

Kuhn all Copper Masks are 99.95% pure copper mesh masks that sanitize and filter the air you breathe. The masks are unique. An in-house study confirmed the masks deposited a minute amount of copper in the nostrils. **Published reports of laboratory studies proved copper inactivated most corona virus, flu, and other respiratory viruses and killed bacteria on contact.** Inactivation renders virus unable to infect, making them harmless. Copper had anti-inflammatory properties, as well.

Currently, no clinical trials are available on the use of the Kuhn all Copper Masks with corona or other viruses, nor the effects of extended wearing times. Further research is needed. Corona virus, cold, flu, respiratory, other viral infections or allergy symptoms may develop, regardless of precautions taken. Read all enclosed instructions before use. Read all enclosed instructions before use.

MATERIALS: The main structural component of the Kuhn all Copper Masks is 99.95% pure copper mesh. The ear loops are made of polyester and spandex (no latex). The edges are lined with moleskin (beige) or nylon (black) for increased comfort.

CONTENTS OF PACKAGE:

- Instructions
- One Kuhn all Copper Mask full face mask to cover the nose and mouth (Fig 1,2)
- patch
- Moleskin strip
- Small blue desiccant pack, a drying agent (Intertek Packaging)
- Plastic bag
- Mailer, which can be used to store or carry the Mask.

DIRECTIONS FOR USE: One size fits most. For adult use only. Kuhn all Copper Masks are reusable by a single wearer, unless steam autoclaved (sterilized by high temperature, pressure, and steam.) Once autoclaved, they can be worn by another person. If you are wearing eyeglasses, remove them. Place the ear loops over your ears. Gently press the top of the mask over your nose. Pinch both sides of the mask to snug the mask to your face. Pinching will make the mask bow and conform to your face.

Fig 1 Face Mask (Moleskin)

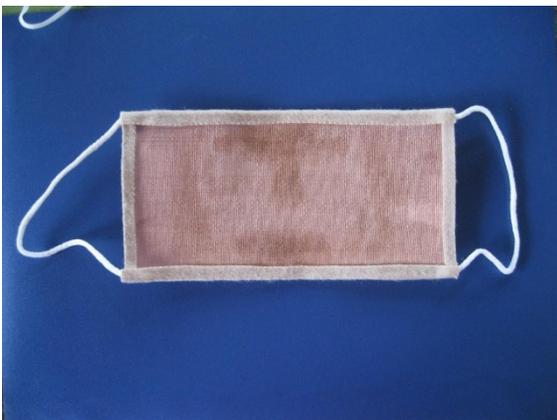
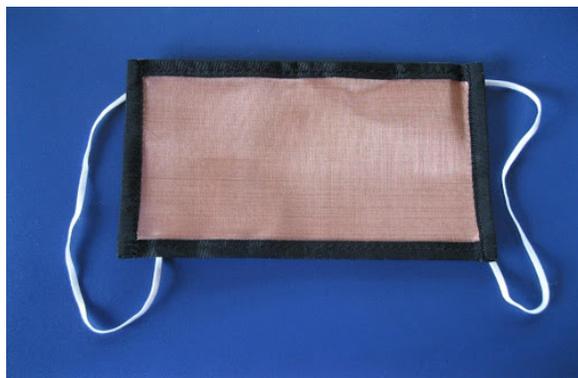


Fig 2 Face Mask (Nylon)



The Kuhn all Copper Mask has a 30% open weave, ensuring a comfortable wearing experience and easy breathing, without becoming too warm or fogging glasses. This allows a miniscule amount of copper to be deposited in the nasal area. Copper kills viruses and has known anti-inflammatory properties, as well. The mask is made of a “see through” mesh, but is water-resistant because of the tensile strength of water. Water droplets at low pressure are repelled. Water resistance can protect against droplets expelled by sneezing. (Fig 3, 4).



