

# **SOLVING ELECTRICAL PROBLEMS**

Electrical problems in laboratories fall into two general categories:

## **Building power and wiring Equipment related wiring**

### **Building Power**

If you suspect that the power to your lab is faulty, contact your building liaison who should request that Facilities Operations send an electrician to diagnose the problem. This may include power surges, intermittent power to various outlets, circuit breakers tripped, soot marks around the face of an outlet, or cover plates missing. A handy way to decide if power to an outlet in your lab is faulty is to use the plug-in circuit tester shown below. The lights will indicate either correct operation or one of the various fault conditions. If the outlet is protected by a GFCI, this can be tested as well. This quick check will help you separate building power problems from equipment electrical problems.



Electrical Circuit Tester

### **Equipment Wiring**

The most common electrical problems associated with lab equipment are on the power cord or the power plug. Inspect these routinely. Cracked insulation on the cord, frayed or exposed wiring, strained reliefs pulled out, power plugs cracked or prongs bent: these should be replaced or repaired by a qualified individual.

Departmental electronics technicians and lab mechanics should be contacted for such repairs. If no such individual exists for your department, contact the Work Center, Facilities Operations for your zone.

If you suspect that a piece of lab equipment has an internal electrical problem, contact the manufacturer to have the unit serviced. If the equipment has been custom built, refer to the schematics and documentation and have an electronics technician service the unit.