

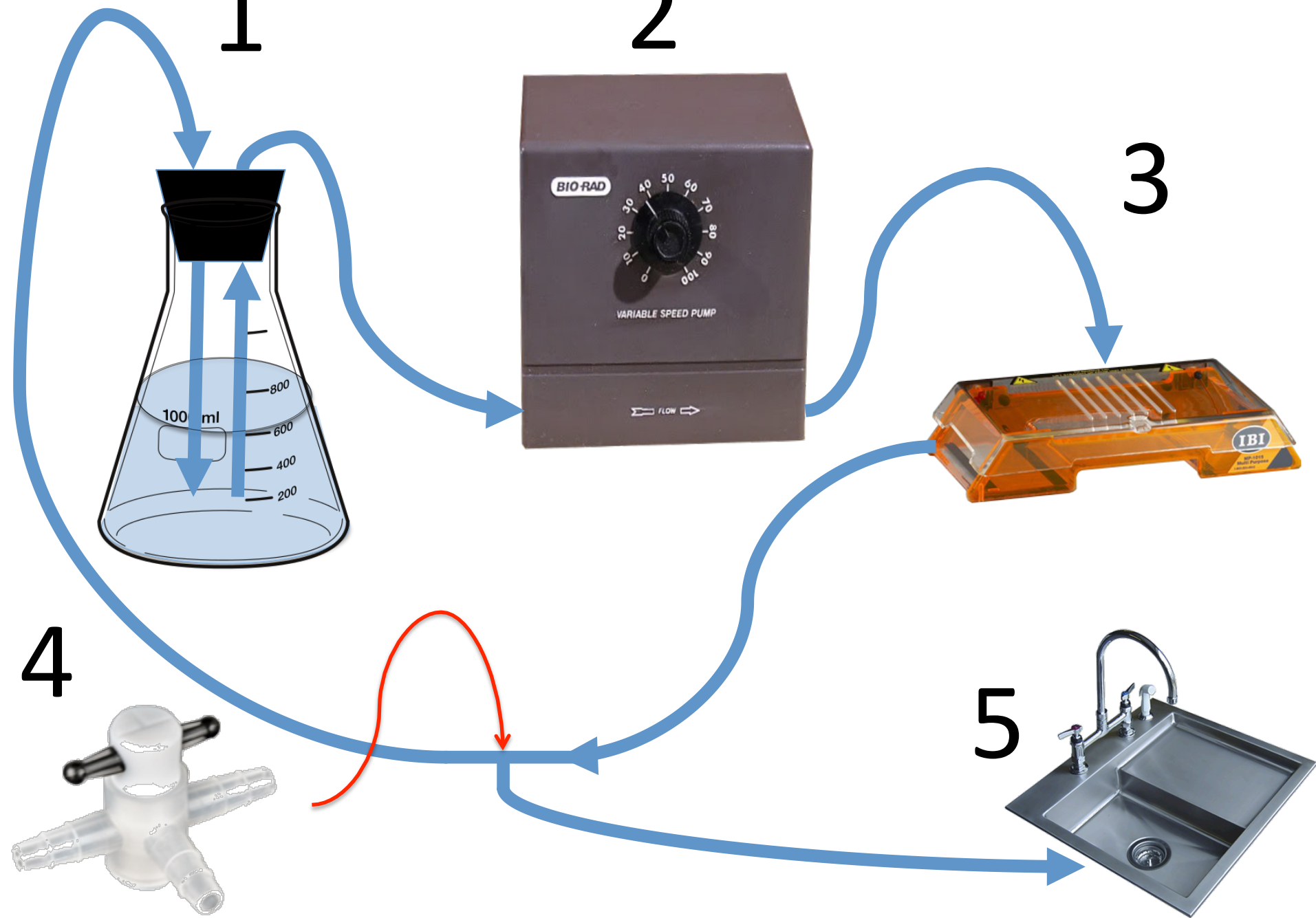
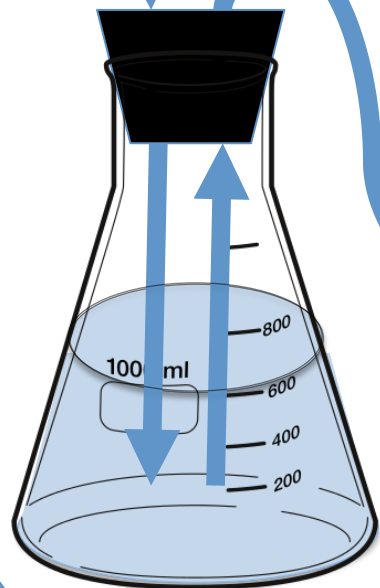
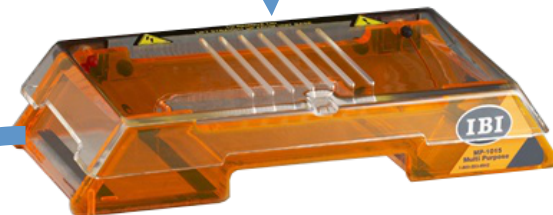
1

