

Preliminary Investigation of Traditionally Processed Special Copper and Its Interaction with Water: An Experience-Based, Hypothesis-Generating Experimental Study with an Exploratory Post-Intervention Laboratory Observation

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Reghunath Ramakrishnan Vaidhyan

Healer & Deputy Director, Traditional Alternative Medicine Research Center (TAMRC–INDIA), Kerala, India

Correspondence: Reghunath Ramakrishnan Vaidhyan, reghunathramakrishnan@gmail.com

Abstract

Background: Copper has a long history of use in traditional Indian practices, including storage of water in copper vessels. Traditional metallurgical and Siddha-oriented practices also describe repeated purification, heating, fusion and reprocessing of metals. The present work concerns a traditionally processed material designated “Special Copper” or “Exotic Copper” within the TAMRC–INDIA research programme. **Objective:** To document the material specifications and preliminary copper–water exposure procedure, and to add a clearly separated exploratory observation from an available post-intervention clinical laboratory report without presenting that report as proof of therapeutic efficacy. **Methods:** A cleaned, traditionally processed copper specimen approximately 1 inch wide, 6 inches long and 2 mm thick was placed in approximately 1 litre of ordinary/well water in a clean covered container for approximately 8 hours. Preliminary pH examination used pH-testing paper. In addition, an uploaded clinical laboratory report associated with the investigator's description of use of the Special Copper–water intervention was reviewed descriptively. The laboratory report includes complete blood count and clinical biochemistry measurements. No paired pre-intervention laboratory dataset, control group, randomization, or blinded assessment was available in the supplied records. **Results:** The copper–water procedure and specimen specifications were documented. The available laboratory report, dated 29 November 2023 on the associated request form, records the following selected values: fasting blood glucose 119 mg/dL, post-prandial blood glucose 167 mg/dL, blood urea 27 mg/dL, serum creatinine 1.1 mg/dL, sodium 134 mmol/L, potassium 4.0 mmol/L, total bilirubin 0.6 mg/dL, direct bilirubin 0.2 mg/dL, total protein 7.5 g/dL, albumin 4.5 g/dL, AST 19 U/L, ALT 22 U/L, alkaline phosphatase 50 U/L, total cholesterol 223 mg/dL, triglycerides 169 mg/dL, HDL cholesterol 41 mg/dL and LDL cholesterol 61 mg/dL. The CBC image records WBC 7.1, haemoglobin 15.3 g/dL, RBC 4.97, MCV 90.7 fL, HCT 45.1%, platelets 192 and

other indices as transcribed below. These values are descriptive observations only; they cannot establish that any change was caused by the intervention. Conclusion: The work provides a documentary and scientifically relevant preliminary foundation for independent materials characterization, water-chemistry testing, safety assessment and, only after appropriate preclinical and ethical review, controlled biological or clinical investigation.

Keywords: Special Copper, Traditionally Processed Copper, Copper–Water Interaction, Siddha Processing, Traditional Metallurgy, Laboratory Observation, Hypothesis-Generating Study, Material Characterization

1. INTRODUCTION

Copper is an important material in human history and has been used for vessels, tools, alloys and other applications for centuries. In several Indian traditional practices, copper vessels have also been used for storing water. Traditional metallurgical and alchemical practices describe processes involving purification, heating, melting, fusion, calcination and repeated processing of metals and mineral substances.

Historical descriptions provide cultural and technical context, but the physicochemical identity and biological implications of an individually prepared material cannot be established from tradition or observation alone. Modern analytical characterization is therefore necessary when a traditionally processed material is proposed to have properties that differ from ordinary copper.

The material investigated here is referred to within the TAMRC–INDIA research programme as “Special Copper” or “Exotic Copper.” These terms are research designations for the material and are not intended to imply the discovery of a new chemical element, isotope or scientifically established new phase of copper.

The present manuscript also records an exploratory laboratory observation supplied by the investigator. The observation is deliberately separated from the copper–water materials experiment because a single post-intervention blood report cannot demonstrate efficacy, causality or safety.

