# Developing a ‘Safe Operating Procedure’ (SOP) for Lithium Batteries

This document can be used as an aide-memoire to produce a faculty/professional service specific SOP that will ensure that all considerations have been taken into account in relation to the purchase, safe use, storage and the emergency procedures to be adopted to ensure you reduce the potential risk of battery fires from overheating.

The following guidance should also be consulted when writing your SOP:

<https://staffintranet.bournemouth.ac.uk/workingatbu/healthsafetywellbeing/hsfire/lithiumbatteries/>

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| **Purchasing: -** Always ensure that the batteries you purchase are from a reputable supplier and that they are ‘CE’ marked and are not copies or counterfeit batteries. |
| **Quantity: -** Only hold enough batteries for what you need, do not hold excessive stocks. |
| **Battery life: -** Ensure that batteries are marked with a ‘do not use after’ date and replace every three years to ensure that they do not present a risk of potential overheating/fire. |
| **Storage: -** Store in approved cabinets or fire/explosion proof storage bags in a cool location and not where they will be exposed to additional high temperatures. Ensure stored batteries are regularly re-charged so they do not fall to zero volts. Remove batteries from equipment when storing. |
| **Safe use: -** Ensure that they are kept dry and away from high temperatures, direct sunlight for prolonged periods and water/damp conditions. |
| **Charging: -** Charge in a flame/explosion proof bag, do not over charge, do not leave charging unattended or overnight (unless in fireproof cabinets), ensure they do not get too hot. Consider the environment where charging is to take place (non-flammable surfaces) consider if you need any PPE. If during charging you see smoke or the battery swells stop charging immediately and call for emergency assistance (as per the [guidance document](https://intranetsp.bournemouth.ac.uk/policy/Lithium%20Battery%20-%20Safety%20Guidance%202023.docx?Web=1)) |
| **Transporting: -** Ensure they are transported safely, in approved containers or bags or attached to the equipment. |
| **Damage: -** Always include what to look for in relation to spotting damage and frequency of visual inspection. Cracked cases, leaking fluids, bulging cases, etc.  |
| **Electrical hazards: -** Do not short circuit terminals, fit protective caps if available, don’t pile batteries up or store large numbers together as this could cause a potential short circuit. Consider if PPE needs to be worn. |
| **Emergencies: -** When developing your SOP follow and include the guidance provided on emergencies situations and actions to follow. |
| **Disposal: -** Full details on how used or damaged batteries can be disposed of needs to be in your SOP. |