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Effect of *Agnihotra* energy field on water purification

*Ulrich Berk & Shailendra Sharma**

*President, German Association of Homa Therapy, **Principal, AIMS College, Dhamnod, MP
E-mail: dght@homatherapie.de; shailendra.b.sharma@gmail.com

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Agnihotra is a special fire performed exactly at the time of sunrise and sunset in a copper pyramid. It comes from ancient *Vedic* Knowledge. *Agnihotra* is said to purify the environment and especially it has been found to have profound impact in mitigating water pollution problem. The present study shows that water will be purified if it is kept in a room where *Agnihotra* is regularly performed. Water purification also happens if water bottles are kept inside a Faraday Cage in the *Agnihotra* room. These results suggest that *Agnihotra* creates an energy field beyond the electromagnetic field which has profound impact.

Keywords: Water purification, *Agnihotra*, Energy field, *Prana*, *Vedas*
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Availability of potable drinking water is becoming increasingly a worldwide problem. Dumping of industrial wastes, radiation coming from the bowels of the earth and from a number of human activities, atmospheric pollution, all are affecting availability of water suitable for human consumption and for agricultural use. This, coupled with acid rains further aggravates the situation. Therefore, inexpensive and easily available methods of water purification are becoming more and more important. Some reports suggest that the ancient method of *Agnihotra* may offer a cheap and affordable solution.

Preliminary tests have shown that if *Agnihotra* ash is added to polluted water, it gets purified (Mondkar[1], Gerlecka[2], Matlander[3]). Further, Matlander showed that if you not only add *Agnihotra* ash to water but also keep the water in *Agnihotra* atmosphere (in a room where *Agnihotra* is performed regularly), the reduction of pathogenic bacteria is higher. Sharma[4] then went one step further and did not add *Agnihotra* ash but just kept water bottles next to a *Somayag* (a long lasting process of fire purification - but which is also based on the principles of *Agnihotra*). Observation was that also in this case water was purified. But since the bottles were open, a chemical effect of smoke particles cannot be excluded.

Sharma[5] also showed that *Agnihotra* atmosphere not just locally purifies water but leads to the purification of a whole river in its vicinity.

The object of the present experiment was to see whether just *Agnihotra* atmosphere without any effect of *Agnihotra* ash or *Agnihotra* smoke would be able to improve water quality (*Agnihotra* atmosphere has been reported to have a positive effect on the sprouting of seeds, see Devi/Swamy/Nagendra[6]).

A first test showed that after a period of 5 days the count of *Coliform* bacteria was reduced by more than 50% compared to control (same water kept in the laboratory during these 5 days).

As any chemical reaction with either ash or smoke of *Agnihotra* was excluded the effect could only be in terms of physics. This leads to the assumption that regular performance of *Agnihotra* creates some kind of energy field which helps to purify water. But which kind of energy field could this be?.

In every day life the most common energy fields are electromagnetic fields. Could it be that electromagnetic fields lead to the purification effect of *Agnihotra* on water?

In order to find out whether electromagnetic fields generated by *Agnihotra* are responsible for the improvement of water quality the following systematic studies were designed. It is well known that Faraday Cages shield electromagnetic waves. Therefore, if the effects of *Agnihotra* on water are (partly) based on some electromagnetic waves, then there would be no (less) change in the parameters of water quality if this water is kept in such Faraday Cages. This was to be tested.

Materials and methods

1) Agnihotra

Agnihotra is the smallest and basic Homa healing fire which is performed in a copper pyramid of fixed

*Corresponding author

size and shape, tuned to the biorhythm of sunrise/sunset. It comes from the ancient most *Vedic* Sciences of Bioenergy, Medicine, Agriculture and Climate Engineering. This knowledge has been revived by Shree Gajanan Maharaj from Akkalkot, Maharashtra last century and taught worldwide by his disciple Shree Vasant Paranjpe[7]. A compilation of recent research on *Agnihotra* and Homa Therapy is given in Berk/Johnson 2009[8].

In this ancient tradition sunrise is described as follows:

"At sunrise the many fires, electricities, ethers and more subtle energies emanating from the sun extend all the way to the Earth and produce a flood effect at those coordinates where the sun is said to rise. It is awesome. The flood enlivens and purifies everything in its path, destroying what is impure in its wake. This torrent of life-sustaining energies causes all life to rejoice. At sunrise that music can be heard. The morning *Agnihotra Mantra* is the essence of that music. It is the quintessential sound of that flood. At sunset the flood recedes" (Paranjpe 1989).

