

Unknown Solutions ID and Net Ionic Equations

Event Overview:

Teams will be given 5 unknown solutions. Through observation of the solutions and of 6 specific combinations of the solutions teams must identify the 5 unknowns. A list of possible solutions will be given in lab.

For each of the 6 combinations, teams must indicate if a reaction occurs. If a reaction does occur teams must write the balanced chemical equation and the net ionic equation.

Reference material and scrap paper will be provided. Teams may only enter lab with safety equipment and a writing utensil (pencil suggested).

Safety: Read Carefully

Teams are responsible for bringing safety goggles, rubber gloves (one pair) and lab aprons. Teams will not be admitted into lab without safety equipment and will receive a 5 point score per NSSL rules of disqualification.

At the beginning of the event all teams will be required to read and sign the following safety agreement.

This event uses real chemicals. Safety is our number one concern. All participants must at all times wear safety goggles and lab aprons. Follow the instructions of the lab proctor at all times. Only the experiments in the procedure are to be performed. Report any spill to the lab proctor. Long hair must be tied back. Keep lab area clean and free of clutter. Make note of the location of the eye wash station. Dispose of chemicals according to the instructions given in the procedure. Any violation of these rules will result in a 5 point deduction and possible ejection from lab. Safety decisions will be made by the lab proctor and are final.

References Provided:

Periodic table, table of common polyatomic ions, solubility rules, solubility chart

Scoring:

The event will be scored out of a possible 50 total points. Correct identification of solutions is worth 20 points. Balanced equations and net ionic equations are worth 30 points. Any deductions will be taken off the point total earned by that team. Raw scores will be ranked and normalized per NSSL rules. Teams asked to leave lab for safety concerns are considered disqualified and will receive a normalized score of 5.

Feel free to email me with any questions:

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