



# When dumplings rise



*Frozen dumplings sink in water.  
However, they rise to the surface  
when cooked in boiling water.  
Are the dumplings ready once  
they float? Investigate this effect.*





# Theory



1. little theory
2. understandable qualitative model
3. added gelatin and another parameter
4. good explanation
5. good explanation of Archimed force



1. No Explanation what gas inside dumpling
2. no numerical theory
3. no explanation difference of meat
4. no clear conclusion
5. do not well answered the questions
6. do not studied effect of water penetration
7. no boundary conditions for break of the dumpling structure
8. do not answered the questions





# Experiment



1. well developed setup and list
2. good explanation of experiment



1. no explanation of graph when dumplings have equal temperature
2. no demonstration
3. do not explained well how temperature of dumplings was measured
4. No boundary conditions of destruction
5. no error
6. affection when dumpling destroyed
7. do not investigate the salinity of water
8. irrelevant experiment
9. no affection of different temperature
10. no explanation of measurement of size of dumpling
11. errors in measuring volume





# Conclusion

*Frozen dumplings sink in water.  
However, they rise to the surface  
when cooked in boiling water.  
Are the dumplings ready once  
they float? Investigate this effect.*

**Problem have not been well  
investigated**





# Opponent



1. stated misunderstanding of solubility
2. stated about volume of dumplings
3. pointed that parameters were not explained
4. answered to questions



1. no carbon dioxide gas investigation
2. affection when dumpling destroyed
3. do not include affection of water on dumpling size





# Reporter

- Salinity do not effect
- Do more experiment
- no investigation of filling
- do not measure temperature
- boiling time 3-5 minutes

# Opponent

- Salinity effect
- Size of the dumplings
- Do more experiments and errors
- Filling effect on system and amount of fillment
- Temperature effect
- boiling time

# Our opinion

- salinity do not affect or particularly affect
- we agree to the opponent for filling and amount of experiments