1 The materials used for present study consist of following:
A pyramid shaped copper container, 14.5 cm x 14.5 cm at the top, 5.25 x5.25 cm at the bottom and 6.5 cm in height.
2 Fire prepared with cow dung patties duly smeared with cow's ghee and its offering to fire along with chanting following *Agnihotra Mantras.*

At sunrise:

Sooryáya swáhá, sooryáya idam na mama prajápataye swáhá, prajápataye idam na mama

At sunset:

Agnaye swáhá, agnaye idam na mama prajápataye swáhá, prajápataye idam na mama

2) Conducting the experiment

For the experiment water was taken with a bucket from the Narmada River in Mandleshwar, Madhya Pradesh, India (22° 10' 29" North, 75° 39' 59" East). The water was stirred and then distributed into glass bottles for experimentation.

Three bottles for control were immediately brought to the laboratory of Shri Umia College, Mandleshwar, MP (first two replications) and of AIMS College, Dhamnod, MP (third replication plus several control experiments). The measurements took place between October 2012 and February 2014.

Seventeen bottles were brought to the Homa Therapy Goshala in Maheshwar, MP. Three each of the bottles filled with water were put in containers made of stainless steel, copper and aluminum, respectively. Care was taken that there was no direct contact between the bottles and the metal containers. At the bottom of the metal containers a piece of dried cow dung was placed and at the sides a distance of one cm was kept. Then, the metal containers were closed with a tightly fitting lid in order to get Faraday Cages.

In addition to these 9 water bottles enclosed in metal containers for comparison, also 8 bottles without metal containers (filled with the same water from Narmada River) were used.

All these bottles were placed in the *Agnihotra* hut at Maheshwar Homa Therapy Goshala where *Agnihotra* has been performed regularly exactly at sunrise and sunset. No other activities are going on in this *Agnihotra* hut, and no words other than mantras related to *Agnihotra* are spoken there.

Figs. 1 & 2 show both shielded and unshielded bottles in the *Agnihotra* hut, and Fig. 3 shows the arrangement of all water bottles for the experiment.



Fig. 1 - Left side: Water bottles in metal containers; Right side: *Agnihotra* is performed in the left-hand pyramid



Fig. 2 - Unshielded bottles

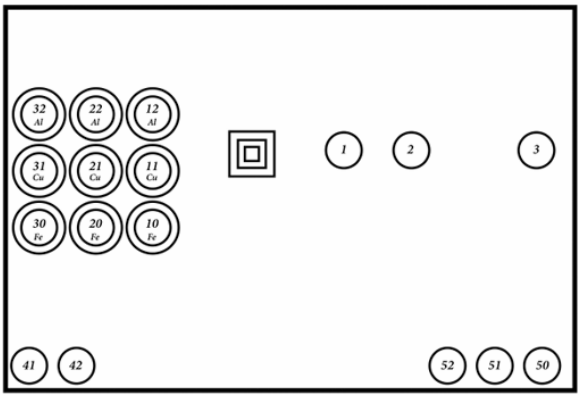


Fig. 3 - Array of shielded and unshielded bottles. One circle - unshielded bottle. Two circles - shielded bottle, metal is indicated

The temperature in the *Agnihotra* hut (where the experimental samples were kept) and the office room of the laboratory (where the control samples were kept) showed only minor differences.

After 5 days all water samples were taken out from the *Agnihotra* hut and brought to the laboratory for testing. These samples plus those kept there for control were examined for the most important physico-chemical parameters of water: Dissolved Oxygen (DO), *p*H, Chemical Oxygen Demand (COD), hardness, and count of *Coliform* bacteria.

Physico-chemical parameters of water were determined as per standard methods of APHA[9] and Welch[10].

Parameters like temperature, *p*H, Dissolved Oxygen (DO), and turbidity were determined at the site, while other parameters like Chemical Oxygen Demand (COD), chloride, phosphate, nitrate, alkalinity, free CO_2, total solids were determined in the laboratory.

The tests were conducted according to single blind protocol: To prevent bias in the results all bottles were marked with numbers only before testing in the laboratory.

Results and discussion

The experiment was done with three replications. All showed considerable improvements in water quality compared to control in all the five parameters tested. Table 1 shows the results in detail, Table 2 shows the percentage changes as compared to control.

Fig. 4 is a graphical representation comparing properties of all the water samples kept in *Agnihotra* atmosphere versus control.

There was a general improvement of water quality in all the parameters measured as compared to control. These changes are consistent through all three replications.

