



Work Activity:	Baylab Workshop – Cosmetic Chemistry		
Persons at Risk:	Employees, students, visitors, and others in the vicinity	Risk Assessment ID:	GP-RA-12
Assessor:	Lucy Haywood	Issue Date:	07/2023
Consulted With:	Emma Schierbaum	Version Number:	V3.0
Approved By:	Yvonne McCann	Review Date:	07/2025

Applicable To:	Bayer employees who work in Baylab, school/college students, teachers and people accompanying the students as helpers
Notes:	Age Group for the Cosmetic Chemistry Workshop is 7 – 11 years of age

Comments and Relevant Documents:

This risk assessment covers the Baylab *Cosmetic Chemistry* Workshop. This risk assessment must be read in conjunction with GP-RA-09 *Baylab and Inspiration Space at Green Park*, which covers the general operation, storage, and maintenance in Baylab as well as the running of practical sessions and experiments for visiting student groups.

Note: All Baylab operations at 400 South Oak Way are under the control of the Baylab Manager.

Supervision of student groups: See GP-RA-09 *Baylab and Inspiration Space at Green Park*.

Spillages: All spillages to be cleaned up immediately and hazardous waste disposed of through our specialist contractor in accordance with the local waste disposal arrangements. Suitable spill kits are provided for all potential spillages.

Personal Protective Equipment: Lab coats are supplied and should be worn during sessions in the Lab. PPE required for the various experiments and procedures have been specified and will be provided to the student groups as required. This might include lab coats, suitable gloves, and safety eyewear. Normal uniform or day wear should be worn as Lab coats will be provided.

Fire and First Aid: The actions to be taken in all foreseeable emergencies and incidents are laid down in our Health and Safety Manual and are available to view on request. The Baylab Manager is a trained first aider.

General: Good laboratory practice must always be followed. Long hair must be safely tied back; ties should be removed or tucked into shirt/lab coat before entry into Baylab. For general advice on health and safety see Health and Safety Executive web site: www.hse.gov.uk/

Note: In addition to this Risk Assessment, Bayer employees and contractors must read and understand all relevant sections within the Bayer Health and Safety Manual. This can be accessed via the Health and Safety SharePoint site.

Please contact the Health and Safety Team based in Reading for any further advice or assistance – our email address is GB-CP-HS@bayer.com

Hazard	Persons at Risk	Risk rating (FF x SF)	Controls and Safe Working Procedures	Additional Controls Recommended
General use of equipment	Baylab Team, student groups and any other people in vicinity	2 x 3 = 6	<p>Ensure sufficient working space around equipment for task</p> <p>Suitable selection of equipment and use restricted to intended purpose</p> <p>All equipment to be maintained in accordance with manufacturer's recommendations</p> <p>Ensure good housekeeping in area</p> <p>Faulty or defective equipment to be removed from use and repaired, recycled, or disposed of</p> <p>PAT testing regime in place and visual checks of all portable electrical equipment prior to use</p> <p>Use of any items of equipment to be demonstrated to students before operation</p> <p>Student use of equipment must be supervised at all times</p> <p>Access to Baylab area is restricted to authorised employees and visiting student groups only</p>	Where new equipment is introduced, a full induction must be provided before use. Training for equipment use by supervising adults is the responsibility of the Baylab Manager.
Slips, trips, and falls	Operator, student groups and others in vicinity	2 x 3 = 6	<p>Ensure good housekeeping in Baylab and Inspiration Space</p> <p>No running allowed in area</p> <p>Signage to be used if necessary to exclude others from designated areas</p> <p>Walkways must always be kept clear</p> <p>Wear suitable footwear</p> <p>Ensure adequate lighting of area</p> <p>All spillages to be cleared immediately</p> <p>Personal items such as bags and coats are stored in closed cupboards</p>	Ensure good cable management to prevent cables becoming a tripping hazard.

Hazard	Persons at Risk	Risk rating (FF x SF)	Controls and Safe Working Procedures	Additional Controls Recommended
Spritzing of witch hazel	Operator, student groups and others in vicinity	1 x 3 = 3	Baylab Manager to demonstrate correct use of spritz bottles Use of spritz bottles always supervised to ensure safe use	
Use of oven	Operator, student groups and others in vicinity	1 x 3 = 3	Baylab Manager or supervising adult to put bath bombs in oven and take them out using appropriate heat proof gloves Supervising adult to ensure plenty of space is left around oven; students not to crowd around the oven. PAT testing and visual check before use	Oven is set at 50°C to dry bath bombs.
Use of hotplate	Operator, student groups and others in vicinity	1 x 3 = 3	Hotplate to be operated by Baylab Manager or responsible adult only Students to use silicone 'hot hands' or heat-proof gloves to handle hot containers Use of hot plate always supervised by adult Hotplate to be turned off after use PAT testing and visual check before use	Hotplate used to melt butters/waxes. During this task – a 'one-way' pedestrian traffic system is in operation.
Measuring and mixing citric acid and sodium bicarbonate	Operator, student groups and others in vicinity	1 x 3 = 3	All weighing and measuring to be performed under strict supervision Students will be shown the correct way to weigh powders to minimise dust creation Students will be warned to not stir mixture too vigorously	
Use of fragrance oils	Operator, student groups and others in vicinity	1 x 3 = 3	Students are advised to avoid any fragrance oil to which they may have a reaction All fragrance oils are cosmetic/food grade	All students to be asked about allergies and potential reactions during introduction.

