

## **Fermentation – souring – headed cabbage conservation**

*(Brassica oleracea var. Capitata)*

**„By reason of Lactic fermentation“**

Professional term **fermentation** and known as **lactic fermentation** is an important process, which is used for changing headed cabbage into healthy beneficial probiotics food.

People were using fermentation from prehistoric ages. The turning point came when Louis Pasteur in middle of 19. century. He showed that lactic acid fermentation is cause by living organisms – **lactic acid bacteria**.

Fermentation has been brought by Tatars and from that time all Slavs are using it.

Sugar which is contained in cabbage will change into **galactic acid** with the help of **lactic acid bacteria** –**Lactobacillus**.

After this „conservation “,cabbage is much more healthier for your body. It helps to immune system fight infection and also has medical treatment for our digestive system.

Sour cabbage is full of vitamins **C, B3, B5, B6 a B12, minerals and trace elements**, mostly **potassium, iron, magnesium, zinc and fluorine**.

It contains **probiotics** in natural way, no by tablets.

### **Project**

#### **Tasks:**

1. Make souring process of headed cabbage fermentation (*Brassica oleracea var. Capitata*).
2. Assess by help of ph-control paper acidness/basicity salted sour solution.

**Tools:** headed cabbage, NaCl, sharp knife, wood cutting board, glass jar

#### **Working process:**

1. Prepare the glass jar. Using wood cutting board and sharp knife cut the cabbage into thin, bite-sized strips and put it into glass bottle.
2. Sprinkle the cabbage with salt – 2 %. (for 1 kg cabbage use 20 g of NaCl).

3. Press the mixture down very firmly with your hand.
4. Be careful don't fill to the top, because the cabbage is still in process.
5. Cover and store the jar in a dark location.
6. Check on it from time to time, because during the fermentation the juice could come out, so we back it up with some pot.
7. The fermentation should be done after three or five days.



**Working-out:**

- Once the sour cabbage has fermented measure the ph of this solution and make some notes.
- Retry the measuring after three days and compare the results.

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- Taste the sour cabbage , if is really salted!☺

**Conclusion:**

1. Solution needs to be salty enough, it should contain 2% of salt.
2. The ph of solution shouldn't be more than 4-4,1. Higher ph occurs microbial corrupting and that is the end of fermentation.
3. Fermentation must be in airtight container process and the cabbage has to be completely covered by the solution. It is important not to have mould on the top, because the cabbage will grow soft, smell bad and get slimily.
4. We need to strictly follow cleanness of our hands, and all the tools which we are using. Unwanted microorganisms can't kill the growing **lactic acid bacteria!**

