

#### Toxic & Essential Elements; Hair

REFERENCE µg/g     REFERENCE INTERVAL     REFERENCE 68 <sup>th</sup> REFERENCE 95 <sup>th</sup> <	TOXIC METALS						
Aluminum (A) 4.7 < C 7.0 Antimony (Sb) 0.065 < 0.066 Arsenia (As) 0.048 < 0.080 Arsenia (As) 0.048 < 0.080 Arsenia (As) 0.048 < 0.080 Barium (Bs) 0.73 < 1.0 Beryllium (Bs) 0.020 < 2.0 Cadmium (Cd) 0.088 < 0.055 Lead (Pb) 1.5 < 0.80 Mercury (Hg) 1.2 < 0.080 Platinum (Pt) < 0.003 < 0.005 Platinum (Th) < 0.001 < 0.002 Thorium (Th) 0.014 < 0.002 Thorium (Th) 0.051 < 0.060 Tianium (Ri) 0.35 < 0.30 Total Toxic Representation Total Toxic Representation Total Toxic Representation Calcium (Ca) 579 200 - 750 Magnesium (Mg) 100 25- 75 Calcium (Ca) 557 0.20 - 750 Magnesium (Mg) 100 25- 75 Calcium (Ca) 579 200 - 750 Magnesium (Mg) 100 25- 75 Calcium (Ca) 579 200 - 750 Magnesium (Mg) 100 25- 75 Calcium (Ca) 579 200 - 750 Magnesium (Mg) 100 25- 75 Calcium (Ca) 579 200 - 750 Magnesium (Mg) 100 25- 75 Calcium (Ca) 575 0.100 - 750 Magnesium (Mg) 100 25- 75 Magnesium (Mg) 100 25- 75 Suffur (Cu) 25 11- 30 Zinc (Cu) 25 110 - 300 Magnese (Mn) 0.37 0.080 0.50 Chromium (Cr) 0.55 0.400 0.70 Magnese (Mn) 0.37 0.080 0.50 Molydenum (Mg) 0.050 0.025- 0.80 Molydenum (Mg) 0.050 0.025- 0.80 Molydenum (Mg) 0.050 0.025- 0.80 Molydenum (Kg) 33 0.25- 1.8 Molydenum (Kg) 35 0.040 0.70 Magnese (Mn) 0.37 0.080 0.025 0.040 Molydenum (Kg) 0.038 0.010 0.025 Molydenum (Kg) 0.038 0.025 0.040 Molydenum (Kg) 0.038 0.025 0.040 Molydenum (Kg) 0.038 0.025 0.040 Molydenum (Kg) 0.038 0.025 0.040 Molydenum (Kg) 0.038 0.010 0.025 Molydenum (Kg) 0.025 0.040 Molydenum (Kg) 0.025 0.040 Molydenum (Kg) 0.050 0.025 0.040 Molydenum (K					PERCENTILE 68 <sup>th</sup> 95 <sup>th</sup>		
Arsenia   (As)   0.048   < 0.080     Barylinum   (Bs)   0.73   < 1.0     Barylinum   (Bs)   0.020   < 2.0     Cadmium   (Cd)   0.088   < 0.065     Lead   (Pb)   1.5   < 0.80     Mercury   (Hg)   1.2   < 0.80     Platinum   (Pb)   1.5   < 0.002     Thorium   (Pb)   4.003   < 0.002     Thorium   (Pi)   < 0.001   < 0.002     Vanium   (Pi)   < 0.001   < 0.002     Nickel   (Ni)   0.21   < 0.020     Silver   (Ag)   0.06   < 0.020     Silver   (Ag)   0.05   < 0.60     Total Toxic Representation   Thin   (Sh)   0.025   < 0.60     Sodium   (Na)   44   20- 180       Platssium   (K)   33   9- 60        Calcium   (Na)   44   20- 180         Sodium   (Na)   44	Aluminum	(AI)		< 7.0			
Barjum     (Ba)     0.73     < 1.0       Bismuth     (B)     0.020     < 2.0       Bismuth     (Cd)     0.088     < 0.020       Lead     (Pb)     1.5     < 0.020       Mercury     (Hg)     1.2     < 0.080       Mercury     (Hg)     1.2     < 0.001     < 0.002       Thailum     (Th)     < 0.001     < 0.002         Thorium     (Th)     < 0.001     < 0.002         Vikel     (Nh)     0.21     < 0.020          Silver     (Ag)     0.06     < 0.020          Tatanum     (Ti)     0.45     < 0.35     < 0.36         Tatanum     (Ti)     0.45     < 0.36          Tatanum     (Ti)     0.45     < 0.36          Calcium     (Ga)     579     200-750	Antimony	(Sb)	0.065	< 0.066			
Barium     (Ba)     0.73     <     1.0       Bismuth     (B)     0.020     <	Arsenic	(As)	0.048	< 0.080			
Bismuth   (Bi)   0.020   < 2.0	Barium	(Ba)	0.73	< 1.0			
Bismuth   (Bi)   0.020   < 2.0	Beryllium	(Be)	< 0.01	< 0.020			
Lead     (Pb)     1.5     < 0.80       Mercury     (Hg)     1.2     < 0.80	Bismuth	(Bi)	0.020	< 2.0	•		