Although there was some difference between the water samples kept in metal containers and the samples kept in bottles regarding DO, *p*H, and COD, this difference was rather small compared to the difference with control (Fig. 5).

Also, there were some differences between the different kinds of metal containers - but again these differences were small compared to the difference with control. Further, experiments could look deeper into these differences.

The main results with all three replications and all parameters of water quality are that:

a) *Agnihotra* atmosphere helps to purify water.

b) This effect of purification is there whether or not the water samples are kept in Faraday Cages.

The conclusion seems natural that there is some kind of energy field around *Agnihotra* which is not of the known electromagnetic type and which is not shielded by Faraday Cages.

If someone has some alternative explanation it would be interesting to hear about that.

More detailed discussion

The biggest variation between the samples kept in bottles inside the 3 different metal containers was in Dissolved Oxygen (DO). Water kept in stainless steel showed much pronounced effect, while impact was least in water kept in aluminum container.

Also, there was some difference between the samples just kept in bottles and the samples where the bottles where kept in these metal containers acting as Faraday Cages: samples in Faraday Cages showed less improvement. One possible explanation for that result could be related to temperature. It is known that DO is affected much by the prevailing temperature. Temperature in the *Agnihotra* hut was measured before/after *Agnihotra* (at a distance of appr. 50 cm from the fire). Normally the temperature went up by 1^0C after *Agnihotra* and came down to the value before *Agnihotra* within 20 or 30 minutes. Probably this small change of temperature which also lasted for a short time band can be neglected.

Possible that metal containers absorb the infrared radiations from the *Agnihotra* fire and store the heat for longer time so that inside the containers the temperature is increased for longer time than outside. But then one would expect the samples in the containers next to the *Agnihotra* fire to have least Dissolved Oxygen (DO) and those furthest away the

Table 1-Raw Data of three replications of the experiment

	DO [mg/L]			*p*H			COD [mg/L]			Hardness			Coliform/100 ml		
	R1	R2	R3	P1	P2	P3	C1	C2	C3	H1	H2	H3	C1	C2	C3
Control A	3	2,5	3,5	9	9,5	9	70	90	100	210	300	350	900	1000	1100
Control A	3,4	3	3,9	8,8	8,9	9,5	80	95	110	240	355	365	950	1100	1250
Control A	3,8	2,2	2,8	8,6	9,3	9,8	90	100	120	275	375	380	1100	1250	1350
Average control	3,4	2,57	3,4	8,8	9,23	9,43	80	95,00	110,00	241,67	343,33	365,00	983,33	1116,67	1233,33
Standard Deviation	0,40	0,40	0.55	0,20	0,31	0,40	10,00	5,00	10,00	32,53	38,84	15,00	104,08	125,83	125,83
Unshielded bottles	12,2	11	9,8	7,2	6,2	6,9	30	40	50	135	150	165	369	380	440
Unshielded bottles	14	12	10	7,9	7	7,7	32	36	45	125	135	155	420	430	480
Unshielded bottles	12,4	10	8	7,5	6,8	7,8	28	41	55	130	145	170	320	360	400
Unshielded bottles	9,8	8,5	7,9	7,8	6,9	7,8	20	27	35	110	135	145	250	270	295
Unshielded bottles	10,6	8,8	7,8	7,7	6,2	6,9	28	33	50	125	140	170	290	300	335
Unshielded bottles	8,5	7	6,6	7,5	6,5	7,2	38	45	55	135	150	165	250	295	310
Unshielded bottles	9,8	8,2	8,5	7,4	7	7,9	32	33	45	140	160	185	300	290	315
Unshielded bottles	8,5	7,1	6,9	7,2	6,2	6,8	30	38	50	150	175	195	380	400	410
Bottle in Fe-container	12,8	10,2	9	7,7	6,1	6,8	22	39	50	140	165	180	300	325	355
Bottle in Fe-container	11	9	8,2	8	6,9	7,5	22	32	50	140	170	190	420	435	450
Bottle in Fe-container	12	10,5	9,5	7,8	6,5	7,5	24	42	52	125	140	160	290	310	330
Bottle in Cu-container	9,6	7,5	7,8	7,8	6	6,9	30	37	45	135	155	175	410	425	455
Bottle in Cu-container	9	7	6,5	7,8	6,8	7,2	23	37	40	136	155	165	280	295	355
Bottle in Cu-container	10,4	9,54	8,24	7,5	6,5	7	15	30	39	110	135	155	250	280	300
Bottle in Al-container	8,6	7	7,7	8,2	7,2	7,8	24	35	45	150	165	180	370	395	455
Bottle in Al-container	8,9	7,5	6,5	7,9	6,7	7,2	20	40	50	140	150	180	300	320	350
Bottle in Al-container	9,6	8,2	7,5	8,1	7,5	8	18	25	39	120	130	150	232	285	305
Average *Agni* atm.	10,45	8,77	8,03	7,71	6,65	7,35	25,65	35,88	46,76	132,12	150,29	169,71	319,47	340,88	372,94
Standard Deviation	1,69	1,56	1,09	0,29	0,42	0,43	6,00	5,37	5,83	11,75	13,52	14,19	63,07	58,18	63,86

