ELEMENTS					
	RESULT µg/g	REFERENCE INTERVAL	PERCENTILE 2.5 <sup>th</sup> 16 <sup>th</sup> 50 <sup>th</sup> 84 <sup>th</sup> 97.5 <sup>th</sup>		
Calcium (Ca)	1510	200- 750			
Magnesium (Mg)	130	25- 75			
Sodium (Na)	140	20- 180			
Potassium (K)	33	9- 80			
Copper (Cu)	11	11- 30			
Zinc (Zn)	520	130- 200			
Manganese (Mn)	0.21	0.08- 0.50			
Chromium (Cr)	0.36	0.40- 0.70			
Vanadium (V)	0.013	0.018- 0.065			
Molybdenum (Mo)	0.034	0.025- 0.060			
Boron (B)	0.74	0.40- 3.0			
Iodine (I)	0.35	0.25- 1.8			
Lithium (Li)	0.014	0.007- 0.020			
Phosphorus (P)	185	150- 220			
Selenium (Se)	0.84	0.70- 1.2			
Strontium (Sr)	4.3	0.30- 3.5			
Sulfur (S)	46900	44000- 50000			
Cobalt (Co)	0.017	0.004- 0.020			
Iron (Fe)	9.0	7.0- 16			
Germanium (Ge)	0.034	0.030- 0.040			
Rubidium (Rb)	0.044	0.011- 0.12			
Zirconium (Zr)	0.018	0.020- 0.44			

SPECIMEN DATA		RATIOS	
<b>COMMENTS:</b>		<b>ELEMENTS</b>	<b>RATIOS</b>
Date Collected: 07/07/2016		Ca/Mg	11.6
Date Received: 07/26/2016		Ca/P	8.16
Date Completed: 07/28/2016		Na/K	4.24
Methodology: ICP/MS		Zn/Cu	47.3
Sample Size: 0.196 g	Sample Type: Head	Zn/Cd	> 999
Hair Color: Black	Treatment:		
Shampoo: Head Shoulder			
		<b>RANGE</b>	
		4- 30	
		0.8- 8	
		0.5- 10	
		4- 20	
		> 800	



LAB #: H170718-2398-1  
 PATIENT: Gana Kiritharan  
 ID: KIRITHARAN-G-00002  
 SEX: Male  
 AGE: 49

CLIENT #: 41676  
 DOCTOR: Makoto Trotter, ND  
 In-Common Laboratories  
 57 Gervais Drive  
 North York, ON M3C 1Z2 CANADA

## Toxic & Essential Elements; Hair

TOXIC METALS				
		RESULT µg/g	REFERENCE INTERVAL	PERCENTILE 68 <sup>th</sup> 95 <sup>th</sup>
Aluminum	(Al)	3.0	< 7.0	
Antimony	(Sb)	0.013	< 0.066	
Arsenic	(As)	0.022	< 0.080	
Barium	(Ba)	1.6	< 1.0	
Beryllium	(Be)	< 0.01	< 0.020	
Bismuth	(Bi)	< 0.002	< 2.0	
Cadmium	(Cd)	0.24	< 0.065	
Lead	(Pb)	0.90	< 0.80	
Mercury	(Hg)	0.25	< 0.80	
Platinum	(Pt)	< 0.003	< 0.005	
Thallium	(Tl)	0.002	< 0.002	
Thorium	(Th)	0.001	< 0.002	
Uranium	(U)	0.020	< 0.060	
Nickel	(Ni)	0.11	< 0.20	
Silver	(Ag)	0.01	< 0.08	
Tin	(Sn)	0.09	< 0.30	
Titanium	(Ti)	0.29	< 0.60	
Total Toxic Representation				

ESSENTIAL AND OTHER ELEMENTS					
		RESULT µg/g	REFERENCE INTERVAL	PERCENTILE 2.5 <sup>th</sup> 16 <sup>th</sup> 50 <sup>th</sup> 84 <sup>th</sup> 97.5 <sup>th</sup>	
Calcium	(Ca)	1940	200- 750		
Magnesium	(Mg)	160	25- 75		
Sodium	(Na)	280	20- 180		
Potassium	(K)	71	9- 80		
Copper	(Cu)	15	11- 30		
Zinc	(Zn)	590	130- 200		
Manganese	(Mn)	0.28	0.08- 0.50		
Chromium	(Cr)	0.37	0.40- 0.70		
Vanadium	(V)	0.028	0.018- 0.065		
Molybdenum	(Mo)	0.039	0.025- 0.060		
Boron	(B)	1.1	0.40- 3.0		
Iodine	(I)	11	0.25- 1.8		
Lithium	(Li)	0.16	0.007- 0.020		
Phosphorus	(P)	164	150- 220		
Selenium	(Se)	0.95	0.70- 1.2		
Strontium	(Sr)	6.8	0.30- 3.5		
Sulfur	(S)	46800	44000- 50000		
Cobalt	(Co)	0.010	0.004- 0.020		
Iron	(Fe)	12	7.0- 16		
Germanium	(Ge)	0.034	0.030- 0.040		
Rubidium	(Rb)	0.14	0.011- 0.12		
Zirconium	(Zr)	0.031	0.020- 0.44		

SPECIMEN DATA		RATIOS	
<b>COMMENTS:</b>		<b>ELEMENTS</b>	<b>RATIOS</b>
Date Collected: 07/13/2017		Ca/Mg	12.1
Date Received: 07/18/2017		Ca/P	11.8
Date Completed: 07/21/2017		Na/K	3.94
Methodology: ICP/MS		Zn/Cu	39.3
Sample Size: 0.198 g	Sample Type: Head	Zn/Cd	> 999
Hair Color: Black	Treatment:		
Shampoo: H S			
		<b>RANGE</b>	
		4- 30	
		0.8- 8	
		0.5- 10	
		4- 20	
		> 800	