2. RESEARCH BACKGROUND AND CONTINUITY

An earlier publication by Ramakrishnan Madhusoodanan reported an experimental investigation entitled “Animated Green Vitriol Can Transmute Copper (Cu) into Special Copper,” published in the International Journal of Science and Technology in 2012. The earlier report described high-temperature processing and designated the resulting material “special copper.” Its terminology and proposed mechanisms are not adopted as established scientific explanations in the present manuscript; claims concerning transmutation, nanoscale formation, energy mechanisms or specific chemical structures require independent modern analytical verification.

The broader TAMRC–INDIA research programme has also included work on other specially processed metallic materials. A 2024 article by Reghunath Ramakrishnan described LIXXI-FSRD, a separately investigated metallic material proposed for fuel-efficiency applications. That work is included only as research-history context and is not evidence that the present Special Copper has fuel-catalytic properties.

The broader research history associated with TAMRC–INDIA also includes clinical investigations of a different traditionally derived intervention identified as “Kallunk oxide (Immunotherapy)” in relation to HIV/AIDS. Those studies are included only as documentary research history and are not clinical evidence for the Special Copper–water preparation.

3. AIM AND OBJECTIVES

The primary aim was to document a traditionally processed Special Copper material and its preliminary interaction with water under a basic, reproducible experimental arrangement.

- document the physical dimensions and processing designation of the specimen;
- document the water volume, container, environmental conditions and exposure period;
- record the preliminary pH-testing procedure;
- document an available post-intervention laboratory observation without treating it as causal evidence;
- distinguish direct observations from hypotheses and historical claims; and
- identify laboratory methods required for independent verification.

4. MATERIALS AND METHODS

4.1 Research Site

The preliminary investigation was conducted under the research programme of the Traditional Alternative Medicine Research Center (TAMRC–INDIA), Material Research Laboratory, Kerala, India. The work was performed under resource-limited conditions and was intended as preliminary documentation rather than a validated analytical laboratory study.

4.2 Copper Specimen

The specimen was described by the investigator as traditionally processed and cleaned Special Copper. Approximate dimensions were: width 1 inch; length 6 inches; thickness 2 mm. The specimen was cleaned before the water-exposure procedure.

4.3 Water and Container

Approximately 1 litre of ordinary water was used; the supplied record describes this as ordinary/well water. A clean container capable of holding approximately 1 litre was used and covered with a lid or secure cover to reduce environmental contamination.

4.4 Experimental Procedure

The cleaned copper specimen was placed in approximately 1 litre of water and the container was covered. The exposure period was approximately 8 hours. The procedure was performed in a clean working environment. The 8-hour interval is reported as an experimental condition used in this preliminary investigation; it is not proposed as a scientifically established minimum exposure time for a biological or therapeutic effect.

4.5 Preliminary pH Examination

pH-testing paper was used for a preliminary examination of the water. An exact numerical pH value was not available in the supplied record. Because pH paper provides an approximate indication rather than a high-precision measurement, future studies should use a calibrated laboratory pH meter.

4.6 Exploratory Laboratory Observation

A clinical laboratory report supplied by the investigator was reviewed as an observational record. The associated request form is dated 29 November 2023 and indicates an adult patient aged 54 years. The investigator describes the report as having been obtained after use of the Special Copper–water therapy/intervention. The supplied documents do not provide a paired pre-intervention laboratory report, intervention start date, duration of use, dose/exposure schedule, concurrent medication information, or a

control participant. Accordingly, the laboratory findings are presented only as an exploratory post-intervention observation.

The report contains complete blood count and clinical biochemistry measurements. Values were transcribed from the uploaded report; where handwriting or image quality prevented reliable interpretation, no value was invented.

4.7 AI-Assisted Language Editing Disclosure

AI-assisted language and structural editing was used during preparation of this manuscript to improve clarity, grammar, organization and consistency. The author remains responsible for the scientific content, experimental descriptions, interpretation and final submitted version.

5. EXPERIMENTAL SPECIFICATION

Parameter	Specification
Research Center	TAMRC–INDIA
Laboratory	Material Research Laboratory
Material	Traditionally processed Special Copper
Specimen width	Approximately 1 inch
Specimen length	Approximately 6 inches
Thickness	Approximately 2 mm
Water volume	Approximately 1 litre
Water type	Ordinary/well water, as applicable to the record
Container	Clean container of approximately 1-litre capacity
Cover	Lid/secure cover
Environment	Clean working environment
Preliminary test	pH-testing paper
Exposure period	Approximately 8 hours

Table 1. Experimental specification of the preliminary copper–water exposure procedure.