highest level of DO. The data are not conclusive in this respect. Still, this hypothesis can be tested in future experiments by putting some temperature sensor inside the metal containers.

The main result though is not affected by these variations between the three replications and between the bottles in different materials used for shielding - the significant improvement of water quality of all parameters which were measured if the water is kept in *Agnihotra* atmosphere.

Containers of metals like copper, steel, or aluminum work well as a Faraday Cage to shield electromagnetic waves of a wide range. But if you go to the end of very high energy radiation (like gamma rays), these containers used cannot prevent rays from penetrating inside. For further studies, it is suggested to do an experiment in which a container of lead is used instead. One centimetre of wall thickness should be enough to at least make a difference in the effect on water. The present study showed some interesting observations in mitigating water pollution problem. Considering importance further systematic research studies are suggested. The experimental design can be modified in different directions:

a) Have samples at different distances from the *Agnihotra* pyramid (The distances inside the *Agnihotra* hut varied from 50 cm to approximately 3 m - this did not have a clear effect on the results).

Table 2 - Percentage changes as compared to control

	Dissolved Oxygen %				*p*H %				COD %				Hardness %				Coliform/100 ml %			
	Repl. I	Repl. II	Repl. III	Average Repl. I - III	Rep I	Rep II	Rep III	Average Repl. I - III	Repl. I	Repl. II	Repl. III	Average Repl. I - III	Rep I	Rep II	Rep III	Average Repl. I - III	Repl. I	Repl. II	Repl. III	Average Repl. I - III
Average all	207%	242%	136%	191%	-12%	-28%	-22%	-21%	-68%	-62%	-57%	-62%	-45%	-56%	-54%	-52%	-68%	-69%	-70%	-69%
Average stainless steel	251%	286%	162%	228%	-11%	-30%	-23%	-21%	-72%	-60%	-54%	-61%	-44%	-54%	-52%	-51%	-66%	-68%	-69%	-68%
Average copper	184%	212%	121%	169%	-13%	-30%	-25%	-23%	-72%	-64%	-62%	-65%	-47%	-57%	-55%	-54%	-68%	-70%	-70%	-70%
Average aluminum	166%	195%	113%	154%	-8%	-23%	-19%	-17%	-74%	-65%	-59%	-65%	-43%	-57%	-53%	-52%	-69%	-70%	-70%	-70%
Average shielded bottles	200%	231%	132%	183%	-11%	-28%	-22%	-20%	-73%	-63%	-59%	-64%	-45%	-56%	-53%	-52%	-68%	-69%	-70%	-69%
Average unshielded bottles	215%	254%	141%	200%	-14%	-29%	-22%	-22%	-63%	-61%	-56%	-60%	-46%	-57%	-54%	-53%	-67%	-69%	-70%	-69%

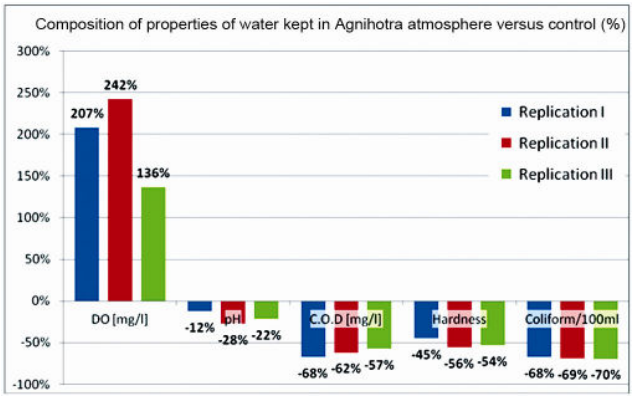


Fig. 4 - Comparison of properties of water kept in *Agnihotra* atmosphere versus control (%)