LAB #: H180713-2361-1  
 PATIENT: Gana Kiritharan  
 ID: KIRITHARAN-G-00002  
 SEX: Male  
 AGE: 50

CLIENT #: 41676  
 DOCTOR: Makoto Trotter, ND  
 In-Common Laboratories  
 57 Gervais Drive  
 North York, ON M3C 1Z2 CANADA

### Toxic & Essential Elements; Hair

TOXIC METALS			
	RESULT µg/g	REFERENCE INTERVAL	PERCENTILE 68 <sup>th</sup> 95 <sup>th</sup>
Aluminum (Al)	2.0	< 7.0	
Antimony (Sb)	< 0.01	< 0.066	
Arsenic (As)	0.020	< 0.080	
Barium (Ba)	0.65	< 1.0	
Beryllium (Be)	< 0.01	< 0.020	
Bismuth (Bi)	< 0.002	< 2.0	
Cadmium (Cd)	0.12	< 0.065	
Lead (Pb)	0.26	< 0.80	
Mercury (Hg)	0.44	< 0.80	
Platinum (Pt)	< 0.003	< 0.005	
Thallium (Tl)	0.001	< 0.002	
Thorium (Th)	< 0.001	< 0.002	
Uranium (U)	0.025	< 0.060	
Nickel (Ni)	0.09	< 0.20	
Silver (Ag)	0.01	< 0.08	
Tin (Sn)	0.09	< 0.30	
Titanium (Ti)	0.33	< 0.60	
Total Toxic Representation			

ESSENTIAL AND OTHER ELEMENTS					
	RESULT µg/g	REFERENCE INTERVAL	PERCENTILE 2.5 <sup>th</sup> 16 <sup>th</sup> 50 <sup>th</sup> 84 <sup>th</sup> 97.5 <sup>th</sup>		
Calcium (Ca)	1300	200- 750			
Magnesium (Mg)	110	25- 75			
Sodium (Na)	230	20- 180			
Potassium (K)	63	9- 80			
Copper (Cu)	14	11- 30			
Zinc (Zn)	490	130- 200			
Manganese (Mn)	0.16	0.08- 0.50			
Chromium (Cr)	0.97	0.40- 0.70			
Vanadium (V)	0.024	0.018- 0.065			
Molybdenum (Mo)	0.035	0.025- 0.060			
Boron (B)	2.2	0.40- 3.0			
Iodine (I)	1.5	0.25- 1.8			
Lithium (Li)	0.083	0.007- 0.020			
Phosphorus (P)	190	150- 220			
Selenium (Se)	0.88	0.70- 1.2			
Strontium (Sr)	3.0	0.30- 3.5			
Sulfur (S)	46400	44000- 50000			
Cobalt (Co)	0.005	0.004- 0.020			
Iron (Fe)	12	7.0- 16			
Germanium (Ge)	0.034	0.030- 0.040			
Rubidium (Rb)	0.093	0.011- 0.12			
Zirconium (Zr)	0.064	0.020- 0.44			

SPECIMEN DATA		RATIOS		
<b>COMMENTS:</b>		ELEMENTS	RATIOS	RANGE
Date Collected: 07/10/2018	Sample Size: 0.199 g	Ca/Mg	11.8	4- 30
Date Received: 07/13/2018	Sample Type: Head	Ca/P	6.84	0.8- 8
Date Completed: 07/17/2018	Hair Color: Black	Na/K	3.65	0.5- 10
Methodology: ICP/MS	Treatment:	Zn/Cu	35	4- 20
	Shampoo:	Zn/Cd	> 999	> 800

# URINE TOXIC METALS



**LAB #:** U100928-2270-1  
**PATIENT:** Gana Kiritharan  
**ID:** KIRITHARAN-G-00001  
**SEX:** Male  
**AGE:** 43

**CLIENT#:** 25809  
**DOCTOR:** Fred Hui, MD  
 The Chelation Center Downtown  
 421 Bloor St East, #204  
 Toronto, ON M4W 3T1 CANADA

## POTENTIALLY TOXIC METALS

METALS	RESULT µg/g creat	REFERENCE RANGE	WITHIN REFERENCE RANGE	ELEVATED	VERY ELEVATED
Aluminum	260	< 25			
Antimony	0.2	< 0.3			
Arsenic	33	< 108			
Barium	7.6	< 7			
Beryllium	< dl	< 0.5			
Bismuth	0.1	< 10			
Cadmium	1.4	< 0.8			
Cesium	6.5	< 9			
Gadolinium	0.4	< 0.3			
Lead	28	< 2			
Mercury	23	< 3			
Nickel	25	< 10			
Palladium	< dl	< 0.3			
Platinum	0.07	< 1			
Tellurium	< dl	< 0.3			
Thallium	0.3	< 0.5			
Thorium	< dl	< 0.03			
Tin	21	< 9			
Titanium	N/A	< 15			
Tungsten	0.2	< 0.4			
Uranium	0.2	< 0.03			

## URINE CREATININE

	RESULT mg/dL	REFERENCE RANGE	2SD LOW	1SD LOW	MEAN	1SD HIGH	2SD HIGH
Creatinine	71.4	45 - 225					

## SPECIMEN DATA

**Comments:**

Date Collected: 9/27/2010	pH upon receipt: <b>Acceptable</b>	Collection Period: <b>timed: 2 hours</b>
Date Received: 9/28/2010	<dl: <b>less than detection limit</b>	Volume:
Date Completed: 10/3/2010	Provoking Agent: <b>DMP5 CAEDTA</b>	Provocation: <b>POST PROVOCATIVE</b>
Method: <b>ICP-MS</b>		

Toxic metals are reported as µg/g creatinine to account for urine dilution variations. **Reference ranges are representative of a healthy population under non-challenge or non-provoked conditions.** No safe reference levels for toxic metals have been established.