Fig 3 Mesh is water-resistant



Fig 4 A sneeze can propel particles more than 20 feet <https://en.wikipedia.org/wiki/sneeze>



Fig 5 Kuhn all Copper Mask: Use in crowded airplanes or buses

<https://unsplash.com/photos/tTfDMaRq-FE>

Photo by Subyeon Choi on Unsplash



Fig 6 Kuhn all Copper Mask: Not for use under any condition when bodily fluids can splash directly on the mask

<https://unsplash.com/s/photos/surgeon>

RECOMMENDED USES FOR KUHN ALL COPPER MASKS: When breathing sanitized and filtered air is important. Suggested length of wear 2-3 hrs. Only wear the Mask when needed (trips, doctor’s office, onset of allergic symptoms or respiratory illness. Do not wear the mask when wet. Note: Men with beards may find the insert more comfortable, as whiskers can penetrate the mesh and cause a pinch.

RESPIRATORY INFECTIONS:

Wear the mask:

- at the first sign of a cold, such as a tickle in your nose, flu or flu-like symptoms (fever, aches, headache fatigue, sore throat, cough). Suggest wear 2 hours. Repeat the following day. Repeat until symptoms subside. Users report resolution of symptoms, usually within 2.5 days. See user comments at www.kuhncoppersolutions.org;
- at the first sign of a fever and cough*
- if you are immunosuppressed and have to visit a crowded doctor's office;
- in a crowded place, especially during flu season;
- if traveling (plane, buses, train, cruise); Note: Insert may set off metal detector. (Fig 5)
- if close to someone who is sneezing or has a cold or the flu;
- if you are experiencing a cold or flu and wish to protect others;
- post exposure: If you do not have your mask and are exposed to someone with a cold or flu or you are traveling and do not want to wear the mask, wear it after travel ends, even if it is 2 to 3 hours post exposure; eg, while watching TV in the evening.

If Corona virus is suspected, take all recommended precautions. Stay Isolated. See a doctor.

No clinical trials are available regarding the efficacy of the protective or therapeutic effects of wearing a copper mask. Further research is needed. Suggested length of wear 2-3 hrs. Corona virus, cold, flu, respiratory, other viral infections or allergy symptoms may develop, regardless of precautions taken.

Adults with heart and lung conditions that make breathing through ordinary masks difficult, and those with high blood pressure for whom certain cold medications are contraindicated (should not be used) may find the mask particularly helpful in the above conditions.

ENVIROMENTAL ALLERGIES:

Wear mask when you are being exposed to known environmental allergens, for example, outdoor activities, when cutting a lawn, yard work, or harvesting hay. See user comments at www.kuhncoppersolutions.org.



WARNING: The Kuhn all Copper Masks are not intended as a surgical, infection control, dental, or medical procedure mask **and should not be used under any conditions where bodily fluids or blood may be sprayed directly on the Kuhn all Copper Mask as a splash may penetrate mask (Fig 6).** However, the Kuhn all Copper Masks may be worn beneath a traditional surgical mask, dental, isolation or surgical procedural mask to **enhance protective properties**; for example, health care workers, dentists, surgeons, or first responders with a potential hepatitis or HIV patient. However, a Copper Mesh Insert is designed to be worn beneath another mask and will afford a more comfortable wearing experience

GENERAL PRECAUTIONS: Wearing a Kuhn all Copper Mask does not eliminate the possibility of contracting diseases. The use of the Kuhn all Copper Mask is not a substitute for good hygienic practices, careful cleaning, proper handwashing techniques, immunizations, antiviral drugs, or antibiotics. **If you experience persistent symptoms of a cold, flu, or chest or sinus infections, consult a doctor. If you experience persistent cough and a fever, consult a doctor.**



“Coronavirus disease:

Illnesses have ranged from mild symptoms to severe illness and death. Symptoms of fever, cough, and shortness of breath may appear **2-14 days after exposure.***

If emergency **warning signs** for COVID-19 develop, get **medical attention immediately**. Emergency warning signs include:

- Difficulty breathing or shortness of breath
- Persistent pain or pressure in the chest
- New confusion or inability to arouse
- Bluish lips or face

Consult your medical provider for any other symptoms that are severe or concerning.”*

*https://www.cdc.gov/coronavirus/2019-ncov/symptoms-testing/symptoms.html?CDC_AA_refVal=https%3A%2F%2Fwww.cdc.gov%2Fcoronavirus%2F2019-ncov%2Fabout%2Fsymptoms.html

PRECAUTIONS: The Kuhn all Copper Masks are contraindicated (should not be used) in persons with Wilson’s disease; or allergy, sensitivity, or toxicity to copper; or metal allergy of any kind. If uncertain regarding allergy or sensitivity, secure the small copper patch with hypoallergenic tape to a site under the upper part of the arm for 24 hours. Remove and inspect the site for redness or any irritation. If redness or irritation is present, return the mask for a full refund. The Masks have not been tested in infants, children, or in pregnant or breastfeeding women and is therefore contraindicated in these groups. **The body has a natural mechanism for maintaining copper levels. However, children under one have not developed this mechanism.** Like any powerful antimicrobial, only use mask when necessary. The mask is not intended for extended wear, for example, for several hours every day. Limit wear to 2 to 3 hours at a time for two to three days a week. (www.health.state.mn.us/div/eh/water/factsheet/com/copper.html) Many microbes have become resistant to antibiotics because of overuse. Careful use only when needed will help ensure that copper will remain capable of killing microbes for many years.

RISKS: What are the possible risks or discomfort?

- Cold, flu, respiratory, other viral infections or allergy symptoms may develop, regardless of precautions taken.
- An abrasion may result if the Kuhn all Copper Mask is fitted too tightly on the face or is too small for the wearer (replace ear loops with longer loops).
- Though copper allergy is extremely rare, if a person is allergic to the copper, he/she may experience discomfort, redness, red marks, irritation, rash, pain, swelling, and/or blisters. **Discontinue use immediately. Return mask for full refund. (See Return policy, p.8.)** Usually, medical treatment is not needed. However, if any of the above symptoms become worse or if the red marks/rashes are spreading, seek medical advice immediately. (http://www.ehow.com/about_5507189_symptoms-copper-allergy.html) The risks can be lessened by carefully following the instructions.

SAFETY: Copper is needed to maintain health and occurs in foods. Absorbing trace amounts is safe. Allergy, sensitivity, and irritation to copper are rare. The miniscule amounts deposited in the nostrils, 1.6ppm in the highest sample after two hours of wear, was 3 orders of magnitude lower than the amount of copper dust that would need to be inhaled to cause an adverse effect, 994 pp. Copper detected on soaking (eluting) the entire mask in water at 37°C for 72 hours was only 2 ppm.

Copper has to be ingested as a chronic oral ingestion in food and water that supplies more than 5mg/kg per day to reach toxic levels and cause harm. ^(1, 2)

1. Aggett PJ Fairweather-Tait. Adaptations to high and low copper: its relevance to estimate safe and adequate daily dietary intake. S.Am J Clin Nutri 1998; 6:1061S-1063S
2. Copper and the Skin, Hostynek and Maibach ed, Informa healthcare, NY and London. P57. 73:2006.

POTENTIAL BENEFITS: The Kuhn all Copper Masks allow the user to breathe sanitized, filtered air.

CLEANING PROCEDURE: Definitions: Disinfection means lowering the number of germs, sterilizing refers to complete destruction of germs. Before each use, visually inspect the Kuhn all Copper Mask. If the Kuhn all Copper Mask is dirty or discolored, see cleaning instructions below.