6. RESULTS AND OBSERVATIONAL FINDINGS

The preliminary investigation documented a basic copper–water exposure arrangement using a traditionally processed Special Copper specimen and approximately 1 litre of water. The specimen dimensions, water volume, container, covered exposure condition, approximate eight-hour exposure period and preliminary pH-testing procedure were recorded.

The present study does not contain sufficient quantitative analytical data to determine the concentration of copper released into water, total dissolved elemental content, copper oxidation state or speciation, crystalline phase, surface morphology or microbiological quality. These remain unresolved scientific questions.

The investigators regard the material's processing history and observed characteristics as sufficiently distinctive to warrant further investigation. This is a statement about research significance, not a claim that a new chemical phase or therapeutic material has been scientifically established.

6.1 Exploratory Post-Intervention Laboratory Observation

The uploaded clinical laboratory records provide an additional observational dataset. The associated request form is dated 29 November 2023. The report concerns an adult aged 54 years. The investigator states that the blood examination was performed after use of the Special Copper–water

therapy/intervention.

Because no pre-intervention laboratory measurements were supplied, the report cannot be used to calculate a change from baseline. It also cannot distinguish any possible effect of the intervention from normal biological variation, diet, concurrent treatment, underlying conditions, timing of sampling or other factors. The values are therefore reported descriptively rather than as evidence of therapeutic benefit.

7. LABORATORY RESULTS: DESCRIPTIVE PRESENTATION

7.1 Complete Blood Count (CBC)

CBC parameter	Reported result
WBC	$7.1 \times 10^9/\text{L}$
LYM	$3.1 \times 10^9/\text{L}$
LYM%	45.5%
MID	$0.5 \times 10^9/\text{L}$
MID%	7.6%
GRA	$3.5 \times 10^9/\text{L}$
GRA%	48.9%
Haemoglobin	15.3 g/dL
MCH	30.9 pg
MCHC	34.0 g/dL
RBC	$4.97 \times 10^{12}/\text{L}$
MCV	90.7 fL
HCT	45.1%
RDW-CV	13.3%
Platelets	$192 \times 10^9/\text{L}$
MPV	9.0 fL
PDW	11.0 fL
PCT	0.17%
P-LCR	20.3%

Table 2. CBC values transcribed from the supplied laboratory report image. Units follow the report where legible.

7.2 Clinical Biochemistry

Clinical biochemistry parameter	Reported result	Reference range printed on report
Fasting blood glucose	119 mg/dL	70–110 mg/dL
Post-prandial blood glucose (2 h)	167 mg/dL	70–140 mg/dL
Blood urea	27 mg/dL	15.0–35.0 mg/dL
Serum creatinine	1.1 mg/dL	0.6–1.4 mg/dL
Serum uric acid	Not recorded	2.0–7.2 mg/dL
Serum sodium	134 mmol/L	135–145 mmol/L
Serum potassium	4.0 mmol/L	3.5–5.0 mmol/L
Total bilirubin	0.6 mg/dL	0.2–0.5 mg/dL*
Direct bilirubin	0.2 mg/dL	0.0–0.3 mg/dL
Total protein	7.5 g/dL	6.2–7.8 g/dL
Albumin	4.5 g/dL	3.5–5.0 g/dL

AST (SGOT)	19 U/L	4–40 U/L
ALT (SGPT)	22 U/L	4–40 U/L
Alkaline phosphatase	50 U/L	Printed range appears altered/unclear
Total cholesterol	223 mg/dL	130–210 mg/dL
Triglycerides	169 mg/dL	50–150 mg/dL
HDL cholesterol	41 mg/dL	40–80 mg/dL
LDL cholesterol	61 mg/dL	85–125 mg/dL

Table 3. Clinical biochemistry values transcribed from the supplied report. Reference ranges are reproduced as printed; the alkaline-phosphatase reference range was not reliably legible and is therefore not interpreted.

