

Names: \_\_\_\_\_

### Salt Crystals (Halite, NaCl)

- In groups of 4, observe three separate single grains of salt under a magnifying glass or microscope and then complete the lab below.

1. Draw the shapes that you see in the space below.

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- Fill your beaker halfway with water.
- Use the hotplate to warm up your water.
- Add a spoonful of table salt to the water.
- I will come around and give a drop or drops of food coloring in your solution.
- Use stirring rod to stir the water until the salt has dissolved.
- Add another spoonful of salt to your solution.
- Continue to add salt until you can't get any more to dissolve.
- For best results, make sure you really, really dissolve the salt.

2. How many spoonfuls were you able to get into beaker?

- Gently pour the water onto a plate and place it on the table in the back.

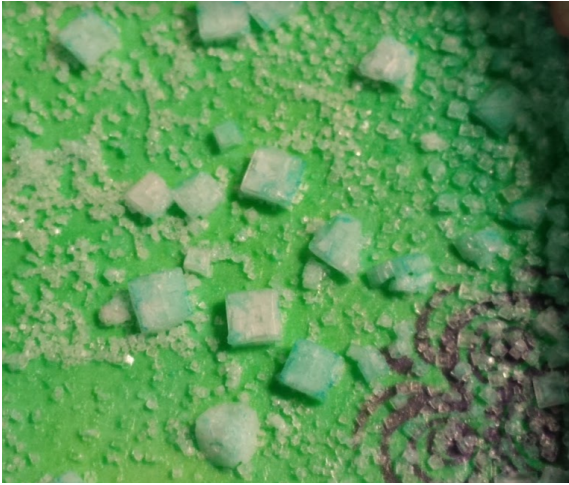
3. Check the plate every other day until all the water has evaporated. Make sure you really observe what is happening. Check both inside and outside the plate. Write down your observations.

Observation 1
Observation 2
Observation 3

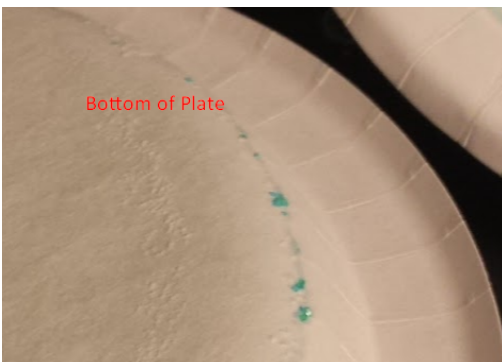
4. What can you conclude about the formation of salt crystals?

## Teacher Notes

- Materials needed:
  - Salt, hot plates, stirring rods, plates (preferably paper), water.
- I group the students in groups of 3 to 4 as I am limited to space for the amount of plates.
- This experiment works best if the students really, really, really get the salt dissolved. Sometimes students just stir a little and then add more before the first salt has dissolved. They should work very hard at stirring the salt so that it dissolves. If they do it right they will get large cubed salt crystals like the ones in the picture below.



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- Many students for their observations just write down that the salt is floating around, or that it looks like salt water. Encourage them to really look. After the first day they should see some crystals starting to form.
- One observation they might see if the plates you use have crevices running up the sides, is salt will “precipitate” out of the solution. If the students pick up the plate sometimes they can see that the salt moved out of the solution and to the bottom of the plate.



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- I add the food color to simulate chemical impurities that can alter a crystals color during formation.

- I also set up a table in the back of the room to house all the plates. It takes about 5-8 days for all the water to evaporate.

