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A homeopathic dilution is not just a simple dilution:

Diluting un-ionised water in a pharmaceutical vial in successive steps forcibly and systematically removes material deposited on the glass; this phenomenon does not occur with polyethylene vials. (Schema 1)

Homeopathic raw materials diluted and vigorously shaken (sucussion) at each step allows for detection of additional material derived from the homeopathic stock. This material can also be found when using polyethylene vials and is material clearly derived from the stock. (Schema 2)

This method of dilution including successive and systematic shaking (provides additional energy) between each dilution + dynamisation allows preserving unique composite material. (Table 1)

A homeopathic dilution + dynamisation is specific:

Using traditional methods, it is possible to detect the raw materials forming the stock up to 6D (3CH); at 4CH (10^{-8}) one can still detect some parts of the stock but beyond that dilution, this is no longer possible. (Table 2)

The most modern methods (NTA) allow for detection of the quantity, size and distribution of particles, which are stock specific, beyond the dilution 4CH. (Schema 3)

Using laser electronic microscopy (SEM), one can observe specific and distinct shapes of particles (which can be distinguished one from another). Their chemical compositions (EDX) are also distinct. (Schema 4 & 5).

The behaviour of aqueous solvent is modified by the presence of these particles. This can be observed using nuclear magnetic resonance. It is possible to tell the difference between diluted + dynamised stocks, whereas it is impossible to discern a difference between stocks which are only diluted. (Schema 6)

One can distinguish one remedy from another through electro-photonic analysis of a drop (classic hydro-alcohol dynamised solutions) or of an impregnated pill, even at the highest dilutions+dynamisations. (Pictures Aqua/Cuprum/Gelsemium).

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DYNHOM CONCLUSIONS :

Homeopathic remedies are unique and can be distinguished from one another on the basis of their physico-chemical and particulate characteristics in all of their dilutions+dynamisations, but also, thanks to their signature in the solvent.

The signature of impregnated pills is stable and durable.

GENERAL CONCLUSIONS FOR HOMEOPATHY :

- **Other research teams have published modifications of observed gene expression using techniques traditionally employed in university and hospital centres (DNA chip microarrays and PCR) and each remedy, even at high dilutions+dynamisations, directly regulates a limited and specific series of genes. The malfunctioning of these genes is expressed by specific symptoms observed in human beings. (Schema 7)**
- **The specific signature of a remedy is directly (through per lingual absorption) transmitted to the blood and transported to specific receptive genes which are, thus, regulated and which, in turn, causes the symptoms to disappear.**
- **This mode of action can be fully explained by the principles of quantum physics.**
- **Basic research, as well as clinical observations, are an integral part of evidence based medicine (EBM) .**

Water Copper Gelsemium

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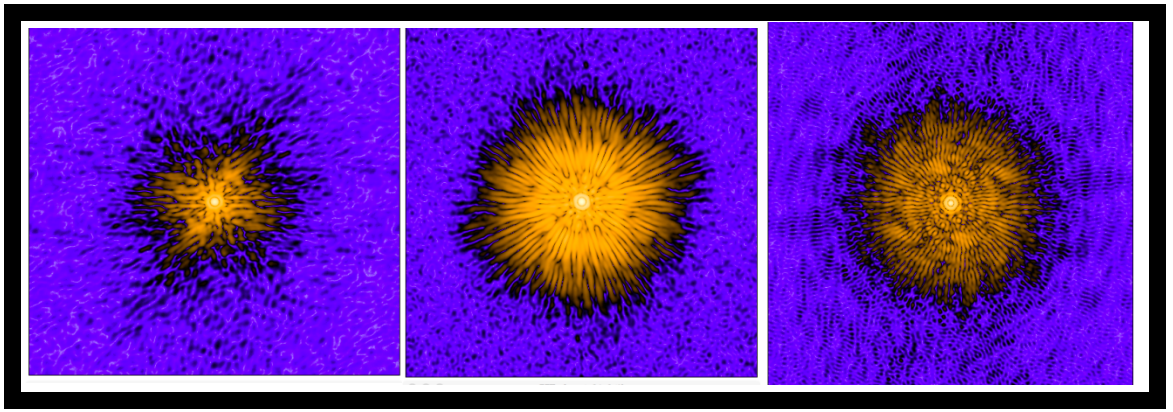