8. DISCUSSION

The present study occupies a preliminary position within a longer research programme involving traditionally processed materials. The earlier Special Copper publication, the 2024 LIXXI-FSRD publication and the previous Kallunk oxide clinical research programme represent different materials or interventions and different research questions. They should therefore be understood as research history and continuity, not interchangeable evidence.

The central materials-science question is whether the traditional processing history produces measurable differences in the material compared with conventional copper. Elemental composition can be assessed by XRF or ICP-based methods; crystalline phases by XRD; surface morphology and elemental distribution by SEM-EDS; and water chemistry by calibrated pH, conductivity, oxidation–reduction potential, ion chromatography and quantitative elemental analysis.

A second question concerns dissolution or release. If copper or other elements are released into water, the concentration, chemical form and time dependence should be measured. This is particularly important because copper is an essential trace element but excessive exposure can be harmful, and because the historical processing record may involve materials other than metallic copper.

The uploaded blood report introduces a separate hypothesis-generating clinical observation. It may motivate future research into whether a standardized Special Copper–water preparation has measurable biological effects. However, such a hypothesis should be tested using prospective baseline and follow-up measurements, appropriate controls, predefined outcomes and independent laboratory analysis. The current report alone does not establish a clinical effect.

Claims in the supplied descriptive material that the water may influence organs, inflammation, ageing, hormones, immunity or other systemic functions are therefore treated in this manuscript only as unverified hypotheses. They are not presented as established mechanisms or outcomes.

9. HYPOTHESIS-GENERATING INTERPRETATION

- Hypothesis: The surface and/or structural characteristics of traditionally processed Special Copper may differ measurably from those of commercially available copper.
- Hypothesis: Exposure of water to the processed material may produce measurable changes in physicochemical parameters such as pH, conductivity, oxidation–reduction potential or ionic composition.
- Hypothesis: The amount and chemical form of copper or other elements released into water may depend on processing history, surface characteristics, water chemistry and exposure duration.
- Hypothesis: Any microbiological or biological effect, if present, should be demonstrated experimentally using appropriate controls rather than inferred from traditional claims.

- Hypothesis: Any health-related effect suggested by the exploratory blood report would require prospective baseline measurements, reproducible laboratory methods, appropriate controls and ethically approved clinical research before being considered scientifically established.

10. SAFETY AND TOXICOLOGICAL CONSIDERATIONS

The present study does not establish that water exposed to Special Copper is safe for routine or continuous human consumption. Before any recommendation for human consumption, independent testing should determine dissolved copper concentration and other relevant elements, including lead, cadmium, mercury, arsenic and any processing-related contaminants. Microbiological quality, acute and chronic toxicological parameters, material stability and batch-to-batch reproducibility should also be assessed.

The historical processing record described in the earlier Special Copper publication involved a specially processed green copper sulfate preparation. Because copper sulfate compounds can be hazardous at inappropriate exposures, the chemical composition of the present material and any substances that may migrate into water must be independently verified before safety is inferred.

The blood report provides useful clinical information but is not, by itself, a complete toxicological or long-term safety assessment.

10.1 Researcher's Long-Term Observational Context

The present investigation forms part of a long-term, investigator-led research effort in which the author reports repeated practical observations associated with the traditionally processed material. These observations are important in motivating the present scientific documentation and in defining testable research questions. The manuscript preserves the distinction between accumulated experience and experimentally verified causal conclusions: the experience provides the rationale and research signal, while independent analytical and controlled clinical studies are required to establish mechanism, efficacy and safety.

11. LIMITATIONS

- The investigation was preliminary and resource-limited.
- The number of copper specimens was limited.
- No conventional-copper control specimen was included in the preliminary exposure procedure.
- No quantitative elemental analysis of the water was performed.
- No ICP-MS or ICP-OES analysis was performed.
- No XRF, XRD or SEM-EDS characterization was performed.
- No microbiological testing was performed.
- No toxicological testing was performed.
- The preliminary pH assessment used pH-testing paper rather than a calibrated pH meter.
- The clinical laboratory observation has no paired pre-intervention baseline in the supplied records.
- The timing, duration and standardized dose/exposure schedule of the intervention are not documented in the supplied laboratory records.
- No control participant or comparator intervention was available.
- Concurrent medications, diet, hydration and other clinical factors were not documented for the laboratory observation.
- The laboratory report is a single observational dataset and cannot establish causality.
- No randomized or blinded clinical trial was conducted as part of the present work.

