

# INVISIBLE INK FORMULAS



## FORMULA #1

- » 1 Tablet of Laxative
- » 1 Tablespoon Rubbing Alcohol
- » Cotton balls
- » Household Ammonia

Mash the laxative tablet into the tablespoon of alcohol. Be sure the tablet is entirely dissolved. Write a message on the paper with paintbrush dipped into the solution. As the solution dries, the writing will disappear. To develop the message: dampen the cotton ball with liquid ammonia and dab it on the page. The writing will reappear.

## FORMULA #2

- » Lemon Juice
- » Heat Source

Write your message in lemon juice and wait for it to dry. Use a hair dryer, iron or light bulb (carefully) to expose the message.

## FORMULA #3

- » Vinegar
- » Heat Source

Write your message in vinegar and wait for it to dry (or use hair dryer). Use a hair dryer, iron or light bulb (carefully) to expose the message.

## FORMULA #4

- » Whole Milk
- » Heat Source

Write your message in milk and wait for it to dry. Use a hair dryer, iron or light bulb (carefully) to expose the message.

## FORMULA #5

- » Vinegar or Lemon Juice
- » Red Cabbage Water  
(chop one large red cabbage into small pieces  
Note: blackberries, red onions, or even hibiscus flowers can be used as well - simmer the cabbage pieces until the water turns a deep shade of purple.  
Allow the water to cool. Refrigerate when not in use).

Write your message in lemon juice or vinegar and wait for it to dry (or use hair dryer). Using a spray bottle, mist red cabbage water over it to expose the message.

## FORMULA #6

- » 3 Tablespoons Baking Soda
- » 3 Tablespoons Water
- » Grape Juice

Mix about 3 tablespoons of baking soda and 3 tablespoons water. Write with this mixture on paper and let it dry. Paint or rub the grape juice across the paper to expose the message.

## FORMULA #7

- » 1 Teaspoon Corn Starch
- » 1/4th Cup Water
- » Iodine
- » Water

Mix the corn starch with the water. Heat it a little, about 30 seconds in a microwave. Stir it and let it cool. Write your message on paper and let it dry. To expose the message wipe the surface of the paper with a sponge this has been wetted in iodine and water.

## FORMULA #8

- » Whole milk
- » Sandpaper
- » Pencil

Write a secret message with whole milk. Let it dry. Scrape the pencil point with the sandpaper, letting the pencil dust fall on the message area.



# SECRET MESSAGE EGG CHALLENGE

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## WHAT YOU NEED

- » Small bowl
- » Measuring cup
- » Alum (can find in the spice aisle at your local supermarket)
- » White vinegar
- » Q-tips
- » Hard-boiled egg

## WHAT TO DO

In the bowl, dissolve one part alum in one part vinegar. Mix well. Use the Q-tips cotton swab to write or draw something on the eggshell using the alum and vinegar solution as ink. Let dry. Remove the eggshell from the egg.

## WHAT HAPPENS

The alum-and-vinegar solution dries invisible, but when the eggshell is removed the writing is visible on the egg's surface (the egg is still edible).

## WHY IT HAPPENS

The vinegar (acetic acid) dissolved the calcium carbonate in the eggshell, allowing the alum to permeate the shell and discolor the egg white.

\*Ok, we have to admit, we've never gotten this to work. If you're successful, e-mail us a photo at [educators@spymuseum.org](mailto:educators@spymuseum.org) and we'll send you a prize!