

# CRUNCH TIME

## Making Glue From Milk



**Serve Information: Makes Fist-Sized Serve Of Milk Glue,**

### INGREDIENTS:

1.5 Cups milk  
3 Teaspoons white vinegar  
1 Tablespoon baking soda  
(plus some spare)  
Cup of water (it won't all be used)  
1 x 'Prepared earlier' small lunchbox ,  
with glue cooled milk glue in it  
(details below)

### EQUIPMENT:

Medium-sized saucepan  
Medium-sized sieve  
Mixing bowl  
Silicon spatula  
Teaspoon  
Small lunchbox (with a lid)  
Medium-sized paintbrush  
Two tissue boxes (full of tissues)



## METHOD:

1. Heat milk in a saucepan.
2. When the milk is warm, add white vinegar.
3. Keep heating and stirring the mixture until the solid and liquid parts separate into 'curds and whey'.  
By adding vinegar to heated milk, you create a chemical reaction that makes the milk separate into solid curds and liquid whey. The curds are a milk protein, known as casein. Liquid casein is actually a natural glue.
4. Using a sieve, strain the liquid whey into the bowl.
5. Then use a spatula to mix the remaining solid lumps of curds into a ball.
6. Place the ball of curds back into the saucepan.
7. Pour a little bit of water in the saucepan
8. Add the baking soda
9. Heat the mixture until it starts to bubble.
10. The vinegar in the milk glue is acidic. When we add the baking soda, it neutralises the vinegar.  
The bubbles we see when the mixture boils are a result of carbon dioxide gas being given off as part of this chemical reaction.
11. Stir the mixture well until it resembles a thick paste. If it looks too thin, add a bit more baking soda.  
Or if it's too thick, add a bit of extra water.
12. Once the consistency of the glue is right, transfer it into a small container with lid
13. Set aside glue for at least 15 minutes to cool in the fridge. Take "prepared earlier" Milk Glue from fridge
14. Use a paintbrush to add a layer of glue to the bottom of one tissue box. Press the bottom of the other tissue box against it, and push the two tissue boxes together for a few moments.
15. Hold the tissue boxes up to see if the glue holds

## ADDITIONAL NOTES:

\* 1 x 'prepared earlier' serve of milk glue, in a small lunchbox (with a lid):  
Made as per instructions above, but left to cool.



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