Mercury   (Hg)   1.2   <   0.80     Platinum   (Pt)   < 0.003   < 0.005     Thallium   (Ti)   < 0.001   < 0.002     Thorium   (Th)   < 0.001   < 0.002     Nickel   (Ni)   0.21   < 0.20     Nickel   (Ni)   0.21   < 0.20     Silver   (Ag)   0.06   < 0.02     Titanium   (Ti)   0.45   < 0.20     Titanium   (Ti)   0.45   < 0.06     Totic Representation   ESSENTIAL ANO DTHER ELEMENTS   PERCENTILE     Calcium   (Ca)   579   200-750     Magnesium   (Mg)   100   25-75   25     Sodium   (Na)   44   20-180   25     Potassium   (K)   33   9-80   9-80     Zinc   (Zn)   250   11-30   20     Zinc   (Zn)   250   10-70   4-80     Manganese   (Mn)   0.37   0.08-0.50	Cadmium	(Cd)	0.088	< 0.065		-	
Mercury   (Hg)   1.2   <   0.80     Platinum   (Pt)   < 0.003   < 0.005     Thallium   (Ti)   < 0.001   < 0.002     Thorium   (Th)   < 0.001   < 0.002     Nickel   (Ni)   0.21   < 0.20     Nickel   (Ni)   0.21   < 0.20     Silver   (Ag)   0.06   < 0.02     Titanium   (Ti)   0.45   < 0.20     Titanium   (Ti)   0.45   < 0.06     Totic Representation   ESSENTIAL ANO DTHER ELEMENTS   PERCENTILE     Calcium   (Ca)   579   200-750     Magnesium   (Mg)   100   25-75   25     Sodium   (Na)   44   20-180   25     Potassium   (K)   33   9-80   9-80     Zinc   (Zn)   250   11-30   20     Zinc   (Zn)   250   10-70   4-80     Manganese   (Mn)   0.37   0.08-0.50	Lead	(Pb)	1.5	< 0.80			
Thallium   (Th)   < 0.001	Mercury		1.2	< 0.80		-	
Thorium     (Th)     < 0.001     < 0.002       Uranium     (U)     0.014     < 0.060	Platinum	(Pt)	< 0.003	< 0.005			
Uranium   (U)   0.014   <   0.060	Thallium	(TI)	< 0.001	< 0.002			
Uranium   (U)   0.014   <   0.060	Thorium	(Th)	< 0.001	< 0.002			
Silver     (Aq)     0.06     < 0.08       Tin     (Sn)     0.35     < 0.30       Tin     (Sn)     0.35     < 0.30       Tin     (Ti)     0.45     < 0.60       Total Toxic Representation     ESSENTIAL AND OTHER ELEMENTS     PERCENTILE       REFUNCT     REFERENCE     2.5%     16%     97.5%       Galoium     (Mg)     100     25-75     75       Sodium     (Na)     44     20-180		(U)	0.014	< 0.060	—		
Silver     (Ag)     0.06     <     0.38       Tin     (Sn)     0.35     <	Nickel		0.21	< 0.20			
Tin     (Sn)     0.35     <     0.30       Titanium     (T)     0.45     <							
Titanium     (Ti)     0.45     < 0.60       Total Toxic Representation       ESSENTIAL AND OTHER ELEMENTS       ESSENTIAL AND OTHER ELEMENTS       RESULT     REFERENCE INTERVAL     2.5°     16°     PERCENTLE     2.6°     16°     97.8°       Calcium     (Ca)     579     200 -     750     200 -     750       Magnesium     (Mg)     100     25 -     75     200 -     750       Sodium     (Na)     44     20 -     180     97.8°       Potassium     (K)     33     9 -     80     -     -       Manganese     (Mn)     0.37     0.08 -     0.50     -     -       Molybdenum     (Mo)     0.052     0.018 -     0.065     -     -       Molybdenum     (Mo)     0.0052     0.220 -     0.60     -     -       Strontium     (Sr)     2.7     0.30 -     0.20     -     -     -       Boron     (B)     0.11 -     0.70 - <td></td> <td></td> <td></td> <td></td> <td></td> <td>-</td> <td></td>						-	
Total Toxic Representation       ESSENTIAL AND OTHER ELEMENTS       RESULT market REPERCE maging       gg/g     REFERICE INTERVAL     2.5 <sup>th</sup> 16 <sup>th</sup> 97.5 <sup>th</sup> Calcium     (Ca)     579     200 - 755							
ESSENTIAL AND OTHER ELEMENTS       RESULT µg/g     REFERENCE NERVAL     2.5 <sup>th</sup> 16 <sup>th</sup> PERCENTILE 50 <sup>th</sup> 84 <sup>th</sup> 97.5 <sup>th</sup> Calcium     (Ca)     579     200-750		(,	0110				
RESULT µµqq     REFERENCE INTERVAL     2.5 <sup>th</sup> PERCENTLE 00 <sup>th</sup> PERCENTLE 84 <sup>th</sup> 97.5 <sup>th</sup> Calcium     (Ca)     579     200 - 750     16 <sup>th</sup> 50 <sup>th</sup> 84 <sup>th</sup> 97.5 <sup>th</sup> Magnesium     (Mg)     100     25 - 75     110 <sup>th</sup> 16 <sup>th</sup> 84 <sup>th</sup> 97.5 <sup>th</sup> Sodium     (Na)     44     20 - 180     100 <sup>th</sup> 100							