The Kuhn all Copper Mask is packaged nonsterile, no processing is required. Of note: the copper portion of the Mask will self- disinfect in less than 10 minutes. Unlike conventional masks, the mask is not a repository (source) for germs. The Kuhn all Copper Masks can be disinfected immediately by rinsing in rubbing alcohol (70% isopropyl alcohol) and thoroughly drying. Note: Do not soak in alcohol, just rinse and dry. **Alcohol does not remove tarnish. See below.** The Kuhn all Copper Masks can be sterilized in a steam autoclave (high temperature, pressure, steam). The copper, ear loops, and mole skin adhesive backing are unaffected by steam autoclaving or a quick isopropyl rinse. Note: Remove adhering organic material, for example, mucus or nasal discharge) before autoclaving or disinfecting. If the ear loops are frayed or become too loose or the Kuhn all Copper Mask is torn, replace the Kuhn all Copper Mask.

Since the mask is 99.95% pure copper, the mask will tarnish and darken if exposed to water and air. This can be expected when moisture from your breath touches the mask. Tarnishing does not affect its cidal (virus inactivation and bacteria killing), anti-inflammatory, or filtering properties and usually can be removed. (See below)

If visibly discolored, remove the mole skin from the edges. Place the mask in a 50/50 solution of water and lime juice for 2 to 4 hours or until the tarnish disappears. (Note: Lime juice is slightly more acidic than lemon juice or vinegar and works better at removing discoloration.) Rinse with water, then rubbing alcohol (70% isopropyl alcohol). Place the mask between two sheets of absorbent paper toweling and press until no water is visible on the toweling. Allow to thoroughly dry. Replace the mole skin. See storage instructions.

If the tarnish is a small spot, wet a Q tip with lime juice and rub the discolored spot until the spot disappears, rinse the mask in water, and then rubbing alcohol (70% isopropyl alcohol). Dry thoroughly as above. See storage instructions. For best results, remove tarnish when it first appears. If the tarnish has been present several days, it will be difficult to remove.

If visibly soiled, remove the mole skin, rinse the mask in hot water, and scrub both sides with a new toothbrush until clean. Rinse again in hot water, then rinse in rubbing alcohol (70% isopropyl alcohol). Dry thoroughly as above. If the mask is still visibly soiled, repeat the procedure. If the mask appears clean, replace the mole skin. If the mask remains visibly soiled, corroded, pitted, or torn, discard in regular trash.

Note: Never put the metal Kuhn all Copper Mask in a microwave. This is a potential fire hazard.

SHELF LIFE/EXPIRATION DATE Two years

Though the cidal (killing) activity is permanent, the mask can corrode or become pitted on exposure to water and air. It can tear if sharply folded. If the integrity of the mask is compromised (torn or pitted), or the mask is soiled to the extent that it cannot be cleaned, discard the mask in the regular trash and reorder a new mask.

STORAGE INSTRUCTIONS: The Kuhn all Copper Mask can be stored in a dry place at room temperature in a clear plastic bag with the desiccant. If the desiccant pack turns pink, reactivate by microwaving for about 1.5 minutes on LOW power. The mailer can be reused to store or carry the mask.

MAINTENENCE: If the Kuhn all Copper Mask is cleaned and stored properly (above), it should last several months. Avoid putting a sharp fold in the mesh, as this may result in a tear.

DISPOSAL: The Kuhn all Copper Mask can be disposed in the trash collection.

TROUBLE SHOOTING: If you experience an undesirable outcome or adverse event, please contact Kuhn all Copper Solutions Pkuhnphd@aol.com 727 289 2754 Nov to May May to Nov 814 774 4417

Problem	Possible Cause and Corrective Action
After you apply the Kuhn all Copper Mask, you smell a metallic odor.	This is to be expected. No action is necessary. It indicates the mask is “working” and releasing copper atoms. The odor will dissipate after about 20 minutes.
After you apply the Kuhn all Copper Mask you experience burning, redness, swelling, irritation on the face.	Possible allergic reaction. Remove immediately and rinse face in copious amounts of cold water. If condition worsens, seek medical help immediately. Note: copper allergies rare. Do not reapply. Contact company to report adverse reaction and for full refund.
After you apply the Kuhn all Copper Mask, you experience some abrasions.	Possible inaccurate application. Suggest replacing mole skin strips to cover entire edge of mask. Kuhn all Copper Mask may be too small for your face and the Kuhn all Copper Mask may be pressed too tightly against your skin. Suggest stretch ear loops or contact company directly for special order of a larger mask.