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2. Van Wassenhoven M., Goyens M, Capieaux E, Devos P (2017). Nanoparticle Characterization of Traditional Homeopathically-Manufactured Copper (Cuprum metallicum) Medicines and Controls. Homeopathy (2017) *In publication.*
3. Van Wassenhoven M., Goyens M, Henry M, Capieaux E, Devos P (2017). Nuclear Magnetic Resonance Characterization of Traditional Homeopathically-Manufactured Copper (Cuprum Metallicum) and a plant (Gelsemium Sempervirens) Medicines and Controls. Homeopathy (2017) *In publication.*
4. Henry M, Van Wassenhoven M., Goyens M, Capieaux E, Devos P (2017). Electro-photonic Characterization of Traditional Homeopathically-Manufactured copper (Cuprum Metallicum) and a plant (Gelsemium Sempervirens) Solutions and Impregnated pills and Controls.(2017) *In publication.*
5. Capieaux E (2014). Exemples de vérifications des hautes dynamisations par la technique “Microarrays” (in vitro et in vivo). Colloque Dynhom 2014.
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Schema 1: Nano tracking analyses: Number of particles counted for each frame.

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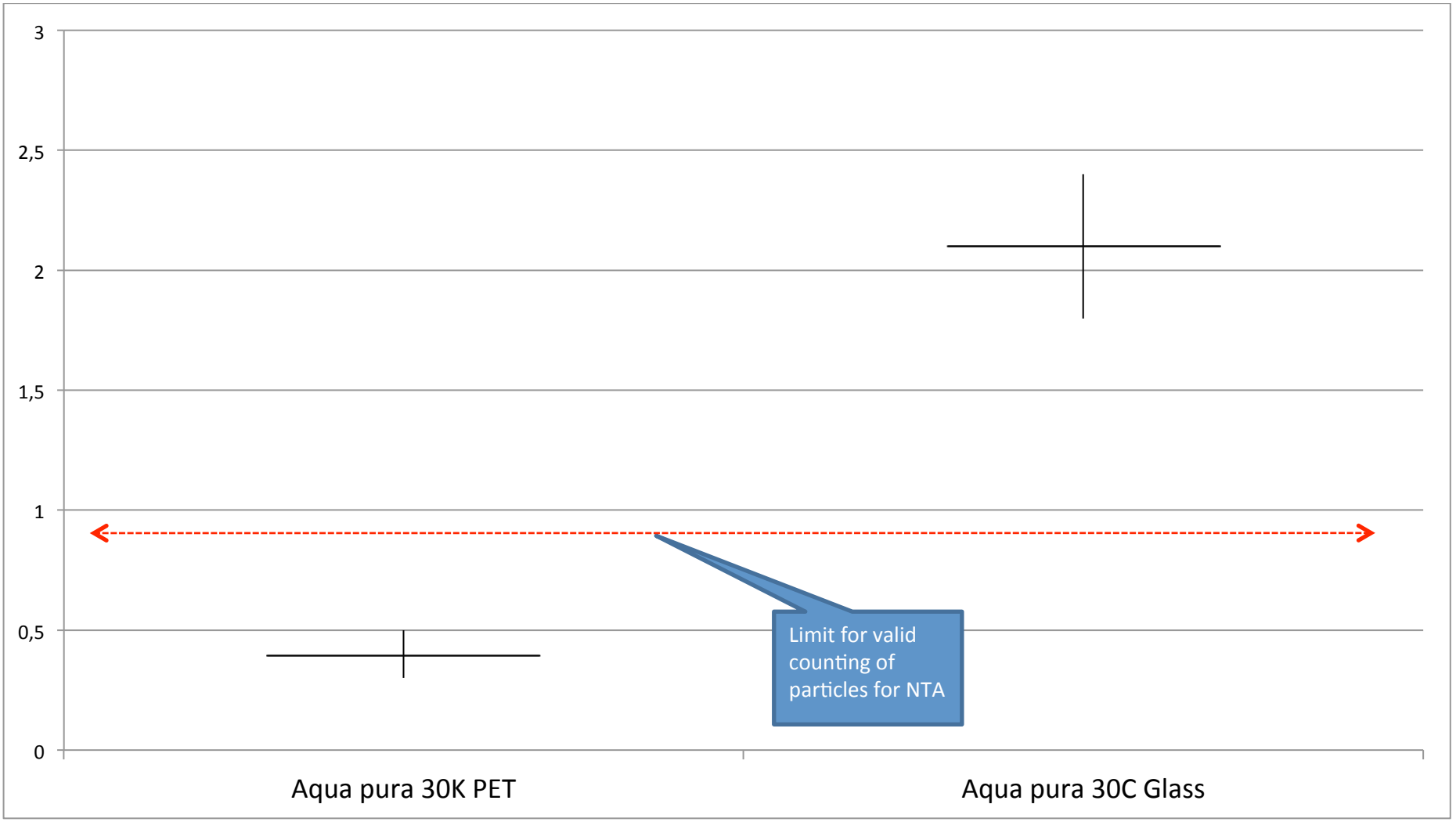

Schema 2: Nano tracking analyses: Number of particles counted for each frame.