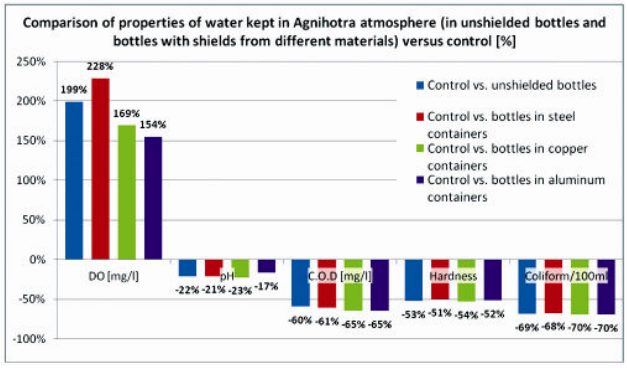


Fig. 5 - Comparison of properties of water kept in *Agnihotra* atmosphere (in unshielded bottles and bottles with shields from different materials) versus control (%)

Samples could be placed outside the *Agnihotra* hut at different distances.

This would also help to see whether the effects of *Agnihotra* energy field inside and outside of the *Agnihotra* hut are same at same distance or not.

b) Put the samples in a room where *Agnihotra* has never been performed before and will be just performed for the 5 days of the experiment. This would help to find out whether the energy field is building up over a period of time.

Possible also to put the samples in an *Agnihotra* hut with continuous *Agnihotra* for several years-but not perform *Agnihotra* during the time of the experiment and see whether the energy field of *Agnihotra* is still present after some time of non-performance.

c) Keep the samples one day only, two days, etc. to see how fast these changes in water quality happen - and also continue for say 30 days to see whether the improvement continues or stops at some point. Most interesting though is the question: which kind of energy field is created by *Agnihotra* and how this type of energy field brings about the changes in water quality (assuming the possibility of high energy electromagnetic waves which can not be shielded by the type of Faraday Cage used can be excluded).

For future studies, two hypotheses are suggested:

1) There are microorganisms in polluted water which are activated by *Agnihotra* energy field and thus help to improve properties of water.

2) *Agnihotra* creates an energy field in the vicinity which is not confined to electromagnetic fields.

The first hypothesis requires further studies in the field of Microbiology, identifying microorganisms which can help improve water quality and examine closely how their activity is influenced by *Agnihotra* atmosphere.

The second hypothesis puts a challenge for physicists. The pyramid shape of the *Agnihotra* vessel probably plays some role – not much researched yet, but there are some preliminary studies in this field[11].

An important study would be: which kind of energy field could this be? One possibility is "*Prana*" energy - but then this concept of "*Prana*" has to be translated into the language of modern science, and especially methods of measuring *Prana* energy will be required[12].

A lot of interesting further studies are necessary, and these could help to get a better understanding of such basic Vedic concepts as "*Prana*" in terms of modern Science. All scientists from different disciplines are invited to join forces!

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References

1 Mondkar A, Agnihotra and Microbes, A Laboratory Experience, *Satsang*, 9 (20) (1982) 2-7.

2 Gerlecka E, Observations with Agnihotra Ash and Water, *Satsang*, 16 (1-3) (1988) 11.

3 Matlander J, Study of the Effect of Agnihotra Ash on Pathogenic Bacteria, Unpublished Paper, 2013.

4 Sharma S, Water Quality Purification Through Homa Therapy, will be published in 2014.

5 Sharma S, Sengupta T & Kapil S, Somayag Influences on Different Parameters of Narmada River, *Indian Res Comm*, 5(1) (2011) 55-56.

6 Devi HJ, Swamy NVC & Nagendra HR, Effect of *Agnihotra* on the germination of rice seeds, *Indian J Tradit Knowle*, 3(3) (2004) 231-239.

7 Paranjpe VV, Homa Therapy - Our Last Chance, (Fivefold Path Inc., Madison, VA, USA), 1989.

8 Berk U & Johnson B, Bringing Homa Farming into the Mainstream of Indian Agricultural System, (Fivefold Path Publications, Dhule), 2009.

9 APHA (American Public Health Association): Standard Methods for the Examination of Water and Wastewater, 21st edn, American Water Works Association and Water Pollution Control Federation, Washington, D.C 2002.

10 Welch PS, Limnological methods, (McGraw-Hill Book Co., New York), 1998.

11 Itagi RK, Swamy NVC & Nagendra HR, Effect of Pyramids on Microorganisms, *Indian J Tradit Knowle*, 4(4) (2005) 373-379.

12 Recently there are different methods which seem to do that - like PIP (Polycontrast Interference Photography), GDV (Gas Discharge Visualization technique, developed by K. Korotkov on the basis of Kirlian photography), and Life Energy Meter measurements. More research with these methods is planned for the future.