<p>After you apply the Kuhn all Copper Mask, you experience a slight scratching in your throat.</p>	<p>Possible mild irritation or drying from the Kuhn all Copper Mask. This should resolve within 10 to 15 minutes. No action is required.</p> <p>Possible irritation from Kuhn all Copper Mask not resolving within 10 to 15 minutes.</p> <p>Remove mask. Do not reapply. Contact company to report an adverse reaction and for a full refund.</p> <p>If condition worsens, seek medical help immediately. Note: copper allergies are extremely rare.</p>
<p>After you apply the Kuhn all Copper Mask, you are still experiencing a stuffy nose when exposed to environmental allergens; eg, mowing a lawn or harvesting , etc.</p>	<p>Possible inaccurate application. Look in a mirror. If the mask has slipped too low on the nose, a large gap will appear under the mouth. Readjust the Kuhn all Copper Mask so the top edge hits the upper part of the bridge of the nose and the bottom is under the nostrils (mini mask) or resting under the mouth on the chin (face mask). Pinch the sides tighter until edges of Kuhn all Copper Mask are flush with face. The mask should fit snugly to the face with little or no gapping.</p> <p>Possible sensitivity to allergens such as small pollens or other allergens not filtered out by the mask. Avoid activity that triggers the reaction. Wear a conventional face mask with much less air flow.</p>
<p>You are feeling a pinching sensation where the mask touches the skin.</p>	<p>Possible frayed thin copper wire. Press the edges of the mesh on a solid surface. Put the mask on to see if this relieves the pinch.</p> <p>Possibly catching beard in the mesh. Shave before application or consider wearing the copper meshi insert</p>

Frequently asked questions:

Q. Can I wear the mask longer than three hours per day?

A. Two to three hours per day is a suggested wearing time. Though extensive safety data are available on copper ingestion, inhalation, and skin contact, very little data are available on extended wear of a copper mesh mask, for example, eight hours a day, every day. Two to three hours was about the general length of an airplane trip or a doctor's visit. As more data become available, these suggested wearing times may be extended.

Copper has powerful antimicrobial, antiviral and anti-inflammatory properties. Limiting wear will hopefully better ensure copper's effectiveness for years to come.

Q. Will the mask cause irritation?

A. Allergy, sensitivity, and irritation to copper are rare. If a person is allergic to the copper, he/she may experience discomfort, redness, red marks, irritation, rash, pain, swelling, and/or blisters that usually resolve quickly when the mask is removed. The mask or insert should be discontinued immediately and returned for full refund. Of note, if copper or metal sensitivity suspected, the small copper patch can be adhered with hypoallergenic tape to the underside of the upper arm. After 24 hours, the patch can be removed and inspected for signs of redness, irritation, or blisters. If this occurs, discontinue use immediately and return the mask for a full refund.

Usually, medical treatment is not needed. However, if any of the above symptoms become worse or if the red marks/rashes are spreading, medical advice should be immediately sought.