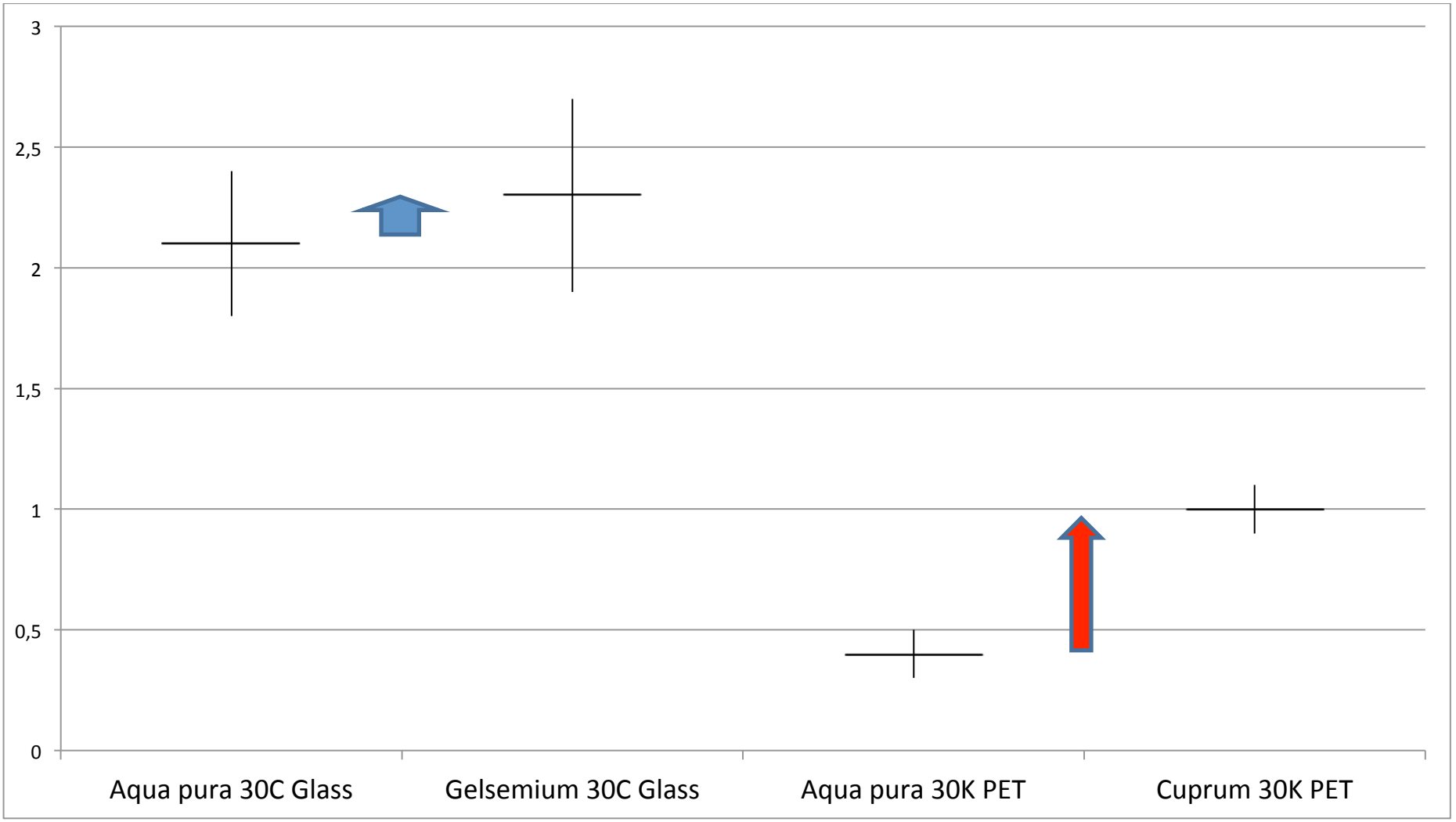

Table 1: Atom percentages detected * atomic mass * quantity of collected material in µg.

