

## **Invisible Ink for Secret Correspondence**

Rufus Porter describes various methods to create what he called “sympathetic inks for secret correspondence” in his 1826 book *A Select Collection of Valuable and Curious Arts, and Interesting Experiments: Which Are Well Explained and Warranted Genuine and May Be Performed Easily, Safely, and at Little Expense* [pages 27]. His methods are not included below because they utilize hard to find and/or somewhat dangerous materials.

There are several fun easy ways to make invisible ink and below you will find a few different recipes for making your own invisible ink and how it works.

### **Invisible Ink the Baking Soda Way**

Mix about 1/4 cup (60 ml) of baking soda and 1/4 cup (60 ml) of water. Next, write using a Q-tip, toothpick or brush on a piece of paper. Let it dry completely. To read the secret message, paint grape or lemon juice across the paper with a paint brush or a sponge. Grape juice concentrate works as well. Don't forget - grape juice stains.

**Why it works:** Grape/lemon juice has an acid that reacts with the baking soda. The ink can be revealed multiple times.

### **Invisible Ink the Milky Way**

Put a little milk in a small bowl. Write with the milk on a piece of paper with a Q-tip or a brush. Let your message dry completely. To read the message just heat the paper. Use an iron or 100-watt light bulb or stove element. Don't rest the paper on the bulb. Ask an adult to help in case a fire starts and never use a halogen light.

**Why it works:** Milk is an organic product which means it comes from a living thing. When it's heated, it burns at a slower rate than the paper. Your invisible message shows up brown.

### **Invisible Ink the Lemon Way (An Alternative Option)**

This works the same way as the Milky Way. Simply dab a Q-tip or brush into a bowl of lemon juice and write away. Just make sure you don't use too much. To see the message, simply heat the paper after it dries. Another way to see the message is put salt on the drying ink. Give it a minute and then wipe the salt off. Use a wax crayon to color over the message.

**Why it works:** Both lemon juice and milk are mildly acidic and acid weakens paper. The acid remains in the paper after the juice or milk has dried. When the paper is held near heat the acidic parts of the paper burn or turn brown before the rest of the paper does.

These are only a few ways to make invisible ink. Using the same heat method, you can also use white wine, vinegar, apple juice, and even orange juice, to name just a few. Try some other fruit juices to see what works.

Source: <http://www.kidzworld.com/article/3844-making-invisible-ink-appear>

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