



This form is to be used in conjunction with the Environment Health and Safety Manual Procedure 3.2 Hazard Identification, Assessment and Control - Application.

Information of Activity

Activity: Flash Chromatography Location: Chemistry

Identified by: G. Papadopoulos Date: 12/6/07

Identified Hazard / Aspect: Exposure to chemicals of unknown toxicity, apparatus under positive pressure

Risk Analysis matrix – level of risk

| Identified Hazards | Risk Assessment | | | Risk Score | Risk Level |
|--|-----------------|----------------|-----------------|------------|------------|
| | Exposure (E) | Likelihood (L) | Consequence (C) | E x L x C | |
| Exposure to research compound (unknown toxicity) | 6 | 0.3 | 5 | 9 | M |
| Explosion of apparatus while under +ve pressure | 6 | 0.3 | 5 | 9 | M |

| Definitions | | | | | |
|-----------------|--------------------|-----------------|---|---|--|
| Exposure E | Likelihood L | Consequence C | Risk Score | Hierarchy of Risk Controls | |
| Continuously 10 | Almost Certain 1.0 | Catastrophic 20 | E >20 H >10 M 3-10 | Elimination is a permanent solution and should be attempted in the first instance. Substitution involves replacing the hazard or environmental aspect by one of lower risk. Engineering controls involve physical barriers or structural changes to the environment or process. Administrative controls reduce hazard by altering procedures and providing instructions. Personal protective equipment last resort or temporary control. | |
| Frequently 6 | Likely 0.6 | Major 10 | | | |
| Occasionally 3 | Possible 0.3 | Moderate 5 | | | |
| Infrequently 2 | Unlikely 0.1 | Minor 2 | L < 3 | | |
| Rarely 1 | Rare 0.05 | Insignificant 1 | | | |

LEGEND

E: extreme/significant risk; immediate action required; must be managed by senior management with a detailed plan, notify RMO immediately.

H: high risk, senior management attention needed, detailed research and management planning at senior levels

M: moderate risk, management responsibility must be specified; manage by specific monitoring or response procedures

L: low risk, manage by routine procedures; unlikely to need specific allocation of resources

Details of Risk Controls to be Taken

Risk Controls: (These should be determined by both the person(s) identifying the risk and the responsible manager and HSR or Environmental Representative). When determining risk controls refer to Hierarchy of Risk Control. Some examples are operating manuals, safe work procedures, licenses, permits to work, training and instruction etc

Supervision: New users must be trained by senior member of the laboratory who is sufficiently competent to give instruction on the correct procedure. Newly trained users should be supervised for the first few attempts by a competent person.

Use: Consult with the relevant MSDSs for chemicals used. If the eluent is a hazardous substance or a dangerous good, the apparatus must be set up in a fume hood. Check glassware prior to use to ensure there are no cracks or visible flaws, thereby ensuring failure of the glassware is minimised. Use a shield to prevent glass particles ejected into the lab in the event of glass failure. Ensure a mechanism for the release of excess pressure is incorporated into the apparatus, eg. a ground glass joint secured with rubber bands that will be the point of first failure.

PPE: Lab coat, appropriate gloves and safety glasses must be worn.



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RISK ASSESSMENT 3D Model EHS Manual

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Person assessing the risk: G. Papadopoulos Date: 12/6/07

Authorised by: G. Papadopoulos Planned completion date: _____

| |
|--|
| Risk Control Measures Completed |
|--|

Actions by: _____ Completed (Initials & date): _____