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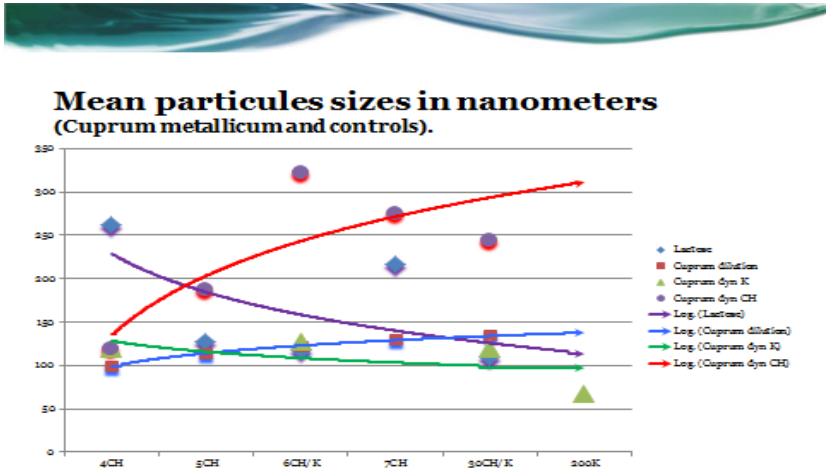
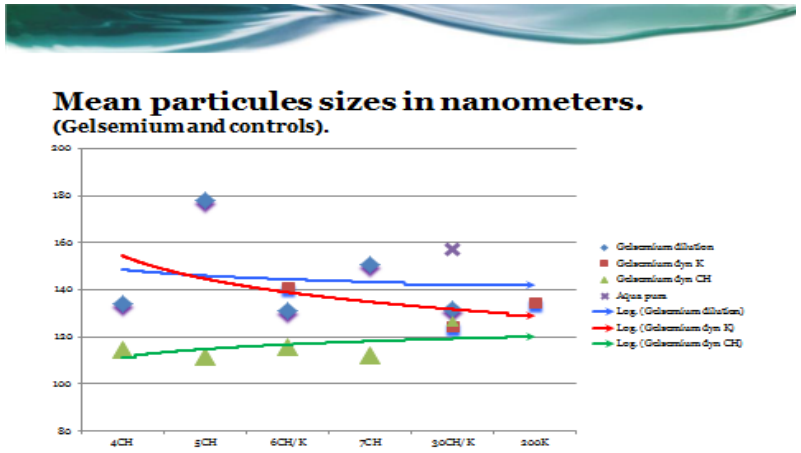
	Aqua 30C	Cupr 4C	Cupr 30C	Cupr 200K	Cupr 10^{-60}	Cupr 30C PET	Arg 30C	Arg 200K	Arg 10^{-60}	Sil 30C	Sil 200K	Sil 10^{-60}	Kali-m 30C	
Carbon	400,8	24099,12	198,12	508,2	993,96	340,02	4364,4	1094,52	4588,8	2327,04	2617,92	3481,56	9694,08	1
Oxygen	1623,04	10851,84	811,84	2047,2	2263,2	1211,04	6982,4	5933,76	16963,2	9724,8	5788,16	15044,96	8614,24	2
Natrium	850,54	68,31	424,58	1215,55	1023,27	901,485	3776,6	3588,69	6683,8	4556,76	3849,28	4234,53	2799,56	1
Silicium	463,68	279,72	187,04	394,8	488,04	50,82	389,2	1266,16	3085,6	1760,64	808,64	10517,64	3436,72	
Calcium	239,2	0	161,2	253	254,4	27	240	361,2	3392	3273,6	304	1132,4	1897,2	
Magnesium	59,292	0	17,982	49,2075	79,461	39,7305	82,62	401,436	403,38	209,952	182,736	789,507	330,48	
Sulfur	14,08	0	14,08	13,6	25,92	17,28	147,2	109,76	230,4	99,84	64	0	1017,28	
Aluminium	13,5	0	10,26	22,95	30,78	17,01	64,8	34,02	221,4	145,8	56,16	666,9	146,88	
Kalium	65,52	0	42,9	70,2	60,84	33,345	140,4	147,42	748,8	1062,36	124,8	637,26	344,76	
Molybdenum	0	0	0	0	0	0	0	0	0	0	0	255,36	0	
Chlorine	20,59	0	24,14	47,925	21,3	80,4075	63,9	94,43	731,3	387,66	53,96	128,155	78,455	
Barium	0	0	0	0	0	0	0	0	0	0	0	754,87	0	

Table 2: HPLC-UV quantification of sempervirine and gelsemine (alkaloids markers) in Gelsemium.

