

## **Thermal processing case study (Revised: 5/25/18)**

<https://www.serious-eats.com/recipes/2017/09/canned-whole-tomatoes-preservation-recipe.html>

### **Process development for canned tomatoes!**

Kharkiv Farmers Cooperative is selling marinated tomatoes in glass jars. The tomatoes are slightly boiled for 5 minutes, and then the skins are peeled. The skinned tomatoes are put into a special marinade with spices and vinegar and soaked for 2 hours. The tomatoes are then filled in to a glass jar and then the marinade is filled in to jar leaving a ½” headspace. Then the jars are lowered in to a covered pot with boiling water and heated for 85 minutes with the lid slightly tightened. At the end of the boiling water process, the jars are removed and the lids are then completely tightened.

The Customer Service rep mentioned that several customers were calling in to report that there is mold growth in some of the glass jars. The manufacturing team is asking for your help in trouble shooting.



1. What are the requirements for effective sterilization of the tomatoes in glass jars?
2. What ingredient related and processing related factors could have contributed to this problem?

The company would like your help to develop a retort process for this product and would like your help with selection of equipment and the process development.

3. What type of retort would you recommend for the company's consideration and why?
4. How would help develop a scheduled process for this product?