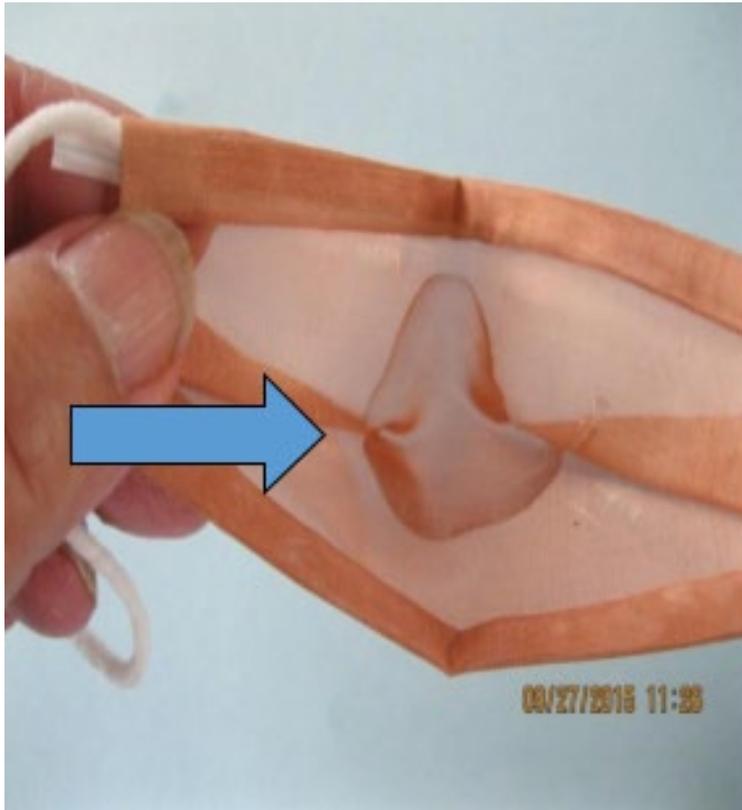
Q. Is the mask safe to wear?

A. Copper is needed to maintain health and occurs in foods. Absorbing trace amounts is safe. The miniscule amounts deposited in the nostrils, 1.6ppm in the highest sample after two hours of wear, was 3 orders of magnitude lower than the amount of copper dust that would need to be inhaled to cause an adverse effect, 994 pp. Copper detected on soaking (eluting) the entire mask in water at 37°C for 72 hours was only 2 ppm. Copper has to be ingested as a chronic oral ingestion in food and water that supplies more than >5mg/kg to reach toxic levels and cause harm. ^(1, 2)

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2. Copper and the Skin, Hostynek and Maibach ed, Informa healthcare, NY and London. P57. 73:2006.

Q. Do viruses penetrate the mesh mask?

If a person with a respiratory infection sneezes directly in your face, yes, penetration can occur; however, this is true of most masks. The viruses travel on water droplets and aerosols. If a person sneezes, for example, 3 to 4 feet from you, because the mask is "water-resistant", the mask repels the droplets and aerosols. (See below. Water poured from a height of one inch does not penetrate the mask.) Once the virus touches the copper, a rapid inactivation of the viruses occurs. This is known as contact kill. Also, the copper mesh deposits copper in the nasal area. Even if a virus penetrates the mask, it will likely be inactivated in the nasal area. (See user comments.)



Q. Can I wear the mask during my workouts at the gym?

A. Wearing the mask or insert (or any mask) during strenuous exercising is not recommended. Breathing is impeded, even with the copper mesh mask. Overheating may occur. Also, you will be placing a lot of moisture from your breath on the mask. This will cause rapid tarnishing that will appear as dark areas on the mask located by your nose and mouth.

Q. Can I put the insert into a pocket on a mask?

Placing the mesh insert into a pocket on a mask can impede the flow of copper atoms into the nasal area. It can decrease the efficacy of the mask.

Return Policy: Money back guarantee. If you are not completely satisfied with your purchase, you may return it within four weeks for a full refund. If the material rips within one month of purchase, the Kuhn all Copper Mask will be replaced. It must be returned in the original package and with all the original material, as well as the receipt.

This is a device for sanitizing and filtering the air.

If you have questions, contact:

Kuhn Copper Solutions

Phyllis J. Kuhn, PhD

Redington Shores, FL 33708

Pkuhnphd@aol.com

814 774 4417 May to Nov

727 289 2754 Nov to May

Kuhncoppersolutions.org - Made in the USA