V12



LAB #: U110620-2251-1  
 PATIENT: Gana Kiritharan  
 ID: KIRITHARAN-G-00001  
 SEX: Male  
 AGE: 43

CLIENT #: 25809  
 DOCTOR: Fred Hui, MD  
 The Chelation Center Downtown  
 421 Bloor St East, #204  
 Toronto, ON M4W 3T1 CANADA

### Toxic Metals; Urine

TOXIC METALS						
		RESULT µg/g creat	REFERENCE INTERVAL	WITHIN REFERENCE	OUTSIDE REFERENCE	
Aluminum	(Al)	16	< 25			
Antimony	(Sb)	0.6	< 0.3			
Arsenic	(As)	18	< 108			
Barium	(Ba)	14	< 7			
Beryllium	(Be)	< dl	< 1			
Bismuth	(Bi)	3.5	< 10			
Cadmium	(Cd)	0.8	< 0.8			
Cesium	(Cs)	5.4	< 9			
Gadolinium	(Gd)	< dl	< 0.3			
Lead	(Pb)	15	< 2			
Mercury	(Hg)	3.4	< 3			
Nickel	(Ni)	19	< 10			
Palladium	(Pd)	< dl	< 0.3			
Platinum	(Pt)	< dl	< 1			
Tellurium	(Te)	< dl	< 0.8			
Thallium	(Tl)	0.9	< 0.5			
Thorium	(Th)	< dl	< 0.03			
Tin	(Sn)	10	< 9			
Tungsten	(W)	< dl	< 0.4			
Uranium	(U)	< dl	< 0.03			

  

URINE CREATININE						
	RESULT mg/dL	REFERENCE INTERVAL	-2SD	-1SD	MEAN	+1SD +2SD
Creatinine	16.3	45 - 225				

### SPECIMEN DATA

Comments:

Date Collected: 6/16/2011      pH upon receipt: Acceptable      Collection Period: timed: 2 hours  
 Date Received: 6/20/2011      <dl: less than detection limit      Volume:  
 Date Completed: 6/21/2011      Provoking Agent: DMPS EDTA      Provocation: POST PROVOCATIVE  
 Method: ICP-MS      Creatinine by Jaffe Method

Results are creatinine corrected to account for urine dilution variations. Reference intervals and corresponding graphs are representative of a healthy population under non-provoked conditions. Chelation (provocation) agents can increase urinary excretion of metals/elements.

V13



LAB #: U110701-2354-1  
 PATIENT: Gana Kiritharan  
 ID: KIRITHARAN-G-00001  
 SEX: Male  
 AGE: 43

CLIENT #: 34074  
 DOCTOR: Wendy Pitblado

77 Lowell Street North  
 Cambridge, ON N1R 5E2 CANADA

**Toxic Metals; Urine**

TOXIC METALS						
		RESULT µg/g creat	REFERENCE INTERVAL	WITHIN REFERENCE	OUTSIDE REFERENCE	
Aluminum	(Al)	6.3	< 25			
Antimony	(Sb)	0.2	< 0.3			
Arsenic	(As)	5	< 108			
Barium	(Ba)	4.9	< 7			
Beryllium	(Be)	< dl	< 1			
Bismuth	(Bi)	< dl	< 10			
Cadmium	(Cd)	0.6	< 0.8			
Cesium	(Cs)	3.9	< 9			
Gadolinium	(Gd)	< dl	< 0.3			
Lead	(Pb)	5.8	< 2			
Mercury	(Hg)	0.5	< 3			
Nickel	(Ni)	6.6	< 10			
Palladium	(Pd)	< dl	< 0.3			
Platinum	(Pt)	< dl	< 1			
Tellurium	(Te)	< dl	< 0.8			
Thallium	(Tl)	0.3	< 0.5			
Thorium	(Th)	< dl	< 0.03			
Tin	(Sn)	0.3	< 9			
Tungsten	(W)	0.05	< 0.4			
Uranium	(U)	< dl	< 0.03			

URINE CREATININE								
		RESULT mg/dL	REFERENCE INTERVAL	-2SD	-1SD	MEAN	+1SD	+2SD
Creatinine		105	45 - 225					

SPECIMEN DATA			
Comments:			
Date Collected: 6/30/2011	pH upon receipt: Acceptable	Collection Period: timed: 6 hours	
Date Received: 7/1/2011	<dl: less than detection limit	Volume:	
Date Completed: 7/5/2011	Provoking Agent: DMSA	Provocation: POST PROVOCATIVE	
Method: ICP-MS	Creatinine by Jaffe Method		
Results are creatinine corrected to account for urine dilution variations. Reference intervals and corresponding graphs are representative of a healthy population under non-provoked conditions. Chelation (provocation) agents can increase urinary excretion of metals/elements.			
V13			





LAB #: U110715-2059-1  
 PATIENT: Gana Kiritharan  
 ID: KIRITHARAN-G-00001  
 SEX: Male  
 AGE: 43