12. RECOMMENDED FUTURE RESEARCH

A scientifically rigorous follow-up programme should begin with independent characterization of both the

processed copper and the water.

- **Material characterization:** XRF for elemental screening; ICP-MS or ICP-OES where quantitative elemental analysis is required; XRD for crystalline phases; SEM-EDS for surface morphology and elemental distribution.
- **Water characterization:** calibrated pH, electrical conductivity, oxidation–reduction potential, ion chromatography where relevant and quantitative elemental analysis.
- **Time-course study:** baseline, 1 hour, 4 hours, 8 hours, 24 hours and other scientifically justified intervals.
- **Controls:** identical water containers without copper exposure and, where appropriate, a standardized conventional copper specimen.
- **Safety assessment:** copper and other elemental concentrations, including lead, cadmium, mercury, arsenic and processing-related contaminants; microbiological testing; and appropriate cytotoxicity/toxicology studies.
- **Clinical hypothesis testing:** if preliminary physicochemical and safety studies support further work, a prospective protocol should define the intervention precisely, collect baseline and follow-up laboratory measurements, specify primary and secondary outcomes, use an appropriate comparator and obtain independent ethical review and informed consent. The exploratory blood report in the present manuscript can serve only as a hypothesis-generating observation, not as a clinical endpoint.
- **Reproducibility:** independent preparation of multiple specimens and replication by a laboratory not involved in the original preparation.

13. SIGNIFICANCE OF THE PRESENT INVESTIGATION

The significance of the present investigation lies in documenting a traditionally processed copper material and an associated exploratory laboratory observation in a form that separates observation from interpretation. The study does not attempt to establish every claimed or potentially associated property of the material. Instead, it records the material designation, specimen characteristics, exposure procedure and available laboratory observations so that future independent studies can reproduce, challenge or confirm them.

If subsequent analytical studies demonstrate reproducible differences in elemental composition, surface structure, dissolution behaviour, water chemistry or biological outcomes, the present investigation may provide an initial documentary foundation for a broader research programme. Conversely, if independent testing does not confirm the proposed differences, that result would also be scientifically informative.

14. CONCLUSION

This preliminary investigation documents a traditionally processed material designated Special Copper within the TAMRC–INDIA research programme and presents a basic experimental procedure for examining its interaction with water. An additional clinical laboratory report has been included as an exploratory post-intervention observation, clearly separated from the materials experiment.

The available blood results document the clinical laboratory profile following the reported intervention and provide a basis for testing hypotheses regarding possible biological effects; causal attribution requires controlled prospective study. The present study does not establish therapeutic, immunological, antimicrobial, nutritional, disease-preventive or other health benefits, nor does it establish that water exposed to the material is safe for human consumption.

The most important next step is independent laboratory characterization using validated analytical

methods, followed—only if justified—by appropriately controlled biological and clinical research. Confirmation or refutation of the proposed differences will determine whether the material warrants further investigation.

15. DECLARATIONS

Funding: No external funding is reported for the present preliminary investigation.

Conflict of Interest: The author declares a research interest in the material described.

Data Availability: The underlying experimental records, material specifications and available laboratory documentation are available from the author/research center upon reasonable request, subject to availability of the original records and appropriate protection of personal information.

Ethical Statement: The copper–water materials experiment did not involve human participants or animals. The blood report is an existing clinical laboratory record supplied for retrospective descriptive documentation; no new clinical intervention or sample collection was performed as part of preparing this manuscript. For any future prospective clinical investigation, appropriate ethical review and informed consent will be required.

Patient privacy: The patient's name and other direct identifiers are not reported in the manuscript. The original laboratory documents should not be submitted as unredacted figures unless specifically required by the journal and permitted by the patient.

Author Contribution: The author was responsible for conception of the investigation, experimental work, documentation, interpretation of preliminary observations and preparation of the manuscript.

AI Assistance: AI-assisted language and structural editing was used as disclosed in the Methods section. The author reviewed and assumed responsibility for the final scientific content.

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