



# Let's Make Karumeyaki



(Brown Sugar Cake)

**Making KARUMEYAKI by inflating melted sugar.**

 **Point**

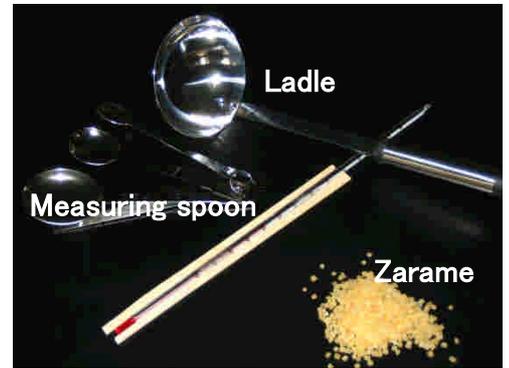
**Thermal decomposition of sodium bicarbonate**



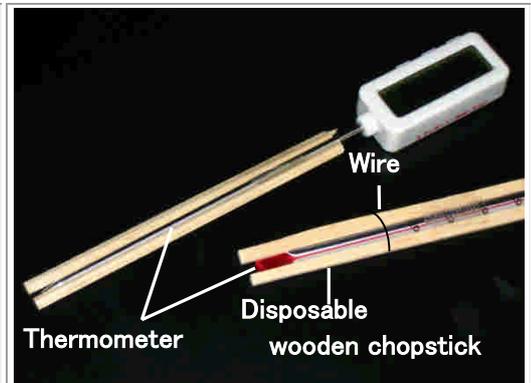
**Materials**



- Ladle (spoon for soup)
- Zarame (crystal brown sugar)
- Sugar
- Egg
- Baking soda (sodium bicarbonate)
- Water    ▪Thermometer    ▪Disposable wooden chopstick
- Cup        ▪Measuring spoon    ▪Gas stove



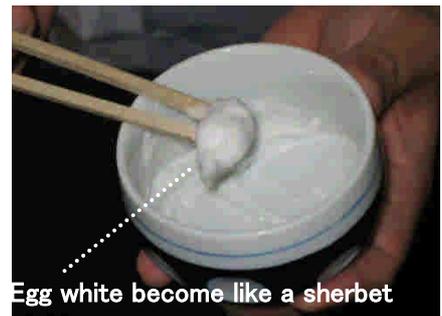
※Thermometer should be protected using disposable wooden chopstick as shown in the photo.



## Prepare

1

Separate egg yolk and egg white.



Egg white become like a sherbet

**2** Put baking soda (1tsp) in the egg white. Mix them for about 2 minutes until it looks like a sherbet. Then, put sugar (1/4 tsp) into it.

If it doesn't become like a sherbet, add a little baking soda.

**3** Have a size of red beans of the mixture (no. 2 procedure) on the tip of the disposable chopstick as shown in the photo.



Baking soda and egg white

## \*Experiment\*

**1** Put 30g of crystal brown sugar and 11ml (2tsp) of water to the ladle.



**2** Put the ladle above the fire of gas stove and stir the mixture well using disposable chopstick with thermometer.

After over 100°C, remove the ladle from the fire, heated to about 117°C.

\* When the temperature is over 100°C, bubbles become bigger and bigger. It is said that KARUMEYAKI's suitable temperature is 125°C. If you use the ladle, when you keep it away from the fire, the temperature will continue to go up for a minute. So keep away the ladle from fire when the temperature is 117°C.

**3** When the temperature goes up to 117°C, remove the ladle from the fire and place it above newspaper. Wait for 30 seconds.



**4** Put the mixture of egg white and baking soda in the ladle when the big bubbles are gone and stir it quickly for about 30 times using disposable chopstick.

It is important to mix it when the big bubbles vanished !!

5

Gently pull the disposable wooden chopstick from center upward and wait.



6

When already puffy, put the ladle above the fire to roast it slightly.



Finish ! !

### Information

◆ Carbon dioxide is generated by thermal decomposition of sodium bicarbonate (baking soda) which drives up the membrane that inflates cold and hardened sugar.

◆ Sometimes this experiment might fail because of the temperature. But you should try it many times, so you can give tips on making KARUMEYAKI.



When the bubbles become big...  
117°C!!