

# Comet Recipe

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[1] Start: wear your lab coats, goggles and gloves – dry Ice is -70C very cold.

[2] Good scientists are SAFE scientists!

[3] Read all of the instructions twice before starting.

[4] Please ask for help if you need it- or have any questions.

## Ingredients

- 2 cups of water (for the water ice of comet)
- 1 teaspoon of sand (for the rubble in the comet – to scale)
- 1 Dash of smelling salts (for the ammonia gas that comes off comets)
- 1 Pinch of amino acids (for the prebiotic organic molecules)
- 1 Dash of soy sauce (for the complex organic molecules found in comets)
- 2 rounded heaped scoop of dry ice pellets

## Assembly steps

1. Collect two scoops of dry ice in the black plastic bag.
2. Collect all the other ingredients and place them in the white bag which can rest in the bowl (ask one of the demonstrators for the ammonia and glycine).
3. Give the ingredients in the white bag a good stir with the spoon.
4. Gently crush the dry ice pellets with the mallet on the cutting board (to protect the bench surface). Do not pound them into a powder!
5. These next steps are the time-critical ones. Pour the crushed dry ice from the black bag into the white bag.
6. One person lift-up the white bag up from the bowl and have the other team members compress the mixture as hard as possible with the **palms** of their hands.
7. When the comet is firm, take it out of the bag and place it on the cutting board.