

lechyd a Diogelwch – Health and Safety

LABORATORY SAFETY – ELECTRICAL SAFETY

This Information Sheet provides guidance with regards to the practical steps that should be taken when working with electrical equipment in a laboratory environment.







General Information

Unsafe use of electricity and electrical equipment can lead to fires, property / equipment damage, electrocution, major injury and even death.

As a result the Law requires that electrical equipment is maintained to prevent danger and that it is used in a suitable manner. Inspection and Testing is part of this process, helping to determine if equipment is safe to use or if it needs repairing, maintenance or disposal. Visual User Checks form part of this process.

Visual User Checks

Before using an item of electrical equipment always visually check for the following faults. If you find anything wrong do not use the item of equipment and report it to your Supervisor immediately.

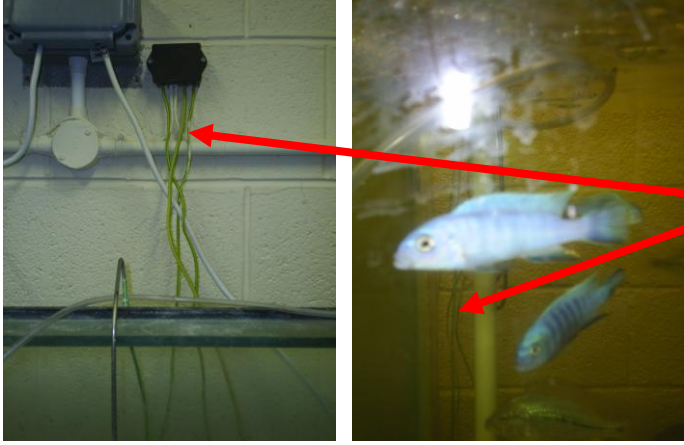

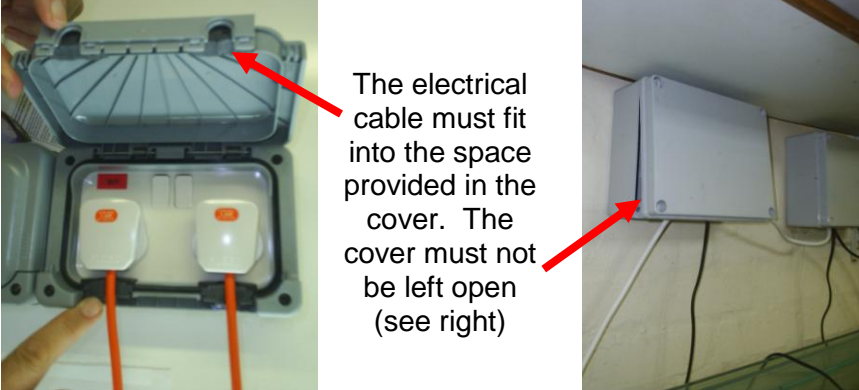
CORDS – look for	✓ Right	✗ Wrong
Cut / damaged / taped electrical cords		
EXTENSION CABLES – look for	✓ Right	✗ Wrong
Extension leads that are overloaded or with cables caught up. They should also have surge protection (this is usually indicated on the lead)		
Coiled extension leads must be fully unwound. If they are not, they can melt and cause a fire		

PLUGS – look for	✓ Right	✗ Wrong
Cracks / burns to the casing		
Damaged / bent / corroded pins		
Poorly connected / damaged cord		
Two pin plugs must only be used with a CE Marked Adaptor		<p data-bbox="943 1003 1528 1037">NEVER force a 2 pin plug into a 3 pin socket</p> 

EQUIPMENT	
<ul style="list-style-type: none"> • Loose switches • Burn marks • Loose panels • Cracks • Corrosion • Damage • Water damage 	

Working with Aquariums

Aquariums use both water and electricity which when mixed, can be dangerous if not handled correctly. Always check the following before working in and around aquariums.

AQUARIUMS	WHAT TO LOOK FOR
The tank is earthed	 <p data-bbox="1321 488 1455 618">Earth wire and earth wire into tank</p>
IP Rated electrical sockets – ensure sockets have covers to protect them from water	 <p data-bbox="1198 1055 1331 1144">WARNING! RISK OF ELECTRICAL SHOCK OBSERVE AND FOLLOW THE ELECTRICAL SAFETY PROCEDURES FOR WORKING IN WET AREAS.</p>
IP Rated electrical sockets – make sure covers are shut properly	 <p data-bbox="948 1279 1145 1547">The electrical cable must fit into the space provided in the cover. The cover must not be left open (see right)</p>