ug/g     INTERVAL     2.5"     16"     84"     97.5"       Calcium     (Ga)     579     200-     750							
Calcium     (Ca)     579     200-     750       Magnesium     (Mg)     100     25-     75       Sodium     (Na)     44     20-     180       Potassium     (K)     33     9-     80       Copper     (Cu)     25     11-     30       Zinc     (Zn)     250     130-     200       Manganese     (Mn)     0.37     0.08-     0.50       Chromium     (Cr)     0.55     0.40-     0.70       Vanadium     (V)     0.052     0.018-     0.065       Molybdenum     (Mo)     0.050     0.025-     0.060       Boron     (B)     0.51     0.40-     3.0       Phosphorus     (P)     181     150-     220       Selenium     (Se)     1.1     0.70-     1.2       Strontium     (Sr)     2.7     0.30-     3.5       Sulfur     (S)     51000     44000-     5000       Cobalt     (Co)     0.007 </th <th></th> <th></th> <th></th> <th></th> <th>2.5<sup>th</sup> 16<sup>th</sup></th> <th></th> <th>84<sup>th</sup> 97.5<sup>th</sup></th>					2.5 <sup>th</sup> 16 <sup>th</sup>		84 <sup>th</sup> 97.5 <sup>th</sup>
Magnesium     (Mg)     100     25-75       Sodium     (Na)     44     20-180       Potassium     (K)     33     9-80       Copper     (Cu)     25     11-30       Zinc     (Zn)     250     130-200       Maganese     (Mn)     0.37     0.08-0.50       Chromium     (Cr)     0.55     0.40-0.70       Vanadium     (V)     0.052     0.018-0.065       Molybdenum     (Mo)     0.0050     0.025-0.060       Boron     (B)     0.51     0.40-3.0       Iodine     (I)     0.35     0.25-1.8       Lithium     (Li)     0.009     0.007-0.020       Phosphorus     (P)     181     150-220       Strontium     (Sr)     2.7     0.30-3.5       Sulfur     (S)     51000     44000-50000       Cobalt     (Co)     0.007     0.044-0.020       Iron     (Fe)     11     7.0-16       Germanium     (Ge)     0.030     0.030-0.040 <	Calcium	(Ca)			210 10		01 0110
Sodium     (Na)     44     20-180       Potassium     (K)     33     9-80     -       Copper     (Cu)     25     11-30     -       Zinc     (Zn)     250     130-200     -     -       Manganese     (Mn)     0.37     0.08-0.50     -     -       Chromium     (Cr)     0.55     0.40-0.70     -     -       Vanadium     (V)     0.052     0.018-0.065     -     -       Molybdenum     (Mo)     0.050     0.025-0.060     -     -       Boron     (B)     0.51     0.40-3.0     -     -       Iddine     (I)     0.35     0.25-1.8     -     -       Lithium     (Li)     0.009     0.007-0.020     -     -       Phosphorus     (P)     181     150-220     -     -       Strontium     (Sr)     2.7     0.30-3.5     -     -       Sulfur     (S)     51000     44000-50000     -     - <					•••••		
Potassium     (K)     33     9-80       Copper     (Cu)     25     11-30       Zinc     (Zn)     250     130-200       Manganese     (Mn)     0.37     0.08-0.50       Chromium     (Cr)     0.55     0.40-0.70       Vanadium     (V)     0.052     0.018-0.065       Molybdenum     (Mo)     0.050     0.025-0.060       Boron     (B)     0.51     0.40-3.0       Iodine     (I)     0.35     0.25-1.8       Lithium     (Li)     0.009     0.007-0.020       Phosphorus     (P)     181     150-220       Stenntium     (Sr)     2.7     0.30-3.5       Sulfur     (S)     51000     44000-50000       Cobalt     (Co)     0.007     0.0020       Iron     (Fe)     11     7.0-     16       Germanium     (Ge)     0.038     0.011-     0.12       Zirconium     (Zr)     0.89     0.020-     0.44       Date Collected:							