Hazard	Persons at Risk	Risk rating (FF x SF)	Controls and Safe Working Procedures	Additional Controls Recommended
Use of flavour oils	Operator, student groups and others in vicinity	1 x 3 = 3	Students are advised to avoid any flavour oil to which they may have a reaction All flavour oils are cosmetic/food grade	All students to be asked about allergies and potential reactions during introduction.
Use of oils in lip balm	Operator, student groups and others in vicinity	1 x 3 = 3	Students are advised to avoid any oils to which they may have a reaction. All oils are cosmetic/food grade	All students to be asked about allergies and potential reactions during introduction.
Pouring hot lip balm into pot	Operator, student groups and others in vicinity	1 x 3 = 3	Pouring of hot lip balm to be supervised by Baylab Manager or responsible adult Students to use silicone 'hot hands' or heat-proof gloves to handle hot containers Students advised not to handle pot until the balm has cooled	
Use of glassware	Operator, student groups and others in vicinity	2 x 2 = 4	Students will be supervised to ensure glassware is handled correctly to prevent breakage Baylab Manager ensure all attendees are instructed not to touch any broken glass All breakages to be cleared up immediately and glass to be disposed of suitably	Note - Glassware may include; beakers, capillary tubes, microscope slides, chromatography tanks and lids, glass bottles.

Hazard	Persons at Risk	Risk rating (FF x SF)	Controls and Safe Working Procedures	Additional Controls Recommended
Storage and use of chemicals	Operator, student groups and others in vicinity	1 x 3 = 3	<p>Students will work with suitably diluted solutions</p> <p>All spillages to be cleaned immediately</p> <p>All chemicals to be used under supervision of Baylab Manager or responsible adult</p> <p>Chemicals to be stored in appropriate cabinets with appropriate segregation</p> <p>Minimum quantities of chemicals to be stored at all times</p> <p>Chemicals to returned to storage when not in use</p> <p>COSHH assessments to be in place to cover use of all chemicals</p> <p>Suitable PPE to be worn, as determined by Baylab Manager, which may include nitrile gloves and eye protection when handling chemicals</p>	<p>Note: See relevant COSHH assessments.</p> <p>Only small quantities of low molarity chemicals used.</p> <p>Waste chemicals to be disposed of in accordance with COSHH assessment and waste policy.</p>
Use of final products	Operator	1 x 3 = 3	<p>Students to be advised against use of product if they have sensitive skin</p> <p>Students should rinse skin thoroughly with water if irritation occurs upon use</p>	Final products: bath bombs and lip balm.

Hazard	Persons at Risk	Risk rating (FF x SF)	Controls and Safe Working Procedures	Additional Controls Recommended
Exposure to potential allergens	Operator, student groups and others in vicinity	2 x 3 = 6	<p>Attending groups to inform in advance of any allergy, medical condition, or access requirement that may affect visit to Baylab</p> <p>Visiting school or group to obtain parental permission to attend Baylab</p> <p>The chemicals, substances and natural items used in this workshop are:</p> <ul style="list-style-type: none"> • Sodium Bicarbonate • Lemon juice • Water • Beeswax • Citric acid • Witch hazel • Colours – food colouring • Fragrance • Peach kernel oil • Avocado oil • Flavourings – food grade • Powdered pigments – cosmetic grade 	

Calculating the Risk Rating

Risks are assessed by rating the impact and the probability as low, medium, or high, given the controls that are in place, as shown below. The numbers are multiplied together to give a score; the higher the score the greater the requirement to address that risk.

Risk is a combination of two factors:

- The likelihood that an adverse event will occur – the *Frequency Factor*
- The severity of the consequences of the adverse event – the *Severity Factor*

To make an assessment:

- Assess the frequency with which an accident may occur and take the numerical value from the table below for *Frequency Factor*. This assessment should be based on available data, such as reported accidents, or on knowledge and experience of the assessor.
- Assess the severity of injury the hazard could cause and take the numerical value from the table below for *Severity Factor*.
- Multiply the Frequency Factor by the Severity Factor to obtain the Risk Rating.
- Consult the Threshold Values given below to decide whether further controls are required.

Risk rating (RR) = Frequency Factor (FF) x Severity Factor (SF)

Frequency Factor	Severity factor
1 = Improbable Occurrence (<1/ year)	0 = No identified effect
2 = Possible Occurrence (Once/ year)	1 = Trivial Injury (no lost time)
3 = Occasional Occurrence (>2/ year)	2 = Minor Injury (≤ 7 days absence)
4 = Frequent Occurrence (>1/ quarter)	3 = Major Injury to One Person (RIDDOR reportable)
5 = Regular Occurrence (>1/ month)	5 = Major Injury to Several People or Fatality

Risk Assessment Conclusion:

The controls identified are accepted as being suitable and sufficient to allow this task to proceed.

Risk Level Rating

Threshold Values for Risk Ratings

0 – 8	LOW LEVEL OF RISK	Acceptable risk within existing control measures
9 – 11	MODERATE LEVEL OF RISK	Put on hold and investigate further controls
12 +	HIGH RISK LEVEL OF RISK	Stop immediately and reassess process

Record of Reviews and Controls Identified:

Date of review:	17th July 2023
Reviewed by (list all names Involved in review process):	Lucy Haywood and Emma Schierbaum
Extra Controls Identified:	Corrective Action Taken and Completed Date:

Register of Changes Made:

Description of Change:	Date of Change:	Made by:

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