	Sempervirine	**Gelsemine**
	(Mean ± standard deviation)	**(Mean ± standard deviation)**
Mother Tincture (dilution 50x)	577.1 µg/ml ± 1.1	354.0 µg/ml ± 1.5
Mother Tincture (dilution 20x)	577.5 µg/ml ± 3.8	360.2 µg/ml ± 0.3
1D	165.5 µg/ml ± 1.7	116.1 µg/ml ± 1.7
10^{-1}	179.0 µg/ml ± 0.8	111.6 µg/ml ± 1.7
2D	16.1 µg/ml ± 1.8	15.5 µg/ml ± 1.5
10^{-2}	16.0 µg/ml ± 2.5	17.9 µg/ml ± 5.1
3D	1.51 µg/ml ± 1.8	1.44 µg/ml ± 2.2
10^{-3}	1.56 µg/ml ± 2.7	1.44 µg/ml ± 3.3
4D	0.117 µg/ml ± 8.3	0.115 µg/ml ± 2.8
10^{-4}	0.117 µg/ml ± 5	0.112 µg/ml ± 2.7
5D	0.00722 µg/ml ± 11.1	0.01076 µg/ml ± 11.2
10^{-5}	0.00749 µg/ml ± 2.4	0.01074 µg/ml ± 0.7
6D	Non quantifiable	Non quantifiable
10^{-6}	Non quantifiable	Non quantifiable

Schemas 3: Particles sizes in nanometers and particles sizes distributions.