CLIENT #: 34074  
 DOCTOR: Wendy Pitblado

77 Lowell Street North  
 Cambridge, ON N1R 5E2 CANADA

### Toxic Metals; Urine

TOXIC METALS					
		RESULT µg/g creat	REFERENCE INTERVAL	WITHIN REFERENCE	OUTSIDE REFERENCE
Aluminum	(Al)	31	< 25		
Antimony	(Sb)	0.2	< 0.3		
Arsenic	(As)	< dl	< 108		
Barium	(Ba)	7.5	< 7		
Beryllium	(Be)	< dl	< 1		
Bismuth	(Bi)	< dl	< 10		
Cadmium	(Cd)	0.7	< 0.8		
Cesium	(Cs)	5.5	< 9		
Gadolinium	(Gd)	< dl	< 0.3		
Lead	(Pb)	6.1	< 2		
Mercury	(Hg)	0.8	< 3		
Nickel	(Ni)	9.8	< 10		
Palladium	(Pd)	< dl	< 0.3		
Platinum	(Pt)	< dl	< 1		
Tellurium	(Te)	< dl	< 0.8		
Thallium	(Tl)	0.3	< 0.5		
Thorium	(Th)	< dl	< 0.03		
Tin	(Sn)	0.8	< 9		
Tungsten	(W)	< dl	< 0.4		
Uranium	(U)	< dl	< 0.03		

URINE CREATININE							
	RESULT mg/dL	REFERENCE INTERVAL	-2SD	-1SD	MEAN	+1SD	+2SD
Creatinine	33.7	45 - 225					

SPECIMEN DATA			
Comments:			
Date Collected: 7/14/2011	pH upon receipt: Acceptable	Collection Period: timed: 6 hours	
Date Received: 7/15/2011	<dl: less than detection limit	Volume:	
Date Completed: 7/16/2011	Provoking Agent: DMSA ALA	Provocation: POST PROVOCATIVE	
Method: ICP-MS	Creatinine by Jaffe Method		
Results are creatinine corrected to account for urine dilution variations. Reference intervals and corresponding graphs are representative of a healthy population under non-provoked conditions. Chelation (provocation) agents can increase urinary excretion of metals/elements.			
V13			



LAB #: U111013-2412-1  
 PATIENT: Gana Kiritharan  
 ID: KIRITHARAN-G-00001  
 SEX: Male  
 AGE: 44

CLIENT #: 34074  
 DOCTOR: Wendy Pitblado

77 Lowell Street North  
 Cambridge, ON N1R 5E2 CANADA

**Toxic Metals; Urine**

TOXIC METALS						
		RESULT µg/g creat	REFERENCE INTERVAL	WITHIN REFERENCE	OUTSIDE REFERENCE	
Aluminum	(Al)	7.1	< 25			
Antimony	(Sb)	0.2	< 0.3			
Arsenic	(As)	7.8	< 108			
Barium	(Ba)	9.1	< 7			
Beryllium	(Be)	< dl	< 1			
Bismuth	(Bi)	< dl	< 10			
Cadmium	(Cd)	0.7	< 0.8			
Cesium	(Cs)	7.6	< 9			
Gadolinium	(Gd)	< dl	< 0.3			
Lead	(Pb)	5.7	< 2			
Mercury	(Hg)	0.7	< 3			
Nickel	(Ni)	12	< 10			
Palladium	(Pd)	< dl	< 0.3			
Platinum	(Pt)	< dl	< 1			
Tellurium	(Te)	< dl	< 0.8			
Thallium	(Tl)	0.4	< 0.5			
Thorium	(Th)	< dl	< 0.03			
Tin	(Sn)	0.4	< 9			
Tungsten	(W)	0.08	< 0.4			
Uranium	(U)	< dl	< 0.03			

URINE CREATININE						
	RESULT mg/dL	REFERENCE INTERVAL	-2SD	-1SD	MEAN	+1SD +2SD
Creatinine	59.1	45 - 225				

SPECIMEN DATA			
Comments:			
Date Collected: 10/12/2011	pH upon receipt: Acceptable	Collection Period: timed: 6 hours	
Date Received: 10/13/2011	<dl: less than detection limit	Volume:	
Date Completed: 10/17/2011	Provoking Agent: DMSA	Provocation: POST PROVOCATIVE	
Method: ICP-MS	Creatinine by Jaffe Method		
Results are creatinine corrected to account for urine dilution variations. Reference intervals and corresponding graphs are representative of a healthy population under non-provoked conditions. Chelation (provocation) agents can increase urinary excretion of metals/elements.			
V13			



LAB #: U111207-2237-1  
 PATIENT: Gana Kirijharan  
 ID: KIRIJHARAN-G-00001  
 SEX: Male  
 AGE: 44

CLIENT #: 34074  
 DOCTOR: Wendy Pitblado

77 Lowell Street North  
 Cambridge, ON N1R 5E2 CANADA

*Toxic Metals; Urine*

TOXIC METALS						
		RESULT µg/g creat	REFERENCE INTERVAL	WITHIN REFERENCE	OUTSIDE REFERENCE	
Aluminum	(Al)	< dl	< 25			
Antimony	(Sb)	< dl	< 0.3			
Arsenic	(As)	9.1	< 108			
Barium	(Ba)	8.8	< 7			
Beryllium	(Be)	< dl	< 1			
Bismuth	(Bi)	< dl	< 10			
Cadmium	(Cd)	0.6	< 0.8			
Cesium	(Cs)	6.1	< 9			
Gadolinium	(Gd)	< dl	< 0.3			
Lead	(Pb)	6	< 2			
Mercury	(Hg)	1.1	< 3			
Nickel	(Ni)	13	< 10			
Palladium	(Pd)	< dl	< 0.3			
Platinum	(Pt)	< dl	< 1			
Tellurium	(Te)	< dl	< 0.8			
Thallium	(Tl)	0.4	< 0.5			
Thorium	(Th)	< dl	< 0.03			
Tin	(Sn)	0.2	< 9			
Tungsten	(W)	< dl	< 0.4			
Uranium	(U)	< dl	< 0.03			

