

Casein glue



How can I stick paper to glass?

Glue made from natural raw materials

Cow's milk is healthy. Among other things, it contains proteins, water and fat. The proteins in milk have a special property: they can be used to make a glue. These so-called casein adhesives are often used to stick paper labels on glass bottles.

Find out how you can separate the proteins from cow's milk and process them into an adhesive.

You will need

- Cow's milk
- Glasses
- Tablespoon
- Saucepan
- Oven or microwave
- Sieve
- Measuring cup
- Piece of cloth
- Water
- Vinegar
- Baking soda
- Paper and jam jars for adhesive samples



Casein-glue

Step by Step – Part 1

- Heat approx. 40 mL of milk in a saucepan on the hob.
Alternatively, you can also heat the milk in the microwave.
- **Caution: The milk must not boil**
-> it should only become very warm (50-60°C) and have an adult help you!
- Pour in a tablespoon of vinegar and stir.



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Step by Step – Part 2

- Observe what has happened to the milk: the milk has 'curdled', i.e. the milk proteins form white lumps.
- Separate the milk proteins from the liquid by filtering them using a piece of cloth. You can pour the liquid away. Separate the milk proteins from the liquid by filtering them using a piece of cloth. You can pour the liquid away.



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Step by Step – Part 3

- Pour the white mixture into a new glass, add about a teaspoon of water and a teaspoon of baking powder. Mix everything thoroughly until it has a creamy consistency.
- Spread the mixture on a piece of paper and stick it on a glass jar.