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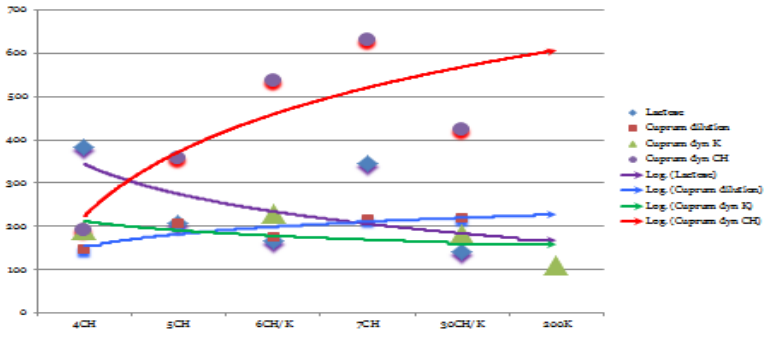
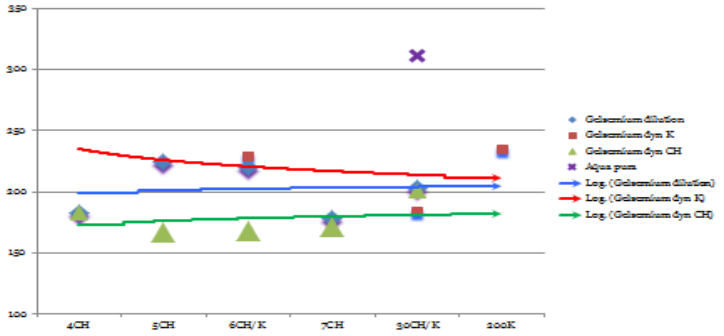
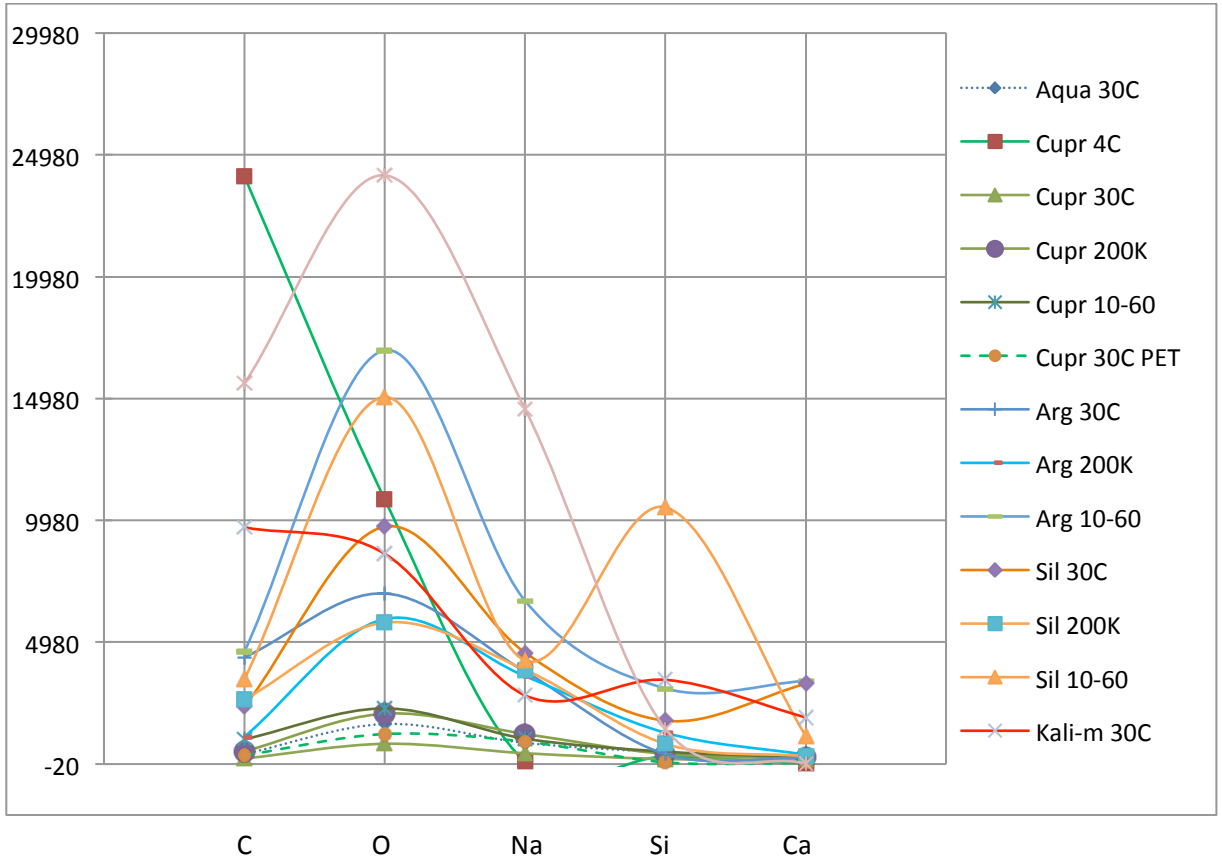
Particules sizes distribution (D90) in nanometers.
(Cuprum metallicum)



Particules sizes distribution (D90) in nanometers.
(Gelsemium)