Copper     (Cu)     25     11-30       Zinc     (Zn)     250     130-200       Manganese     (Mn)     0.37     0.08-0.50       Chromium     (Cr)     0.55     0.40-0.70       Vanadium     (V)     0.052     0.018-0.065       Molybdenum     (Mo)     0.050     0.025-0.060       Boron     (B)     0.51     0.40-3.0       Iodine     (I)     0.35     0.25-1.8       Lithium     (Li)     0.009     0.007-0.020       Phosphorus     (P)     181     150-220       Strontium     (Se)     1.1     0.70-1.22       Strontium     (Sr)     2.7     0.30-3.5       Sulfur     (S)     51000     44000-50000       Cobalt     (Co)     0.007     0.004-0.020       Iron     (Fe)     11     7.0-16     -       Germanium     (Ge)     0.030     0.030-0.040     -       Retrie     11     7.0-16     -     -       Germanium <t< td=""><td></td><td>1 1</td><td></td><td></td><td>••••••</td><td>•</td><td></td></t<>		1 1			••••••	•	
Zinc     (Zn)     250     130-200       Manganese     (Mn)     0.37     0.08-0.50       Chromium     (Cr)     0.55     0.40-0.70       Vanadium     (V)     0.052     0.018-0.065       Molybdenum     (Mo)     0.050     0.025-0.060       Boron     (B)     0.51     0.40-3.0       Iodine     (I)     0.35     0.25-1.8       Lithium     (Li)     0.009     0.007-0.020       Phosphorus     (P)     181     150-200       Strontium     (Sr)     2.7     0.30-3.5       Sulfur     (S)     51000     44000-50000       Cobalt     (Co)     0.007     0.020					•••••		•••••
Manganese     (Mn)     0.37     0.08-0.50       Chromium     (Cr)     0.55     0.40-0.70       Vanadium     (V)     0.052     0.018-0.065       Molybdenum     (Mo)     0.050     0.025-0.060       Boron     (B)     0.51     0.40-3.0       Iddine     (I)     0.35     0.25-1.8       Lithium     (Li)     0.009     0.007-0.020       Phosphorus     (P)     181     150-220       Strontium     (Sr)     2.7     0.30-3.5       Sulfur     (S)     51000     44000-50000       Cobalt     (Co)     0.007     0.044-0.020       Iron     (Fe)     11     7.0-16							
Chromium     (Cr)     0.55     0.40-0.70       Vanadium     (V)     0.052     0.018-0.065       Molybdenum     (Mo)     0.050     0.025-0.060       Boron     (B)     0.51     0.40-3.0       Iodine     (I)     0.35     0.25-1.8       Lithium     (Li)     0.009     0.007-0.020       Phosphorus     (P)     181     150-220       Stentium     (Se)     1.1     0.70-1.2       Strontium     (Sr)     2.7     0.30-3.5       Sulfur     (S)     51000     44000-5000       Cobalt     (Co)     0.007     0.004-0.020       Iron     (Fe)     11     7.0-16					••••••		•••••
Vanadium     (V)     0.052     0.018-0.065       Molybdenum     (Mo)     0.050     0.025-0.060       Boron     (B)     0.51     0.40-3.0       Iodine     (I)     0.35     0.25-18       Lithium     (Li)     0.009     0.007-0.020       Phosphorus     (P)     181     150-220       Selenium     (Se)     1.1     0.70-1.2       Strontium     (Sr)     2.7     0.30-3.5       Sulfur     (S)     51000     4400-50000       Cobalt     (Co)     0.007     0.004-0.020       Iron     (Fe)     11     7.0-16						•	
Molybdenum     (Mo)     0.050     0.025-0.060       Boron     (B)     0.51     0.40-3.0       Iodine     (I)     0.35     0.25-1.8       Lithium     (Li)     0.009     0.007-0.020       Phosphorus     (P)     181     150-220       Stennium     (Se)     1.1     0.70-1.2       Strontium     (Sr)     2.7     0.30-3.5       Sulfur     (S)     51000     44000-50000       Cobalt     (Co)     0.007     0.04-0.020       Iron     (Fe)     11     7.0-16       Germanium     (Ge)     0.038     0.011-0.12     Common of the theorem of theo							•••••
