Identifiable Elements

To date most Periodic Tables disclose 118 distinct elements, total. Of these numbers 95 through 118 are all synthetic. That means they are unknown at present to occur in nature and must be synthesized. In other words, nuclear physics technology is required to observe certain elements.

"Man-Made" Elements

These include, somewhat in their order of discovery, but more so in relationship to one another, and in a certain ascending numerical order (with one exception):

#	Element Name	#	Element Name	#	Element Name
95	Americium Am)	100	Fermium (Fm)	105	Dubnium (Db)
96	Curium (Cm)	101	Mendelevium Md)	106	Seaborgium (Sg)
97	Berkelium (Bk)	102	Nobelium (No)	107	Bohrium (Bh)
98	Californium (Cf)	103	Lawrencium (Lr)	108	Hassium (Hs)
99	Einsteinium (Es)	104	Rutherfordium (Rf)	109	Meiternium (Mt)
110	Darmstadium (Ds)	115	Ununpentium Uup)		
111	Roentgenium (Rt)	116	Ununhexium (Uup)	43	Another element, Technetium (Tc) is also considered to be synthetic
112	Ununbium (Uub)	117	Ununseptium (Uus)		
113	Ununtrium (Uut)	118	Ununoctium (Uuo)		
114	Ununquadium Uuq)				

Together, the synthesized elements listed above, total 25. If we subtract that number from the 118 originally stated, we are left with 93 elements that occur in nature. The edible clay deposit in Panaca (www.montmorillonite.us) is known to contain **78** of these 93. That leaves 15. Which ones are missing, and what is the explanation?

The other 15 missing elements

(or unconfirmed) to date in the Window Peak Trace Minerals quarry are:

Actinium (Ac), # 89
Argon (Ar), # 18
Astatine (At), # 85
Francium (Fr,) # 87
Helium (He), # 2
Krypton (Kr), # 36
Neon (Ne), # 10
Neptunium (Np), #93
Plutonium (Pu), # 94
Polonium (Po), # 84
Protactinium (Pa), # 91
Promethium (Pm), # 61
Radium (Ra), # 88
Radon (Rn), # 86
Xenon (Xe), # 54

Six of the above are gasses, and are certain to occur in the various minerals making up the sedimentary deposit, along with some other gasses we know are in there, halogens, and non-metals such as: Oxygen and Hydrogen, Fluorine, Chlorine, Nitrogen, Carbon, and Iodine, for example. However the six highlighted above are nearly impossible to detect.

David K. Rollins (of THE DEPARTMENT OF CHEMISTRY, THE UNIVERSITY OF ARIZONA) explained these phenomena in his letter dated October 7, 1981.

> "…As you know, N.A.A. (neutron activation analysis) is a technique in which a sample is made radioactive. The radioactive elements in the sample give off gamma ray (γ rays) which are characteristic of the specific elements. These can be counted, as well as measured, and thus a sample can be analyzed. The following elements cannot be measured by N.A.A. because they either don't emit γ rays or else the radioactivity dies out within a very short time period (i.e. a few minutes or less).

Symbol	Element Name	Symbol	Element Name	Symbol	Element Name
H	Hydrogen	**P**	Phosphorous	**Pt**	Platinum
He	**Helium**	**Cl**	Chlorine	**Tl**	Thallium
Li	Lithium	**Ar**	**Argon**	**Pb**	Lead
Be	Beryllium	**V**	Vanadium	**Bi**	Bismuth
B	Boron	**Kr**	**Krypton**	**Po**	**Polonium**
C	Carbon	**Nb**	Niobium	**At**	**Astatine**
N	Nitrogen	**Tc**	Technetium	**Rn**	**Radon**
O	Oxygen	**Rh**	Rhodium	**Fr**	**Francium**
F	Fluorine	**Xe**	**Xenon**	**Ra**	**Radium**
Ne	**Neon**	**Er**	Erbium	**Ac**	**Actinium**
Pm	**Promethium**	**Color Key: List of Elements undetectable by Neutron Activation Analysis**			

This may seem like a lot of elements, but let me explain. He, Ne, Kr, Xe, and Rn are all **inert gases** that will not be found in your samples. **Po, At, Fr, Ra,** and **Ac** are all very rare and only exist in a radioactive state, thus it is extremely unlikely that any of them would exist in your samples. **Tc** and **Pm** exist only as by-products of other radioactive elements and almost certainly are not in your samples. This leaves us with:

Symbol	Element Name	Symbol	Element Name	Symbol	Element Name
H	Hydrogen	**P**	Phosphorous	**Rh**	Rhodium
Li	Lithium	**Cl**	Chlorine	**Er**	Erbium
Be	Beryllium	**V**	Vanadium	**Pt**	Platinum
B	Boron	**Nb**	Niobium	**Tl**	Thallium
C	Carbon	**O**	Oxygen	**Pb**	Lead
N	Nitrogen	**F**	Fluorine	**Bi**	Bismuth

[Again, the table immediately above lists those 18 elements merely undetectable by N.A.A., but we know they exist in the ***PANAK-ITE*** deposit because they are detectable using other technologies. They along with another 60 that are detectable with N.A.A. are listed at www.chelatedtraceminerals.com] Dr. Rollins, continues:

"Of these, I can guarantee that you have a high percentage of Oxygen, all soils do. All soils (and some rocks) also contain some organic materials which means that the soil samples undoubtedly have some Carbon and Hydrogen, as well as Phosphorous and Nitrogen. Depending on how the sample is gathered and prepared, these organic materials are usually present at levels of a few parts-per-thousand to a few percent…Also, even though Fluorine and Chlorine can't be seen by N.A.A., a qualitative test for halides (i.e., F, Cl, Br, and I) showed that you definitely have F and Cl in your sample. Although I did not measure exactly how much, they are present in the range of 100 to 1000 parts per millions. This leaves a list of elements as follows: Lithium, **Beryllium**, Boron, **Vanadium**, Niobium, Rhodium, **Erbium**, Platinum, Thallium, **Lead**, and Bismuth. Of these elements, the most likely to be present in your samples are **B**, **V**, **Er**, and **Pb**…There is some possibility that the others are present and further tests of a different kind (not N.A.A.) would be necessary in order to tell if they exist.

I hope this analysis can help you as you had hoped…"

Note 1): All but 3 elements occurring in nature (Plutonium, Neptunium and Protactinium) remain to be documented in the ***PANAK-ITE*** list.

Note 2): Not only are these three elements (**Pu**, **Np**, **Pa**) extremely rare, they are more often associated with radioactive decay, or as derivatives of Uranium; hence their proximity in the order of elements in the periodic table to those "man-made" ones.

Note 3): Subsequent tests since 1981 have revealed precise parts per million detections for Lithium, Boron, Niobium, Rhodium, Platinum, Thallium, and Bismuth along with Boron, Vanadium, Erbium and Lead which were predicted by Professor Rollins.

Conclusion:

The deposit, therefore, probably contains all natural elements known to man, but due to technological reasons, and cost considerations in running the tests, a few a have not been verified to date. Is it important to have access to a single product potentially holding all of Mother Nature's elements in balanced formulation? We hope so. There are likely to be many yet-undiscovered synergies amongst the exotic elements still under nutritional scrutiny. Is it impressive that more individual elements--occurring in nature--perhaps than any other known deposit, have been identified with the Panaca quarry, exploited by Window Peak Trace Minerals? We think so. www.chelatedtraceminerals.com

For a better understanding of heavy metals and the effects of chelation upon them you should read the companion paper that discusses which heavy metals are actually necessary for good metabolism. To do so, click on the link just above.