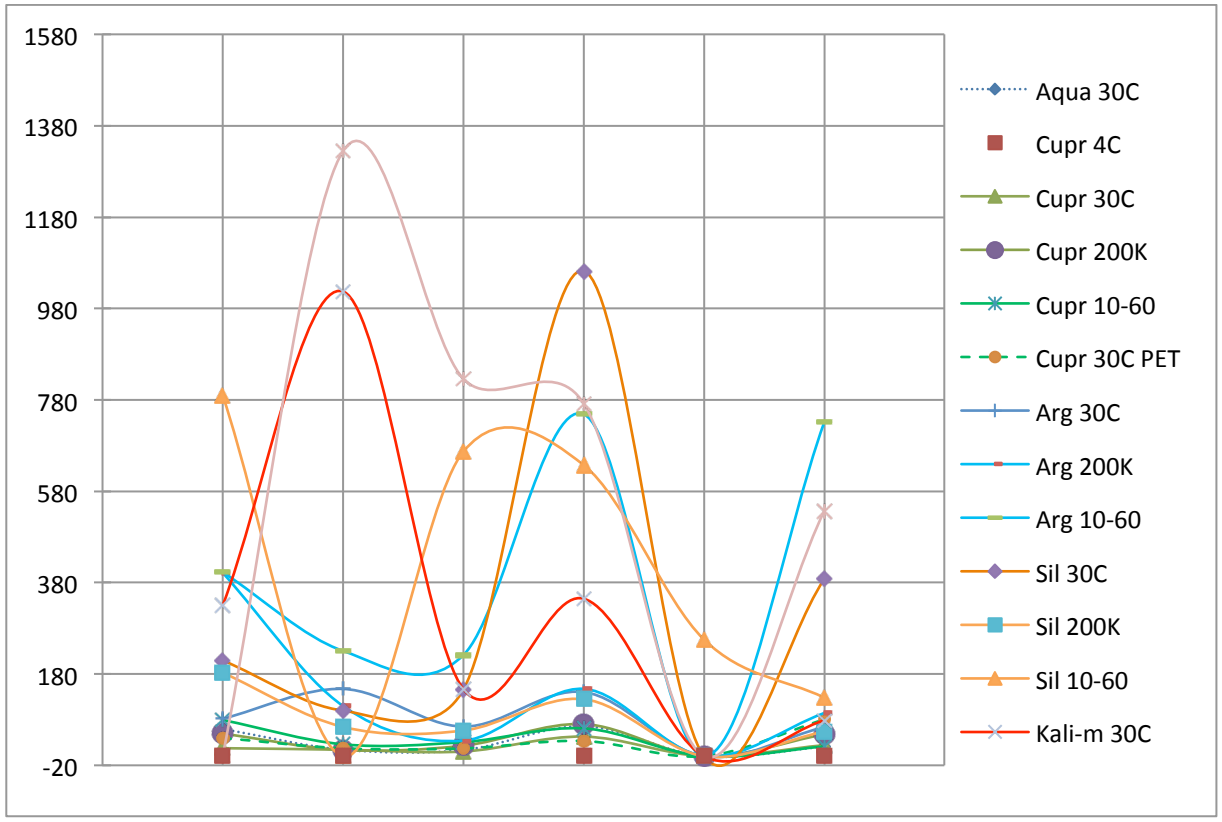
Schema 4: Identified chemistry in dilutions/potentizations (atom% * atomic mass * µg quantity) for the 5 most concentrated atoms in the different preparations.



There is a difference in chemistry between the different samples. The proportion of Carbon, Oxygen, Sodium are always high, Silicium and Calcium are also good discriminant factors. Cuprum 4C is almost pure sugar ($C_{11}H_{22}O_{11}$) and real values are about 9000 times higher than presented here. At this scale, the

different dilutions/potentizations of copper are not easily discriminated from each other but it is easy to discriminate from other metals or salt or plant. For silver and silica the differences between dilutions/potentizations are clearly expressed.