Boron     (B)     0.51     0.40-3.0       Iodine     (I)     0.35     0.25-1.8       Lithium     (Li)     0.009     0.007-0.020     Image: Construction of the second o					•••••••••••••••••••••••••••••••••••••••		•••••
Iodine     (I)     0.35     0.25-     1.8       Lithium     (Li)     0.009     0.007-     0.020       Phosphorus     (P)     181     150-     220       Selenium     (Se)     1.1     0.70-     1.2       Strontium     (Sr)     2.7     0.30-     3.5       Sulfur     (S)     51000     44000-     50000       Cobalt     (Co)     0.007     0.004-     0.020       Iron     (Fe)     11     7.0-     16       Germanium     (Ge)     0.030     0.030-     0.040       Rubidium     (Rb)     0.038     0.011-     0.12       Zirconium     (Zr)     0.89     0.020-     0.44       Date Collected:     12/19/2011     Sample Size:     0.202 g     Ca/Mg     5.79     4-30       Date Conpleted:     12/23/2011     Sample Type:     Head     Na/K     1.33     0.5-10       Date Completed:     12/23/2011     Hair Color:     Brown     Zn/Cu     10 <t< td=""><td></td><td></td><td></td><td></td><td>•••••••••••••••••••••••••••••••••••••••</td><td></td><td>•••••</td></t<>					•••••••••••••••••••••••••••••••••••••••		•••••
Lithium     (Li)     0.009     0.007-0.020       Phosphorus     (P)     181     150-220       Selenium     (Se)     1.1     0.70-1.2       Strontium     (Sr)     2.7     0.30-3.5       Sulfur     (S)     51000     44000-50000       Cobalt     (Co)     0.007     0.004-0.020     •       Iron     (Fe)     11     7.0-16     •       Germanium     (Ge)     0.030     0.030-0.040     •       Rubidium     (Rb)     0.038     0.011-0.12     •       Zirconium     (Zr)     0.89     0.020-0.44     •       Date Collected:     12/19/2011     Sample Size:     0.202 g     Ca/Mg     5.79     4-30       Date Collected:     12/23/2011     Sample Size:     0.202 g     Ca/Mg     5.79     4-30       Date Completed:     12/23/2011     Hair Color:     Brown     Zn/Cu     10     4-20       Methodology:     ICP/Ms     Treatment:     Zn/Cd     999     > 800					••••••		•••••
Phosphorus     (P)     181     150-220       Selenium     (Se)     1.1     0.70-1.2       Strontium     (Sr)     2.7     0.30-3.5       Sulfur     (S)     51000     44000-50000       Cobalt     (Co)     0.007     0.004-0.020       Iron     (Fe)     11     7.0-16       Germanium     (Ge)     0.030     0.030-0.040       Rubidium     (Rb)     0.038     0.011-0.12       Zirconium     Zr)     0.89     0.020-0.44       SPECIMEN DATA     RATIOS     RAMGE       COMMENTS:     Sample Size: 0.202 g     Ca/Mg     5.79     4-30       Date Collected:     12/23/2011     Sample Size: 0.202 g     Ca/P     3.2     0.8-8       Na/K     1.33     0.5-10     Zn/Cu     10     4-20       Date Conpleted:     12/23/2011     Hair Color: Brown     Zn/Cu     10     4-20       Methodology:     ICP/Ms     Treatment:     Zn/Cd     999     > 800					••••••		•••••
Selenium     (Se)     1.1     0.70-     1.2       Strontium     (Sr)     2.7     0.30-     3.5       Sulfur     (S)     51000     44000-     50000       Cobalt     (Co)     0.007     0.004-     0.020       Iron     (Fe)     11     7.0-     16       Germanium     (Ge)     0.030     0.030-     0.040       Rubidium     (Rb)     0.038     0.011-     0.12       Zirconium     (Zr)     0.89     0.020-     0.44       SPECIMEN DATA     RATIOS     RANGE       CoMMENTS:     ELEMENTS     RATIOS     RANGE       Date Collected:     12/22/2011     Sample Size:     0.202 g     Ca/P     3.2     0.8-8     Na/K     1.33     0.5-10       Date Completed:     12/23/2011     Hair Color:     Brown     Zn/Cu     10     4-20       Methodology:     ICP/MS     Treatment:     Zn/Cd     999     800					•••••••••••••••••••••••••••••••••••••••		•••••
