

Lithium Polymer Battery Use Checklist

Category	Description	Completion Date
Storage	Maintain the minimum quantity of batteries possible.	
<i>Numerous Batteries:</i>	Store lithium batteries in a dedicated, vented fire-rated cabinet. Keep combustible materials clear of the cabinet. Label cabinet as containing lithium batteries.	
<i>Few Batteries:</i>	Dedicate a battery storage area free of combustible materials.	
	Inspect batteries weekly. Look for puffed LiPo battery casing. Monitor temperature.	
	Store LiPo batteries at correct voltage (around 3.8 volts).	
Charging	Set up dedicated charging area. Area must be free of combustible materials. Maintain space between charging batteries.	
	Obtain a quality charger.	
	Never charge batteries unattended.	
	Charge at correct rate and proper voltage for either use or storage.	
	Use lithium battery safety bags/containers during charging.	
	Let batteries cool down prior to charging.	
	Insure LiPo cell balancing cable is connected.	
Handling & Use	Avoid physical damage and short circuiting. No metal jewelry. Work on insulated surfaces. Avoid sharp edges and tools.	
	Wear safety glasses.	
	Use recommended methods to make battery terminal connections.	
	Contact EHRS if LiPo battery packs are to be fabricated in-house.	
	Test equipment for short circuits prior to installing batteries.	
	Use low voltage cutoff switch or monitor battery voltage while in use on equipment. Do not allow voltage to drop below 3.0 volts.	
Shipping Transportation	Only authorized personnel may ship lithium batteries. Contact EHRS if there is a need to ship batteries.	
	If taking lithium batteries on an aircraft, follow FAA and IATA rules.	
	Obtain container to safely transport LiPo batteries between the labs and use locations. Remove from vehicle once at the destination.	
Emergency Procedures	Set up emergency battery isolation container.	
	Obtain sand. Use in bottom of isolation containers and as a smothering agent in case of fire.	
	Obtain infrared thermometer for remote battery temperature monitoring.	
	Place batteries suspected of being damaged into the emergency battery isolation container and monitor temperature.	
	For thermal runaway/fire, activate fire alarm, evacuate, contact public safety.	
Disposal	Obtain recycling container from EHRS for all batteries except LiPo.	
	Insulate all battery terminals on batteries to be disposed of.	
	Store LiPo batteries to be disposed of in a dedicated area of the battery storage cabinet or a dedicated area of the lab away from combustible materials. Contact EHRS for disposal of all lithium batteries.	
	If safe to do so, fully discharge batteries that are to be disposed of.	