

Is the fuse good?

Sometimes your laboratory instrument will not turn on or you find it non-functional when you return to your lab after being gone for a period of time. In your absence the fuse(s) in your laboratory instrument may have blown due to a power surge or maybe someone overloaded or jammed the instrument (e.g. rotators and shaker tables). It is worth checking the fuse(s) before calling a technician or sending it in for repair.

If you have access to a simple ohmmeter, that can cost as little as \$5.00, you can check your own fuses. Here are typical ohmmeter types with two different readouts:



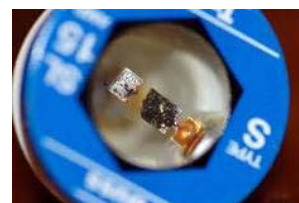
Digital Readout



Analog Readout

Just set the function and range knob to the “Ohms” function and the Rx1 range. When the two leads are shorted together, you will read a low value (~ 0.00 on the digital and ~ 0 at the left side of the analog meter). This means that you have “continuity” and basically checks your measurement meter for you to know that your test leads are OK too.

Most glass cartridges and plug fuses are obvious when they are “blown”



But some of the cartridge fuses are made with an opaque ceramic or fiber/plastic tube:



So the fuse looks “good” even though it may be functionally “bad” – this is where you would use the ohmmeter to determine if the fuse is “good.” After having set the ohmmeter to “Ohms” and the “Rx1” scale, just take the two wire test leads and connect each of the probe tips or alligator clips to the metal cap of each end of the fuse. If the fuse is good you will read a low value on the ohmmeter (just like when you shorted the two test leads together to check the ohmmeter). If the fuse is bad, the analog ohmmeter will read to the high end of the scale and the digital ohmmeter will indicate an over-range or “OL” on the scale. If you replace the fuse and it blows again then call the technician or send it in for repair.