Strontium     (Sr)     2.7     0.30-3.5       Sulfur     (S)     51000     44000-50000       Cobalt     (Co)     0.007     0.004-0.020     •       Iron     (Fe)     11     7.0-16     •     •       Germanium     (Ge)     0.030     0.030-0.040     •     •     •       Rubidium     (Rb)     0.038     0.011-0.12     •     •     •     •       Zirconium     (Zr)     0.89     0.020-0.44     •     •     •     •       Date Collected:     12/19/2011     Sample Size:     0.202 g     RATIOS     RANGE       Date Completed:     12/22/2011     Sample Type:     Head     Na/K     1.33     0.5-10       Date Completed:     12/23/2011     Hair Color:     Brown     Zn/Cu     10     4-20       Methodology:     ICP/MS     Treatment:     Zn/Cd     999     > 800							
Sulfur     (S)     51000     44000-50000       Cobalt     (Co)     0.007     0.004-0.020     •       Iron     (Fe)     11     7.0-     16     •       Germanium     (Ge)     0.030     0.030-0.040     •     •       Rubidium     (Rb)     0.038     0.011-0.12     •     •     •       Zirconium     (Zr)     0.89     0.020-0.44     •     •     •       SPECIMEN DATA     SPECIMEN DATA     RATIOS     RATIOS     RANGE       COMMENTS:     Sample Size: 0.202 g     Ga/P     3.2     0.8-8     8       Date Collected:     12/22/2011     Sample Size: 0.202 g     Ga/P     3.2     0.8-8     8       Date Completed:     12/23/2011     Hair Color: Brown     Zn/Cu     10     4-20       Date Completed:     12/23/2011     Hair Color: Brown     Zn/Cu     10     4-20       Methodology:     ICP/MS     Treatment:     Zn/Cd     >999     > 800					••••••		•••••
Cobalt     (Co)     0.007     0.004-0.020       Iron     (Fe)     11     7.0-16     Iron     Iron     Iron     (Fe)     11     7.0-16     Iron     Iron     Iron     Iron     (Fe)     11     7.0-16     Iron					•••••••••••••••••••••••••••••••••••••••		
Iron     (Fe)     11     7.0-     16       Germanium     (Ge)     0.030     0.030-     0.040       Rubidium     (Rb)     0.038     0.011-     0.12       Zirconium     (Zr)     0.89     0.020-     0.44       SPECIMEN DATA     RATIOS     RANGE       COMMENTS:     ELEMENTS     RATIOS     RANGE       Date Collected:     12/12/2011     Sample Size:     0.202 g     Ca/Mg     5.79     4-30       Date Received:     12/22/2011     Sample Size:     0.202 g     Ca/P     3.2     0.8-8       Date Completed:     12/23/2011     Hair Color:     Brown     Zn/Cu     10     4-20       Methodology:     ICP/Ms     Treatment:     Zn/Cd     > 999     > 800						•	
Germanium     (Ge)     0.030     0.030-0.040       Rubidium     (Rb)     0.038     0.011-0.12       Zirconium     (Zr)     0.89     0.020-0.44     Elements     RATIOS       SPECIMEN DATA     ELEMENTS     RATIOS     RANGE       COMMENTS:     ELEMENTS     RATIOS     RANGE       Date Collected:     12/12/2011     Sample Size:     0.202 g     Ca/Mg     5.79     4-30       Date Received:     12/22/2011     Sample Size:     0.202 g     Ca/Mg     5.79     4-30       Date Completed:     12/23/2011     Hair Color:     Brown     Zn/Cu     10     4-20       Methodology:     ICP/Ms     Treatment:     Zn/Cd     > 999     > 800					••••••	-	
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Methodology: ICP/MS Treatment: Zn/Cd > 999 > 800							
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	Methodology: ICP/MS		reatment:		Zn/Cd	> 999	> 800

