Bright Salt: Structural Energy

Activity	Structural Energy	**Demonstrator(s):**	STEM ambassador(s)
Date		**Venue:**	
Event Organiser		**Audience:**	5 – 18-year-olds and their parents / carers/ teachers
Activity Description	This activity investigates the effects of irradiation on salt crystals by heating previously irradiated salt, which causes photoluminescence and a colour change. This is linked to the real-world application of this technology in equipment to monitor radiation dose.		

Hazards	Control Measures
Allergies	The ambassador(s) will ask any attendees if there are any allergies that they should be aware of before the activity begins.
Chemical hazards	Chemicals have the potential to cause irritation or damage if ingested/come into contact with eyes. Eye wash station is provided. Wear Personal Protective Equipment (PPE): Eye protection (safety glasses) and chemical resistant nitrile gloves. The audience are present in only a spectator capacity and should not be hands-on during the demonstration.
Manual handling	Ambassador(s): No heavy lifting is involved in experiments to help mitigate the risk of damage to property and person. Audience: Present in only a spectator capacity, should not be hands-on during the demonstration No heavy lifting is to be carried out and experiments carried out in the appropriate environment.
Glassware hazards (irradiated salt container)	Evacuate audience from the area. Broken glassware is to be swept up disposed of appropriately, *via* glass bin or however is specified by the venue. Appropriate PPE is worn (including safety glasses and cut-proof gloves). Spilt irradiated salt should be heated until a colour change appears (the salt should go white) and disposed of in household waste.
Electrical hazards from equipment and instruments	Low voltage/current equipment is used, all equipment is stored away from water supplies. Equipment to be inspected for visual faults and to ensure PAT label is in date before demonstration commences.

Hazards	Control Measures
Hot surface- burns from touching a hot surface	Turn off the hot plate when not in use. The surface of a hot plate stays hot for some time and looks the same as a "cold" plate. Avoid the unattended use of hot plates when possible. The hot plate surface should be larger than the vessel being heated. Use of a Pyrex screen with a hot surface label on to demonstrate when the hot plate is in use and to prevent audience touching the plate. The removal of the aluminium plate should be done with care using tweezers.
Slips, trips and falls	Good housekeeping to be maintained to remove potential trip and spill risks. Cables should be taped to the floor.

In addition to the above control measures, the following standard safety requirements should also be in place:

- Any PPE worn should be checked to be in good condition, of the correct specification for the hazards in the activity, and appropriately CE/UKCA marked.
- Appropriate ventilation and hygiene facilities should be present.

Signature: .....

Print Name: .....

Date: .....