URINE CREATININE								
		RESULT mg/dL	REFERENCE INTERVAL	-2SD	-1SD	MEAN	+1SD	+2SD
Creatinine		50.1	45 - 225					

SPECIMEN DATA			
Comments:			
Date Collected:	12/5/2011	pH upon receipt:	Acceptable
Date Received:	12/7/2011	<dl:	less than detection limit
Date Completed:	12/9/2011	Provoking Agent:	DMSA
Method:	ICP-MS	Creatinine by	Jaffe Method
<p>Results are creatinine corrected to account for urine dilution variations. <b>Reference intervals and corresponding graphs are representative of a healthy population under non-provoked conditions.</b> Chelation (provocation) agents can increase urinary excretion of metals/elements.</p>			

V13



LAB #: U120309-2366-1  
 PATIENT: Gana Kiritharan  
 ID: KIRITHARAN-G-00001  
 SEX: Male  
 AGE: 44

CLIENT #: 34074  
 DOCTOR: Wendy Pitblado

77 Lowell Street North  
 Cambridge, ON N1R 5E2 CANADA

**Toxic Metals; Urine**

TOXIC METALS						
		RESULT µg/g creat	REFERENCE INTERVAL	WITHIN REFERENCE	OUTSIDE REFERENCE	
Aluminum	(Al)	4.7	< 25			
Antimony	(Sb)	0.1	< 0.3			
Arsenic	(As)	9.7	< 108			
Barium	(Ba)	13	< 7			
Beryllium	(Be)	< dl	< 1			
Bismuth	(Bi)	< dl	< 10			
Cadmium	(Cd)	0.4	< 0.8			
Cesium	(Cs)	5.7	< 9			
Gadolinium	(Gd)	< dl	< 0.3			
Lead	(Pb)	5.5	< 2			
Mercury	(Hg)	0.7	< 3			
Nickel	(Ni)	10	< 10			
Palladium	(Pd)	< dl	< 0.3			
Platinum	(Pt)	0.2	< 1			
Tellurium	(Te)	< dl	< 0.8			
Thallium	(Tl)	0.5	< 0.5			
Thorium	(Th)	< dl	< 0.03			
Tin	(Sn)	0.4	< 9			
Tungsten	(W)	< dl	< 0.4			
Uranium	(U)	< dl	< 0.03			

URINE CREATININE						
	RESULT mg/dL	REFERENCE INTERVAL	-2SD	-1SD	MEAN	+1SD +2SD
Creatinine	72.4	45- 225				

SPECIMEN DATA			
Comments:			
Date Collected: 3/7/2012	pH upon receipt: <b>Acceptable</b>	Collection Period: <b>timed: 6 hours</b>	
Date Received: 3/9/2012	<dl: less than detection limit	Volume: <b>700 ml</b>	
Date Completed: 3/12/2012	Provoking Agent: <b>DMSA</b>	Provocation: <b>POST PROVOCATIVE</b>	
Method: <b>ICP-MS</b>	Creatinine by <b>Jaffe Method</b>		
Results are creatinine corrected to account for urine dilution variations. <b>Reference intervals and corresponding graphs are representative of a healthy population under non-provoked conditions.</b> Chelation (provocation) agents can increase urinary excretion of metals/elements.			
V13			



LAB #: U120718-2342-1  
 PATIENT: Gana Kiritharan  
 ID: KIRITHARAN-G-00001  
 SEX: Male  
 AGE: 44

CLIENT #: 34074  
 DOCTOR: Wendy Pitblado

77 Lowell Street North  
 Cambridge, ON N1R 5E2 CANADA

**Toxic Metals; Urine**

TOXIC METALS						
		RESULT µg/g creat	REFERENCE INTERVAL	WITHIN REFERENCE	OUTSIDE REFERENCE	
Aluminum	(Al)	5.2	< 25			
Antimony	(Sb)	< dl	< 0.3			
Arsenic	(As)	7.8	< 108			
Barium	(Ba)	11	< 7			
Beryllium	(Be)	< dl	< 1			
Bismuth	(Bi)	< dl	< 10			
Cadmium	(Cd)	0.5	< 0.8			
Cesium	(Cs)	4.2	< 9			
Gadolinium	(Gd)	< dl	< 0.3			
Lead	(Pb)	7.1	< 2			
Mercury	(Hg)	< dl	< 3			
Nickel	(Ni)	7.7	< 10			
Palladium	(Pd)	< dl	< 0.3			
Platinum	(Pt)	< dl	< 1			
Tellurium	(Te)	< dl	< 0.8			
Thallium	(Tl)	0.3	< 0.5			
Thorium	(Th)	< dl	< 0.03			
Tin	(Sn)	0.4	< 9			
Tungsten	(W)	0.2	< 0.4			
Uranium	(U)	< dl	< 0.03			

URINE CREATININE						
	RESULT mg/dL	REFERENCE INTERVAL	-2SD	-1SD	MEAN	+1SD +2SD
Creatinine	59.3	45- 225				

SPECIMEN DATA			
Comments:			
Date Collected: 7/17/2012	pH upon receipt: Acceptable	Collection Period: timed: 6 hours	
Date Received: 7/18/2012	<dl: less than detection limit	Volume: 950 ml	
Date Completed: 7/21/2012	Provoking Agent: DMSA ALA	Provocation: POST PROVOCATIVE	
Method: ICP-MS	Creatinine by Jaffe Method		
Results are creatinine corrected to account for urine dilution variations. Reference intervals and corresponding graphs are representative of a healthy population under non-provoked conditions. Chelation (provocation) agents can increase urinary excretion of metals/elements.			
V13			



LAB #: U130705-2457-1  
 PATIENT: Gana Kiritharan  
 ID: KIRITHARAN-G-00001  
 SEX: Male  
 AGE: 45

