Safety and daily maintenance operations in a plant tissue culture laboratory

Observance of commonsense safety practices can significantly reduce the possibility of accidents or injuries occurring in a laboratory. For your safety and that of others, observe the following:

1. Always wear shoes and a laboratory jacket in the laboratory.
2. Be extremely careful handling alcohols around open flames. They are flammable!
3. Never pipette by mouth.
4. Handle hydrochloric acid, sulfuric acid, sodium hydroxide, and other strong acids and alkalis with extreme caution. They are very corrosive!
5. Wash and bandage all cuts immediately.
6. Before opening an autoclave, be sure the pressure is reduced to zero and the temperature is below 100°C.

In addition to safety concerns, cleanliness and proper care of equipment are vital to the operation of a tissue culture laboratory. The following tasks should be performed routinely before the laboratory is closed at night:

1. Mop floor in lab and culture room with an approved disinfectant.
2. Turn off hood, unless used continuously to reduce particulates in the air.
3. Fill distilled water tanks and turn off stills.
4. Clean off benches completely and put away chemicals, instruments, glassware, etc.
5. Put microscopes on lowest magnification; turn off and cover them.
6. Shut off all water outlets.
7. Wash and dry all dirty glassware (tubes, pipettes, flasks, etc.).
8. Put away all clean, dry glassware, racks, etc.
9. Turn off all electrical equipment that is not in use overnight (e.g., stirrers, pH meters, balances.)
10. Put away all chemical or media stock solutions.