Shampoo: Dr Bronners

#### Health history for hair test 568

#### 1) What are your current symptoms and health history?

Lethargy, brain fog, vision problems, irritability, kidney impairment, joint pain/arthritic knees and ankles, Abdomen pain. Diagnosed with mixed bipolar disorder 1 1/2 years ago.

### 2) Dental history (wisdom teeth removed? First root canal placed? Braces? First amalgam etc...)

First amalgam at 16 years old. Wisdom teeth removed at 18 years old. No root canals.

#### 3) What dental work do you currently have in place? What part of the dental cleanup have you completed?

Two small amalgams still in my mouth, scheduled to be safely removed in two weeks. 1 amalgam removed safely, and replaced with composite 3 months ago. 1 removed unsafely 8 months ago, replaced with composite.

## 4) What dentistry did your mother have at any time before or during pregnancy?

Mother had approximately 7 amalgams while pregnant with me.

# 5) What vaccinations have you had and when (including flu and especially travel shots)?

I had all the vaccinations that were regularly given to children in the United States during the late 70's early 80's. No flu shots or travel shots. 2 Tetanus vaccinations in the past 15 years.

## 6) Supplements and medications (including dosages) taken at time of hair test, or for the 3-6 months before the sample was taken.

Have tried various supplements and vitamins over the past year. These include ALA, most amino acids, A, B complex, C, E, D, Selenium, Fish oil, Zinc, Chromium, L-Dopa, Valerian root, Ginseng, Ginkgo, DHEA, Chorella, Manganese, Soy Lechitin, St. Johns Wort, SAM-E, Probiotic. Maybe a few others that I forgot about. I was desperate and tried everything.

I currently take vitamin A-10,000 IU, vitamin B complex-3 times a day, vitamin C-6 grams/day,vitamin E-800 IU, Selenium 300 mcg, DHEA 100mg, Fish oil 8 grams, CO Q10 200mg, Zinc 60mg, SAM-E 200mg, Probiotic, Licorice root.

#### 7) Other information you feel may be relevant?

I am an artist who used cadmium, titanium, and lead paint for the past 10 years. I get sick when I consume gluten, alcohol, sugar.

### 8) What is your location - city & country (so that we can learn where certain toxins are more prevalent).

I have lived in Brooklyn, NY for the last 5 years. Lived 5 years in Philadelphia, PA. Lived 25 years in Columbus, Ohio.