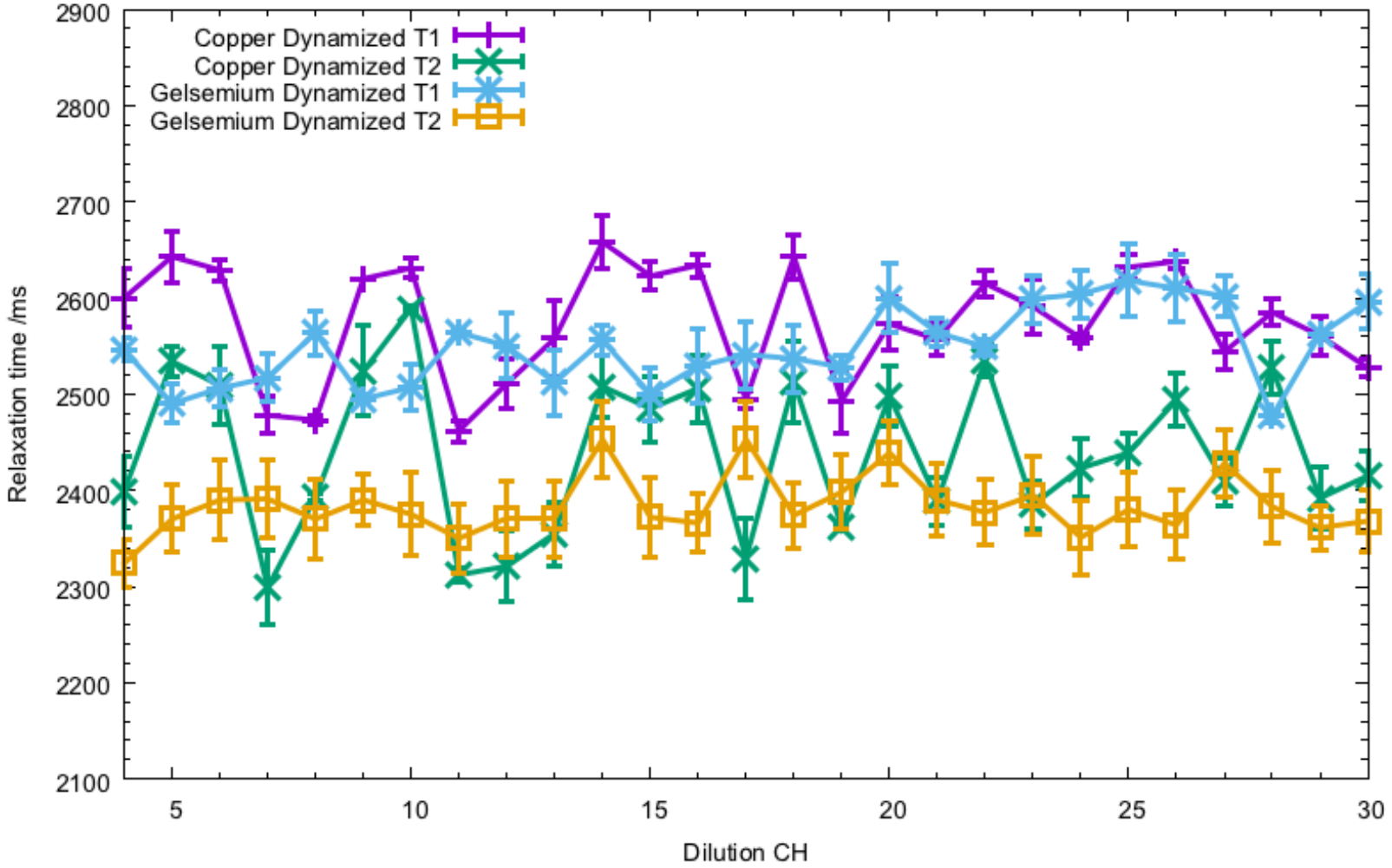
Schema 5: Identified chemistry in dilutions/potentizations (atom% * atomic mass * µg quantity) for 6 lower concentrated atoms in the different preparations.



Mg S Al K Mo Cl

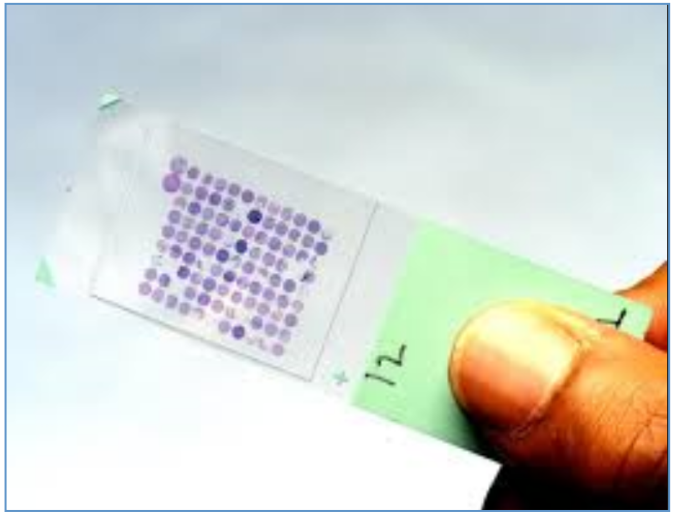
Also for lower concentrated atoms, there is a difference in chemistry between the different samples and are good discriminant factors. At this scale, Cuprum dilutions/potentizations chemistry is not as easy to discriminate between each other for these atoms but easy to discriminate from other preparations.

Schema 6: Comparison of mean relaxation times of Gelsemium & Cuprum.



Schema 7: Example of Gelsemium 2-3-4-5-9-30CH & micro-arrays

45.033 Human genes expressed on one microplate.



GELSEMIUM

56 gènes ⟶ Expression Génique modifiée

- Gènes de la fonction neuronale (TAC4 et GALR2) (2 neuropeptides)
- Gènes impliqués dans la transduction olfactive
- Gènes impliqués dans l'inflammation
- Gènes impliqués dans la signalisation calcique (Ca++)
- .....

49 ↘ et 7 ↗

(The prevalence of down-regulation indicate a tendency to reduce cell excitability)

Ref. Marzotto et al. Extreme sensitivity of gene expression in human SH-SY5Y neurocytes to ultra-low doses of Gelsemium sempervirens. BMC Complementary and Alternative Medicine 2014, 14:104.