Copper in History & Distillation
by Jeanne Rose

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<td>Hanael or Anael</td>
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**Introduction:** Copper as a bracelet is considered a cure for arthritis and copper mirrors were/are used on Friday for divination. In alchemy, copper is associated with Conjunction - which is the recombination of the saved elements from Separation into a new substance. Conjunction is symbolized by Natron or simply salt. Psychologically, conjunction is the inner power of our true selves, the union of both the masculine and feminine sides. Clearly, it has to do with the feminine Venus, the power of sex.

Copper is symbolic of The Bronze Age, one of the 3 phases in the development of man’s material culture. There was the Paleolithic, Neolithic and about 3000 BC the Bronze Age. Bronze is an alloy of copper and tin. This age is said to have started with the Chalcolithic Age when pure copper began to be used in 4000 BC. By 3000 B.C. the use of copper was widespread.

**History:** Copper has been around for ten thousand years. Copper was first used by Neolithic man about 8000 B.C. during the latter part of the Stone Age. Copper can be found in a free metallic state and it was this material that Neolithic man used as a substitute for stone. Hammers, knives and later other utensils were made from it. Pounding copper hardens it and makes a better more durable edge and also results in the bright reddish color of the metal. These are the everlasting qualities that made it highly prized.

The search for copper deposits led to the discovery and use of native found sources of the prized metal. Sometime after 6000 B.C. humans discovered that copper could be melted in a campfire and cast into desirable shapes. The dawn of the metallic age and metallurgy came when it was found that copper-bearing rocks could be freed of the metallic ore by the use of fire and charcoal.

It was found in quantity on the island of Cyprus.

**Modern Uses of Copper:**

Copper is significant in improving public health. It's anti-pathogen properties help to guard against infections in homes, at work, and in hospitals.

Copper tubing, is widely used in plumbing because it can help preserve the purity of drinking water. Copper has antimicrobial effects that can inhibit water-borne microorganisms, such as bacteria, viruses, algae, and infectious parasites in the drinking water supply. These can reside in the plumbing or in the water itself. These microorganisms pose a variety of health hazards to humans, including Legionnaire's Disease, deadly E. coli infections, and polio.

Surfaces made from copper and brass, such as doorknobs and tabletops, can also reduce the spread of disease-causing organisms. Microbial food poisoning can be reduced by using a copper surface when preparing food. Recent research established that the Escherichia coli O157 strain, an especially lethal strain of the E. coli bacterium, dies after just a few hours on a copper surface, even under dry conditions. However, the deadly bacterium can live for over a month on stainless steel, which is a common surface material in food processing and in the steam distillation of plants.
Similarly, hospitals and clinics have reduced the incidental transfer of microorganisms with copper-based, antibacterial paint on walls and by installing copper or brass doorknobs and fittings on doors. Copper is also used in the preparation of antibiotics to keep them pure.

**WHY USE COPPER IN A STILL?**

*Note: Copper stills are used as a vessel for making brandy, cognac, beer, fine whisky and plant essential oil and hydrosols for a very good reason. Copper ions in the still combine with sulfur compounds and yeast cells and help to keep them out of the essential oil and hydrosol. Sulfur compounds and yeast cells smell. Copper keeps the distillate sweet. Copper reduces bacterial contamination.

So why would someone distill in stainless steel? One must distill in stainless steel because it will hold large quantities of plant material, because it is 'big' and strong and won't buckle — but the distillate will have an off-note called the 'still' note. This will disappear with time if the distillate is left to air out. Oftentimes, when someone describes the scent of a hydrosol as unpleasant or 'nasty', it is because a stainless steel was used in the distillation.

The distillate from the copper still does not develop this off-note. The distillate will be sweet and pleasant immediately. Always use some copper in your still, even if it is only the gooseneck that is copper.

**Source:** Small, 31-liter personal-size copper stills can be purchased through the Aromatic Plant Project. They can be directly placed on a gas stove with the flame at high to medium high. These stills are perfect for good-quality hydrosol and will also produce some essential oil depending on the plant. They hold about 3-5 pounds of material and will take up to 3-3½ gallons of spring water and will produce up to 2 gallons of hydrosol.

**Bibliography:**
Alchemy website.
copper info.com

**New Hydrosols are Available**

In 1990 when Jeanne Rose first invented the word hydrosol and used it for that first part of the distillation that contained the most fragrant and therapeutic molecules of the distillate waters — the only hydrosols that were available were Rosemary, Lavender and whatever Jeanne personally distilled. Today, 2003, after teaching over 50 distillation classes and speaking of the subject repeatedly and being personally involved in the manufacture and import of stills from Canada and other countries, there are dozens of distillers. Some of these distillers are competent, ethical proponents of the art and science of distillation - some are not.

One of the best of these new distillers uses a copper still* and is a member of the Aromatic Plant Project as well. Celestial Body Aromatherapy in the hands of Ann Harmon produces several wonderful hydrosols, including but not limited to Yarrow flower, Clary Sage, Pine, Peppermint and St. John's Wort. To find out the cost and availability of these hydrosols: Please e-mail <celestialbody@undata.com> or www.starrpines.com or www.celestialbody.com.

**Hydrosols for Sale**

Yarrow flower, Clary Sage, Pine, Peppermint, Juniper Cedarwood (for ants) and St. John's Wort.
To find out the cost and availability of these hydrosols: Please e-mail <celestialbody@undata.com> or www.starrpines.com or www.celestialbody.com.