





## Extraction Protocol

**1**  Select 2 small kiwis, 6 strawberries or a small tomato – soft fruits work better.


**2**  Remove leaves, stems, skin (from kiwi and tomato) and chop coarsely.

**3**  Put in blender and blend to achieve “pumpkin soup-like” consistency. Add water if necessary. It is okay to be slightly chunky; don't overblend.

**4**  Add blended fruit to 8 oz. plastic cup to ~1/3 of cup's volume.

**5**  Add 1 teaspoon baking soda – it will fizz, especially with acidic fruits.

**6**  Stir several minutes until fizzing stops.


**7**  Add equal volume extraction mixture; stir for several minutes.


**Extraction mixture** (can be scaled for smaller volumes):


*In 1-quart container add:*


- 4 tablespoons dishwashing liquid (e.g., Palmolive)
- 3 teaspoons iodized salt
- Add water to 1 quart

**8**  Put single layer coffee filter in strainer; filter mixture into glass. Discard pulp in strainer.

**9**  Add ½ teaspoon (2 milliliters) of this mixture to small transparent glass or plastic tube, using “eye dropper”.

**10**  Using “eye dropper,” gently layer 1 teaspoon (4 milliliters) of cold isopropanol down side of tube to form layer on top of mixture. Try not to mix layers.

**11**  DNA will appear at interface between alcohol and DNA mixture.

**12**  Unfold a paper clip leaving one end bent into a “U”. Carefully twirl it at interface of two layers to capture DNA, which appears as a “snotty glob” on the clip.

**Congratulations!**  
You have seen the magic that is DNA!