2

3

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4



# Key for plumbing

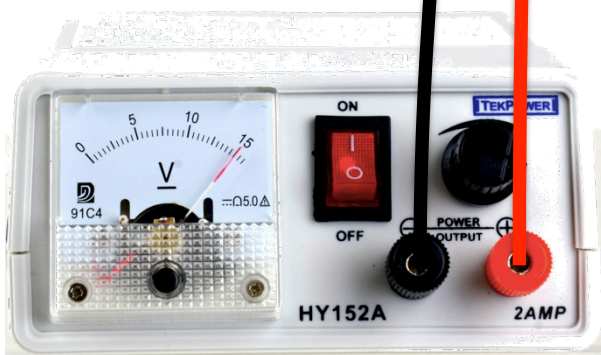
1. 1 L Erlenmeyer flask
2. Bio-Rad Variable speed buffer recirculation pump
3. MP-1015 (10x15cm) Horizontal Electrophoresis System
4. 3-way stopcock
5. Waste for draining (sink is only an icon; you can just get a bucket nearby when you need to drain, and pump it into there first)
  - Blue lines represent tubing; you'll need appropriate tube connectors and fittings to get it working.
  - The 3-way stopcock and drain outlet are to make it easier to change the buffer. With the stopcock in the right position, you can drain the buffer with the pump, making life much easier. When not draining, just make sure it connects the gel rig to the Erlenmeyer flask, as normal.



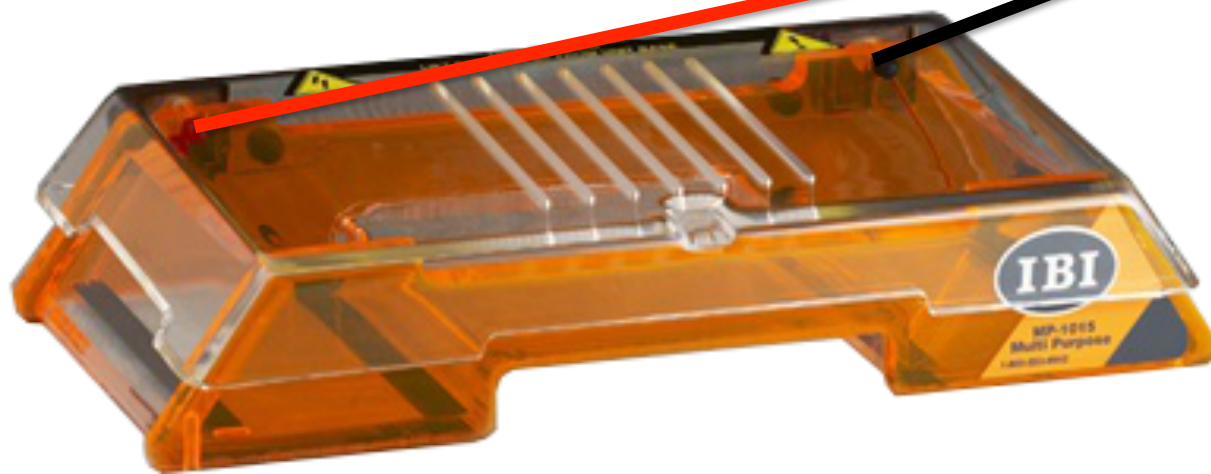
# Key for wiring

1. Power supply
2. Bio-Rad Pulsewave 760 field inverter
3. MP-1015 (10x15cm) Horizontal Electrophoresis System (with buffer recirculation ports)
4. Banana plug cables
  - The dotted lines are the banana plug cables. Use them to connect the + in Block A to the – in Block B and the – in Block A to the + in Block B. then connect from the banana plug ports in block A + & block A – to the gel box as normal.

1



2



# Troubleshooting Key

1. Cheap power supply with low maximum voltage
2. Digital multimeter
  - If you need to troubleshoot, you can measure the voltage coming out of the Pulsewave 760 with a digital multimeter
  - If you are testing, hook up a cheap power supply you don't mind frying and test with the voltage low (say 10V or less)
  - Use another set of banana plugs from the Pulsewave to the multimeter so that you can then go out of the multimeter again to the gel. This way, you can actually monitor the field inversion during a run if you choose
  - The voltage should bounce between a positive value and a negative value based on the voltage on the power supply and the schedule you program in
  - Dotted lines are patch cables with banana plugs