CLIENT #: 34074  
 DOCTOR: Wendy Pitblado

77 Lowell Street North  
 Cambridge, ON N1R 5E2 CANADA

### Toxic Metals; Urine

TOXIC METALS							
		RESULT	REFERENCE	WITHIN REFERENCE			OUTSIDE REFERENCE
		µg/g creat	INTERVAL				
Aluminum	(Al)	12	< 25				
Antimony	(Sb)	< dl	< 0.2				
Arsenic	(As)	27	< 75				
Barium	(Ba)	15	< 7				
Beryllium	(Be)	< dl	< 1				
Bismuth	(Bi)	< dl	< 2				
Cadmium	(Cd)	0.8	< 0.8				
Cesium	(Cs)	7.2	< 9				
Gadolinium	(Gd)	< dl	< 0.5				
Lead	(Pb)	11	< 2				
Mercury	(Hg)	8.6	< 3				
Nickel	(Ni)	10	< 8				
Palladium	(Pd)	< dl	< 0.1				
Platinum	(Pt)	< dl	< 0.1				
Tellurium	(Te)	< dl	< 0.5				
Thallium	(Tl)	0.3	< 0.5				
Thorium	(Th)	< dl	< 0.03				
Tin	(Sn)	0.3	< 4				
Tungsten	(W)	0.2	< 0.4				
Uranium	(U)	< dl	< 0.03				

URINE CREATININE						
		RESULT	REFERENCE	-2SD -1SD MEAN +1SD +2SD		
		mg/dL	INTERVAL			
Creatinine		49.6	45- 225			

SPECIMEN DATA			
Comments:			
Date Collected: 07/03/2013	pH upon receipt: Acceptable	Collection Period: timed: 6 hours	
Date Received: 07/05/2013	<dl: less than detection limit	Volume: 1000 ml	
Date Completed: 07/08/2013	Provoking Agent: ALA DMSA	Provocation: POST PROVOCATIVE	
Method: ICP-MS	Creatinine by Jaffe Method		
Results are creatinine corrected to account for urine dilution variations. Reference intervals and corresponding graphs are representative of a healthy population under non-provoked conditions. Chelation (provocation) agents can increase urinary excretion of metals/elements.			
V13			



LAB #: U140717-2343-1  
 PATIENT: Gana Kiritharan  
 ID: KIRITHARAN-G-00001  
 SEX: Male  
 AGE: 46

CLIENT #: 34074  
 DOCTOR: Wendy Pitblado

77 Lowell Street North  
 Cambridge, ON N1R 5E2 CANADA

## Toxic Metals; Urine

TOXIC METALS					
		RESULT µg/g creat	REFERENCE INTERVAL	WITHIN REFERENCE	OUTSIDE REFERENCE
Aluminum	(Al)	3.3	< 25		
Antimony	(Sb)	0.5	< 0.2		
Arsenic	(As)	14	< 75		
Barium	(Ba)	8.8	< 7		
Beryllium	(Be)	< dl	< 1		
Bismuth	(Bi)	0.2	< 2		
Cadmium	(Cd)	0.4	< 0.8		
Cesium	(Cs)	4.8	< 9		
Gadolinium	(Gd)	< dl	< 0.5		
Lead	(Pb)	16	< 2		
Mercury	(Hg)	1.8	< 3		
Nickel	(Ni)	6.8	< 8		
Palladium	(Pd)	< dl	< 0.1		
Platinum	(Pt)	< dl	< 0.1		
Tellurium	(Te)	< dl	< 0.5		
Thallium	(Tl)	0.4	< 0.5		
Thorium	(Th)	< dl	< 0.03		
Tin	(Sn)	0.6	< 4		
Tungsten	(W)	0.2	< 0.4		
Uranium	(U)	< dl	< 0.03		

URINE CREATININE							
	RESULT mg/dL	REFERENCE INTERVAL	-2SD	-1SD	MEAN	+1SD	+2SD
Creatinine	53.0	45- 230					

SPECIMEN DATA			
Comments:			
Date Collected: 07/16/2014	pH upon receipt: Acceptable	Collection Period: timed: 6 hours	
Date Received: 07/17/2014	<dl: less than detection limit	Volume:	
Date Completed: 07/18/2014	Provoking Agent: DMSA ALA	Provocation: POST PROVOCATIVE	
Method: ICP-MS	Creatinine by Jaffe Method		
Results are creatinine corrected to account for urine dilution variations. Reference intervals and corresponding graphs are representative of a healthy population under non-provoked conditions. Chelation (provocation) agents can increase urinary excretion of metals/elements.			
V13			



LAB #: U160920-2244-1  
 PATIENT: Gana Kiritharan  
 ID: KIRITHARAN-G-00002  
 SEX: Male  
 AGE: 48

CLIENT #: 34074  
 DOCTOR: Wendy Pitblado

77 Lowell Street North  
 Cambridge, ON N1R 5E2 CANADA

### Toxic Metals; Urine

TOXIC METALS					
		RESULT µg/g creat	REFERENCE INTERVAL	WITHIN REFERENCE	OUTSIDE REFERENCE
Aluminum	(Al)	56	< 25		
Antimony	(Sb)	< dl	< 0.2		
Arsenic	(As)	39	< 75		
Barium	(Ba)	11	< 7		
Beryllium	(Be)	< dl	< 1		
Bismuth	(Bi)	0.3	< 2		
Cadmium	(Cd)	0.6	< 0.8		
Cesium	(Cs)	5	< 9		
Gadolinium	(Gd)	< dl	< 0.5		
Lead	(Pb)	4.1	< 2		
Mercury	(Hg)	< dl	< 3		
Nickel	(Ni)	19	< 8		
Palladium	(Pd)	< dl	< 0.1		
Platinum	(Pt)	< dl	< 0.1		
Tellurium	(Te)	< dl	< 0.5		
Thallium	(Tl)	0.4	< 0.5		
Thorium	(Th)	< dl	< 0.03		
Tin	(Sn)	0.3	< 4		
Tungsten	(W)	0.1	< 0.4		
Uranium	(U)	< dl	< 0.03		

