Paraformaldehyde (PFA) solutions

We make 16% PFA stock solution, and make 4% PFA for animal perfusion and slice fixation.

**Materials Needed:**

- Weigh boats
- Thermometer
- Filter paper
- Funnel
- 2 beakers w/H₂O
- Big scooper
- Graduated cylinder
- pH indicator strips
- Scale
  -- hot and stirring plate
  -- 1 liter volumetric flask
- KOH, NaOH for getting to final pH 7.2

We will make PFA solution in the mouse vivarium (Room 338) procedure room with a chemical hood.

**16% PFA**

- Measure 160 g PFA for making one liter of 16% PFA
- Heat ~700-800mL water to no more than 60°C – Make sure not to boil!
Xu lab protocol and instructions

- Add PFA and stir with stirring
- Add 2-3 drops of 10N NaOH
- Allow sufficient time for PFA to dissolve
  - If takes a long time, add more NaOH
- Filter solution using a fine or medium porosity filter
- Adjust to pH 7.2 adding drops of HCl or NaOH, depending on if pH needs to be increased (NaOH) or decreased (HCl). // using pH indicator strips
- Top off with water to 1L in a 1 liter volumetric flask

4% PFA

Measure each solution below with an appropriate graduated cylinder

Mix thoroughly with the appropriate proportions:

Solution A: 1 part  50mL  5mL  2mL
Solution B: 4 parts  200mL  20mL  8mL
16% PFA: 2.5 parts  125mL  12.5mL  5mL
ddH₂O: 2.5 parts  125mL  12.5mL  5mL
               500mL  50mL  20mL