**Name: Date:**

**Solubility of Salt Lab**

**Materials:**

1. 5 100ml beaker
2. 100ml graduated cylinder
3. Ice bath
4. Beaker tongs
5. Glass stir rod
6. Wax Pencil
7. Hot plate
8. Balance
9. Thermometer
10. Scoopula
11. Weigh dish (salt)
12. Weigh paper
13. Timer

**Safety:**

1. Do not place hot beakers into ice water or under cold running water, they will shatter.
2. All other lab safety rules apply.

**Procedure:**

 **Part A:**

1. Fill each 100ml beaker 50ml of distilled water. Use the graduated cylinder to do your measuring so as to be as exact as possible.
2. Label each beaker 1-5.
3. Place Beaker 1 in an ice bath. Wait about 5 minutes then record its temperature.
4. Measure out 1.00 g of NaCl from the weigh dish onto the weigh paper. Be as exact as possible.
5. Add the salt to the beaker and immediately begin timing and stirring. Record the amount of time it takes for the salt to completely dissolve. (ex) 00:58.02 = 58.02 seconds
6. Leave the second beaker at room temp. Record its temperature.
7. Measure out 1.00 g of NaCl from the weigh dish onto the weigh paper. Be as exact as possible.
8. Add the salt to the beaker and immediately begin timing and stirring. Record the amount of time it takes for the salt to completely dissolve.
9. Heat the third beaker on the hot plate until it reaches a temperature of about 45°C.
10. While the beaker is heating, measure out 1.00 g of NaCl. Be as exact as possible.
11. Remove the beaker from the hot plate. Let it cool until the temperature reads 40°C.
12. As soon as the temperature reads 40°C, add the salt to the beaker and immediately begin timing and stirring. Record the amount of time it takes for the salt to dissolve.
13. Heat the fourth beaker on the hot plate until it reaches a temperature of about 65°C.
14. While the beaker is heating, measure out 1.00 g of NaCl. Be as exact as possible.
15. Remove the beaker from the hot plate. Let it cool until the temperature reads 60°C.
16. As soon as the temperature reads 60°C, add the salt to the beaker and immediately begin timing and stirring. Record the amount of time it takes for the salt to dissolve.
17. Heat the fifth beaker on the hot plate until it reaches a temperature of about 85°C.
18. While the beaker is heating, measure out 1.00 g of NaCl. Be as exact as possible.
19. Remove the beaker from the hot plate. Let it cool until the temperature reads 80°C.
20. As soon as the temperature reads 40°C, add the salt to the beaker and immediately begin timing and stirring. Record the amount of time it takes for the salt to dissolve.

**Clean Up:**

1. After checking to make sure everyone in your group has finished with the ice bath, pour it into the sink.
2. After allowing all of your beakers to cool, rinse them out in the sink.
3. Rinse off your scoopula, glass stir rod and graduated cylinder.
4. Turn off scale and hot plate.
5. Wipe down lab station.
6. Discard weigh paper.
7. DO NOT DISCARD WEIGH DISHES!

**Table 1**

|  |  |  |  |
| --- | --- | --- | --- |
| **Beaker** | **Amount of Salt Added****(g)** | **Temperature of the Water****(°C)** | **Dissolve Time****(00:00.0)** |
| **1** |  |  |  |
| **2** |  |  |  |
| **3** |  |  |  |
| **4** |  |  |  |
| **5** |  |  |  |