URINE CREATININE								
		RESULT mg/dL	REFERENCE INTERVAL	-2SD	-1SD	MEAN	+1SD	+2SD
Creatinine		47.7	35- 240					

SPECIMEN DATA			
Comments:			
Date Collected: 09/19/2016	pH upon receipt: Acceptable	Collection Period: timed: 6 hours	
Date Received: 09/20/2016	<dl: less than detection limit	Volume:	
Date Completed: 09/22/2016	Provoking Agent: DMSA 1.5G ALA 1.5	Provocation: POST PROVOCATIVE	
Method: ICP-MS	Creatinine by Jaffe Method		
Results are creatinine corrected to account for urine dilution variations. Reference intervals and corresponding graphs are representative of a healthy population under non-provoked conditions. Chelation (provocation) agents can increase urinary excretion of metals/elements.			
V13			





LAB #: U170725-2088-1  
 PATIENT: Gana Kiritharan  
 ID: KIRITHARAN-G-00002  
 SEX: Male  
 AGE: 49

CLIENT #: 34074  
 DOCTOR: Wendy Pitblado

77 Lowell Street North  
 Cambridge, ON N1R 5E2 CANADA

### Toxic Metals; Urine

TOXIC METALS						
		RESULT µg/g creat	REFERENCE INTERVAL	WITHIN REFERENCE	OUTSIDE REFERENCE	
Aluminum	(Al)	< dl	< 25			
Antimony	(Sb)	< dl	< 0.2			
Arsenic	(As)	110	< 75			
Barium	(Ba)	16	< 7			
Beryllium	(Be)	< dl	< 1			
Bismuth	(Bi)	< dl	< 2			
Cadmium	(Cd)	< dl	< 0.8			
Cesium	(Cs)	6.7	< 9			
Gadolinium	(Gd)	< dl	< 0.5			
Lead	(Pb)	1.8	< 2			
Mercury	(Hg)	1.4	< 3			
Nickel	(Ni)	13	< 8			
Palladium	(Pd)	< dl	< 0.3			
Platinum	(Pt)	< dl	< 0.1			
Tellurium	(Te)	< dl	< 0.5			
Thallium	(Tl)	0.3	< 0.5			
Thorium	(Th)	< dl	< 0.03			
Tin	(Sn)	0.3	< 4			
Tungsten	(W)	0.3	< 0.4			
Uranium	(U)	< dl	< 0.03			

URINE CREATININE								
		RESULT mg/dL	REFERENCE INTERVAL	-2SD	-1SD	MEAN	+1SD	+2SD
Creatinine		55.8	35- 240					

SPECIMEN DATA			
Comments:			
Date Collected: 07/24/2017	pH upon receipt: Acceptable	Collection Period: timed: 6 hours	
Date Received: 07/25/2017	<dl: less than detection limit	Volume:	
Date Completed: 07/26/2017	Provoking Agent: DMSA 1500MG ALA 1	Provocation: POST PROVOCATIVE	
Method: ICP-MS	Creatinine by Jaffe Method		
Results are creatinine corrected to account for urine dilution variations. Reference intervals and corresponding graphs are representative of a healthy population under non-provoked conditions. Chelation (provocation) agents can increase urinary excretion of metals/elements.			
V13			



LAB #: U180213-2106-1  
 PATIENT: Gana Kiritharan  
 ID: KIRITHARAN-G-00002  
 SEX: Male  
 AGE: 50

CLIENT #: 25809  
 DOCTOR: Fred Hui, MD  
 The Chelation Center Downtown  
 421 Bloor St East 202  
 Toronto, ON M4W 3T1 CANADA

*Toxic Metals; Urine*

TOXIC METALS					
		RESULT µg/g creat	REFERENCE INTERVAL	WITHIN REFERENCE	OUTSIDE REFERENCE
Aluminum	(Al)	11	< 25		
Antimony	(Sb)	1.3	< 0.2		
Arsenic	(As)	30	< 75		
Barium	(Ba)	9.5	< 7		
Beryllium	(Be)	< dl	< 1		
Bismuth	(Bi)	0.6	< 2		
Cadmium	(Cd)	0.3	< 0.8		
Cesium	(Cs)	4.4	< 9		
Gadolinium	(Gd)	< dl	< 0.5		
Lead	(Pb)	10	< 2		
Mercury	(Hg)	5.4	< 3		
Nickel	(Ni)	24	< 8		
Palladium	(Pd)	< dl	< 0.3		
Platinum	(Pt)	< dl	< 0.1		
Tellurium	(Te)	< dl	< 0.5		
Thallium	(Tl)	0.3	< 0.5		
Thorium	(Th)	< dl	< 0.03		
Tin	(Sn)	4.7	< 4		
Tungsten	(W)	0.09	< 0.4		
Uranium	(U)	< dl	< 0.03		

URINE CREATININE							
	RESULT mg/dL	REFERENCE INTERVAL	-2SD	-1SD	MEAN	+1SD	+2SD
Creatinine	64.2	35- 240					

**SPECIMEN DATA**

Comments:

Date Collected: 02/12/2018      pH upon receipt: **Acceptable**      Collection Period: **Random**  
 Date Received: 02/13/2018      <dl: less than detection limit      Volume:  
 Date Completed: 02/14/2018      Provoking Agent: **EDTA 29 DMPS 100M**      Provocation: **POST PROVOCATIVE**  
 Method: **ICP-MS**      **Creatinine by Jaffe Method**

Results are creatinine corrected to account for urine dilution variations. **Reference intervals and corresponding graphs are representative of a healthy population under non-provoked conditions.** Chelation (provocation) agents can increase urinary excretion of metals/elements.

