



HAZARDOUS SUBSTANCE RISK ASSESSMENT FORM

This document fulfils the requirements of the COSHH and DSEAR Regulations relating to a written risk assessment

***** WHEN COMPLETING THE FORM REFER TO GUIDANCE NOTES ON SAFETY OFFICE WEBSITE *****

Experiment / Procedure / Process / Activity / Demonstration (include a brief description):

APTMS Binding and Detection This procedure facilitates the binding of APTMS onto Whatman No.1 or No. 41 papers followed by FITC detection procedures

Frequency (hourly, daily, weekly, monthly or 'one-off'): **Monthly**

Hazardous substances to be used (List ALL substances including solvents, expected products and by-products):

Can any of the substances be substituted with a less hazardous substance or form of the substance? **NO**

If **yes**, you must do so, or justify not using it. _____

Substance	Approx. quantity	Physical Form gas, liquid, solid, dust	Hazards Toxic, flammable, corrosive, irritant, easily absorbed through skin etc	WEL Work Place Exp Limit	Risk Phrases / GHS Hazard Statements (see guidance note lists)	Potential Exposure Route(s) inhalation, ingestion, injection, absorption
APTMS	0.5 ml	Liquid	Corrosive		H227, H314, H315, H318	Absorption
95% Ethanol	5 ml	Liquid	Flammable, irritant		H225, H319	Absorption
8 mol% HCl	5 ml	Liquid	Corrosive, irritant		H290, H314, H335	Absorption
16 mol% NaOH	5 ml	Liquid	Corrosive		H290, H314	Absorption
Acetone	5 ml	Liquid	Flammable, irritant, hazard		H225, H319, H336	Absorption
FITC	100 mg	Solid	Toxic		H314, H334	Absorption
NH4Cl	10 mg	Solid	Irritant		H302, H319	Absorption

Which are the significant chemical hazards? _____ No major chemical hazards _____

Risks associated with the procedure: (non-chemical risks require additional risk assessment- see safety office website)

Handling of small amounts of hazardous chemicals

Note: DSEAR risk considerations include:

Is there any substance used or formed that might give rise to a fire or explosion (e.g. reactive intermediates)? No

If **yes**, how will you ensure that no fire or explosion occurs (inc. the consideration of eliminating ignition sources):

Is it reasonably foreseeable that the lower explosive limit (LEL) will be reached in the room or area of the work? N/A

If **yes**, a more detailed risk assessment may be required under the Dangerous Substances Explosive Atmospheres Regulations.

For further guidance on DSEAR see HSD073C and the DSEAR risk assessment form HSD080C

Are any of the substances a Category 1 or 2 carcinogen, a mutagen, a substance toxic to reproduction, a respiratory sensitizer or a skin sensitizer? Yes

(Risk Phrases: R42,R43,R45,R46,R49,R60,R61,R63,R64 or Hazard Statements:H334,H317,H350,H340,H350i,H360f,H360d,H361,H362)

Work with these compounds must be carried out in a fume cupboard where reasonably practicable. A health record must be completed.

Control Measures:

Containment:

Fume cupboard
 Glove box / isolator
 Safety cabinet
 Local exhaust ventilation

Personal Protective Equipment:

Lab coat / overalls
 Gloves
 Glove type: Nitrile
 Eye Protection (i.e. safety glasses, goggles, face shield)

Additional:

Storage requirements (specify): _____

Other control measure (specify): _____

Is health surveillance required? y/n

type: _____

Respiratory protective equipment (RPE) *

RPE type: _____

* Under COSHH all RPE requires face-fit testing

Monitoring: Gas, Vapour or Dust No Specify what and how : _____

Are any additional controls required not covered above? (training, instruction, information or maintenance)

Appropriate training in accordance with Safe Standard Operating Procedure

Are there additional non-chemical hazards requiring further risk assessment? No Ref No: _____

Waste Disposal Routes: Refer to University and departmental policy.

Consider segregation, containment and appropriate labelling of waste in order to avoid problems of mixing incompatible wastes.

Chlorinated solvent Aqueous (hazardous) Other (specify): _____

Non-chlorinated solvent Aqueous (non-hazardous)

Identify incompatible wastes: _____

NB: The mixing of incompatible wastes can introduce significant additional hazards, consult literature and MSDSs

Emergency Procedures (emphasise any special hazards):

Fire Extinguisher: CO₂ Dry Powder L2 D-metal

Spillage/Uncontrolled Release: Spill Kit Evacuate Area Wash Down Area

Other (specify): Wash and rinse all affected areas immediately upon exposure

What could happen if there was catastrophic failure of the apparatus? _____

In the event of an accident, who might be exposed? The direct researcher only

Emergency Treatment in Case of Contamination or Exposure:

Exposure/Contamination – standard procedures (special procedures MUST be detailed below) **Read and Understood**

Mouth, Eyes, Skin Exposure – flush area of contact with plenty of water, contact a First Aider; **Lungs** – remove to fresh air, contact a First Aider.

If swallowed – contact a First Aider, get details of substance ingested and seek medical attention immediately.

If casualty unconscious – contact a First Aider immediately and call an ambulance.

Other (specify): _____

Assessment Reference:

It is agreed that application of the control measures specified will provide adequate management of the identified risks.	
Name of assessor:	
Signature:	Date:
Name of co-signatory: (e.g. Supervisor / authorised deputy)	
Signature:	Date:

Note: This risk assessment is valid for one year after which time it MUST be reviewed.