

Invisible Ink

Materials Included:

- Lemon juice
- Cotton swabs
- Paper

Materials Needed:

- Small bowl
- Heat source (like a hair dryer)



Photo from kiwico.com

Instructions:

1. Gather your materials.
2. Pour the packets of lemon juice into a small bowl.
3. Using the cotton swab, write a secret message on the paper. Let the paper dry completely.
4. Bring your heat source close to the paper and watch as your secret message begins to appear!

What's happening?

Lemon juice is mostly made of a variety of sugars, acids, and water. Normally, lemon juice is mostly clear, so when you paint that mixture onto some paper, you can't see it. However, heating up lemon juice causes some of its sugars to react with oxygen in the air (oxidation), which turns these sugars brown. Your invisible ink might seem like magic, but really, it's all just chemistry.