V13



LAB #: U180905-2094-1  
 PATIENT: Gana Kiritharan  
 ID: KIRITHARAN-G-00002  
 SEX: Male  
 AGE: 50

CLIENT #: 25809  
 DOCTOR: Fred Hui, MD  
 The Chelation Center Downtown  
 421 Bloor St East 202  
 Toronto, ON M4W 3T1 CANADA

## Toxic Metals; Urine

TOXIC METALS					
		RESULT µg/g creat	REFERENCE INTERVAL	WITHIN REFERENCE	OUTSIDE REFERENCE
Aluminum	(Al)	8.7	< 25		
Antimony	(Sb)	0.4	< 0.2		
Arsenic	(As)	29	< 75		
Barium	(Ba)	6.4	< 7		
Beryllium	(Be)	< dl	< 1		
Bismuth	(Bi)	0.6	< 2		
Cadmium	(Cd)	0.5	< 0.8		
Cesium	(Cs)	5.2	< 9		
Gadolinium	(Gd)	< dl	< 0.5		
Lead	(Pb)	12	< 2		
Mercury	(Hg)	4.7	< 3		
Nickel	(Ni)	16	< 8		
Palladium	(Pd)	< dl	< 0.3		
Platinum	(Pt)	< dl	< 0.1		
Tellurium	(Te)	< dl	< 0.5		
Thallium	(Tl)	0.4	< 0.5		
Thorium	(Th)	< dl	< 0.03		
Tin	(Sn)	5.2	< 4		
Tungsten	(W)	0.2	< 0.4		
Uranium	(U)	< dl	< 0.03		

URINE CREATININE							
	RESULT mg/dL	REFERENCE INTERVAL	-2SD	-1SD	MEAN	+1SD	+2SD
Creatinine	54.9	35- 240					

SPECIMEN DATA			
Comments:			
Date Collected: 09/04/2018	pH upon receipt: Acceptable	Collection Period: timed: 2 hours	
Date Received: 09/05/2018	<dl: less than detection limit	Volume:	
Date Completed: 09/06/2018	Provoking Agent: DMPS 180MG EDTA 2	Provocation: POST PROVOCATIVE	
Method: ICP-MS	Creatinine by Jaffe Method		
Results are creatinine corrected to account for urine dilution variations. Reference intervals and corresponding graphs are representative of a healthy population under non-provoked conditions. Chelation (provocation) agents can increase urinary excretion of metals/elements.			
V13			

DATE	FASTING GLUCOSE	Hemoglobin A1C	TRIGLYCE RIDE	CHOLEST EROL	HDL CHOLESTEROL	HEMOGL OBIN	AST	ALT	Aik Phos	CK	CREATINI NE	eGFR	MICROALBU MIN (RUR)	CREATININE (RUR)	MicroAlb / Crea
19-Jun-2002	6.2		7.08	6.09	0.99	149					77				
11-Sep-2002	6.5		11.4	7.69	1.26										
22-Oct-2004	8.16		6.63	4.87	1.04	159	30	42		487					
2-Mar-2005	7.4	0.087	2.25	5.07	1.19	149	28	34		330	95		19.2		
30-Mar-2006	5.11		5.2	1.93	1.4										
23-Sep-2006	11.5	0.089	3.73	4.38	0.96	152						99			
28-Dec-2006	8.2	0.079	4.79	4.56	1.13		28	31			70	116	39.6		
17-Apr-2007	7.9	0.077	2.27	3.84	1.22		24	25			92	83	31.9	12.1	2.6
7-Mar-2008	9.2	0.097	3.14	5.84	0.98	133					81	97	46.3	21.7	2.1
28-Mar-2009	11.9	0.11	3.16	5.3	1.19	135		27					15.6	14.2	1.1
12-Dec-2009	11.8	0.108	4.18	6.39	1.08	133		30					22	15.6	1.4
26-May-2010	14.7	0.117	3.25	4.92	1.17	144		37	40	222	72	103	80.3	38.4	2.1
6-Dec-2010	14.6	0.112	4.63	5.79	1.3	153		36			55	>120	250.7	15.3	15.3
8-Feb-2011	11.8	0.107	5.48	5.42	1.27	150	25	29		274	64	>90	10	>2	Unab to Cal
9-May-2011	12	0.105	2.81	4.77	1.2										
7-Sep-2011	8.8	0.074					25	32	27		75	98			
17-Dec-2011	12.4	0.084	3.74	6.46	1.36	145		26							
17-Mar-2012	8.4	0.083	3.5	5.3	1.31	143		20		215	80	91	48.6	17.4	2.8
13-Jul-2012	7.8	0.077													
4-Jan-2013	12.5	0.09	4.59	6.58	1.17			26		194	82	88	40.7	16.7	2.4
19-Jul-2013		0.128	7.72	5.74	1.12	158			45	160	67	111			
10-Jan-2014	14.6	0.132	8.49	6.4	1.1	150		19		137	55	>120	79.2	21.9	3.6
22-Aug-2014	18.7	0.118	8.43	6.6	1.31	162		29		120	65	114	96.2	15.3	6.3
21-Aug-2015	19	0.128	5.38	5	1.21	161		28		130	67	109	80	13.4	6
19-Feb-2016	17.6	0.131						26			59	114	114.6	12.5	9.2
22-Aug-2016	17.3	0.116	3.62	4.04	1.19	156		31			71	106	74.2	7.7	9.6
2-Feb-2017	16.4	0.107				144			47	81	55	116			
31-Jul-2017	12	0.092	2.86	4.78	1.47	141				135	57	115	46	8.5	5.4
23-Jan-2018		10.8									119	110	34	15.5	2.2
10-Sep-2018	12.7	10.1	3.53	4.45	1.3	142			47	238	59	111	94	15	6.3