

Record of General Assessment of Significant Risks

Sheet 1 of 3

Operational Activity: <i>GENERAL</i> risk assessment for school activity –Algal Balls and TLC				Date of Assessment:29/092025 On this date the performance assessment for this activity, based on the further action required was:		
Site: RBG Kew Wakehurst		Department: Programmes and Learning	Unit: Learning Programme	<div style="display: flex; justify-content: space-around;"> <div style="border: 1px solid black; padding: 2px;">Black</div> <div style="border: 1px solid black; padding: 2px;">Red</div> <div style="border: 1px solid black; padding: 2px;">Amber</div> <div style="border: 1px solid black; padding: 2px;">Green X</div> </div>		
Assessor/s: Hayley Young Lead Teacher		Signed off by: Julie Whelan Learning Manager				
Item	Sub-activity	Risk rank (H,M,L)	People especially at risk* Students and their carers	Further action required	Person responsible	Action taken
	Hazard		Existing controls			
1	<u>Algal Balls</u> 2% calcium chloride solution skin and eye irritation.	L	Small pre-measured volume and low concentration used therefore risk minimised. Goggles provided	None	Wakehurst Teacher	
2	<u>Algal Balls</u> Bicarbonate indicator solution contains sodium hydroxide, thymol blue and cresol red, all are irritants	L	Sodium hydroxide in indicator, less than 0.01%, thymol blue 0.002g/L cresol red 0.001g/L. At these concentrations these chemicals are low risk.	None	Wakehurst Teacher	
3	<u>Thin Layer Chromatography</u> CAP solvent consists of cyclohexane, acetone and petroleum ether, 5:3:2. Each student is supplied with 2ml in a sealed bottle	L	See 4,5 & 6	None	Wakehurst Teacher	
4	<u>Thin Layer Chromatography</u> Cyclohexane is an irritant and highly flammable, vapours may cause drowsiness and dizziness.	L	Small quantities in sealed bottle, lid removed twice for very short period, lab well ventilated – windows open. No naked flames in building.	None	Wakehurst Teacher	

5	<u>Thin Layer Chromatography</u> Acetone/propanone is flammable, vapours may cause drowsiness and dizziness.	L	Very small quantities in sealed bottle, lid removed for short period, lab well ventilated – windows open. No naked flames in building.	None	Wakehurst Teacher
6	<u>Thin Layer Chromatography</u> Petroleum ether is flammable, irritant to skin and vapours in high concentrations may cause headache, dizziness and nausea.	L	Small quantities in sealed bottle lid removed twice for very short period, lab well ventilated – windows open. No naked flames in building.	None	Wakehurst Teacher
7	<u>Thin Layer Chromatography</u> Low intensity UV lamps are used for a few seconds. Risk to eyes if viewed directly.	L	Students are advised that they must not look directly at the light/lamp/bulb.	None	Wakehurst Teacher

*such as employees, public, contractors, young persons, pregnant women.

Date: To be reviewed October 2026

Black: Little or no provision for risk control.
 Amber: A reasonable standard of control but some remaining issues require action.

Red: Risk control incomplete or implementation unsatisfactory.
 Green: Risks minimised and a good standard of control achieved.

RISK RANKING MATRIX

Purpose: allocating action priorities for significant risks

Foreseeable consequences		Chance of exposure occurring					
Ill Health	Injury	Frequent	Probable	Occasional	Remote	Improbable	Incredible
Multiple fatalities	Multiple fatalities	H	H	H	M	L	
Single fatality	Single fatality	H	H	M	L		
Chronic or acute ill health	Major injury or permanent disability	H	M	L	No action required risk is insignificant or "tolerable"		
Minor health effects	Minor injury	M	L				
No known health effect	No injury						

Category definitions: * chance of exposure

*Chance = probability

Category	Definition
Frequent	The exposure occurs frequently during the normal course of the activity or process.
Probable	The exposure will occur several times during the activity or process.
Occasional	The exposure will occur occasionally during the activity or process.
Remote	There is a remote chance that the exposure will occur during the activity or process.
Improbable	The exposure is unlikely to occur. It will only occur exceptionally during the activity or process.
Incredible	The exposure is extremely unlikely to occur. It can be assumed that it may not occur.

Action Priorities for Significant Risks

H = High
 M = Medium
 L = Low