

Water Handout

Name: _____

Answer each question (as if this were a quiz). It's graded for a classwork even though it feels like a quiz. You should be able to do all of these. Put answers on the answer sheet.

1. Show the dissociation of aluminum chlorate in water.
2. Explain why aluminum chlorate is an electrolyte or is not an electrolyte.
3. Determine the number of grams of ammonium chloride that saturates 100 mL solution at 303 Kelvin.
4. Determine the number of grams of potassium chloride that saturates 425 mL solution at 43°C.
5. If you have a saturated 100 mL solution of potassium nitrate at 60°C but then cool it down to 20°C, what happens exactly? (this is math and words)

6. If you have a saturated solution of sodium nitrate at 35°C, and you warm it up to 63°C, is it still saturated? Explain, don't say yes or no.
7. Draw the dissociation of 1 formula unit of lithium carbonate into water, with at least 9 water molecules that are properly oriented to each of these ions.
8. Explain (maybe with a drawing) why water has low vapor pressure.
9. Explain why (maybe another drawing) why solid water floats on liquid water.
10. Oil and water do not mix, for 2 separate reasons. Explain this (and what the hey, make a drawing)

11. Is Barium Chromate an electrolyte (not just yes or no, tell why or why not).
12. Is sodium acetate an electrolyte (not just yes or no, tell why or why not).

13. Skip this one.

14. Sodium acetate is the ionic compound that was in the reusable handwarmers. State the particularly important "one-liner" that explains how these hand warmers work.
15. What does "like dissolves like" mean? Give 2 examples of solutions that exhibit this.
16. When 325 grams of steam at 373 Kelvin condenses onto your kitchen window, then cools down to the room temperature of 23.0°C. How many joules were released in this process?

Put all work on the following pages. Work counts, answers alone are NOT ENOUGH. Do your own work, call me for help, but stay off of AI and stay out of google too!

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