



COSHH FORM

Always follow good laboratory practice, full guidance at <http://www.docs.csg.ed.ac.uk/Safety/policy/p5cl/p5cl2.pdf>

Each section has corresponding in depth guidance (section 2) for completion – please ensure you follow this guidance when completing this assessment http://www.docs.csg.ed.ac.uk/Safety/ra/COSHH_notes.pdf

This form can be used to evaluate the hazards of a single substance, group of related substances or a process/procedure as well as any proprietary purchased materials.

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|-------------------------------|--|--------------------|-----------------------|
| School/Management Unit | Clinical Sciences/MRC Centre for Reproductive Health | Assess. No. | SuRF-COSHH-IMM-008.01 |
| Title of Activity | Heat-induced Epitope Retrieval (HIER) Using a Pressure Cooker | | |
| Location(s) of Work | Laboratories E1.25 / E1.28 of the Shared University Research Facilities (SuRF) within The Queens Medical Research Institute (QMRI), 47 Little France Crescent, Edinburgh, EH16 4TJ | | |

Outline of task/method: Most formalin-fixed tissue requires an antigen retrieval step before immunohistochemical staining can proceed. This is due to the formation of methylene bridges during fixation, which cross-link proteins and therefore mask antigenic sites. Heat-induced epitope retrieval (HIER) is believed to reverse some cross-links and allows for restoration of secondary or tertiary structure of the epitope. The protocol must be optimized for each tissue, fixation method, and antigen to be studied. HIER is performed using microwave ovens, pressure cookers, vegetable steamers, autoclaves, or water baths. **Refer to Standard Operating Procedure: SuRF-IMM-008**

| Assessment History: | | |
|----------------------------|--------------|---------------------------|
| Number: | Date: | Reason for Change: |
| 01 | 01/03/2016 | Original |
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1.0 Hazards, including any substances produced during the procedure

| Hazard(s) – state name of substance(s) and classify hazard (see guidance notes) | Present Risk Evaluation Low/Med/High | Control Measures (i.e., alternative work methods / mechanical aids / engineering controls, etc.) | Risk Evaluation after control Low/Med/High |
|---|---|---|---|
| Epitope Retrieval Solution pH6 Irritant R-PHRASES: 36/37/38/41 | Low | . Use of appropriate laboratory Personal Protective Equipment (PPE). . Training and supervision . Refer to Material Safety Data Sheet | Low |
| Epitope Retrieval Solution pH8 Non-hazardous | Low | . Use of appropriate laboratory PPE. . Training and supervision . Refer to Material Safety Data Sheet | Low |
| Epitope Retrieval Solution pH9 Irritant R-PHRASES: 36/37/38 | Low | . Use of appropriate laboratory PPE. . Training and supervision . Refer to Material Safety Data Sheet | Low |

Risk evaluation should be based on hazard classification and hazard statements – if control methods stated above reduce the risk to low at this point, the risk assessment is complete. If any medium to high hazards remain, please continue to complete the rest of the form.

2.0 Exposure route(s) by which harm may occur

| Skin Contact | Skin Absorption | Eye Contact | Inhalation | Ingestion | Injection via sharps |
|--------------|-----------------|-------------|------------|-----------|----------------------|
| | | | | | |

3.0 Engineering Control Measures (Fume cupboards/LEV etc.)

State any engineering controls required for this task/method;

4.0 Personal Protective Equipment (PPE)

State any PPE required for this task/method. Include which type and when they are to be worn;

Eye protection:

Hand protection:

Special clothing:

Face protection:

Respiratory protection:



5.0 Health Monitoring

| | | |
|---|-----|----|
| Is biological monitoring required to ensure that the control of exposure to the hazardous substance(s) is adequate? | Yes | No |
| Is health surveillance required for the protection of the health of employees? | | |

If yes for health monitoring, contact the Occupational Health Unit for an appointment (occupational.health@ed.ac.uk, 50 8190)

6.0 Training

State any health and safety training required for this task/method;

7.0 Supervision

State what supervision (if any) is required for persons undertaking this task/method:

8.0 Implications for persons not involved in the work activity

Persons identified may require to be informed, in part or in full, of the information contained in the Safe System of Work.

9.0 Emergency procedures

State all emergency procedures including contact names and numbers;
First Aid:
Fire fighting:
Spill Management:
Any others:

10.0 Waste disposal

State waste disposal routes for all hazardous substances in this task/method;

If in doubt contact the University Waste and Environmental Manager Ext. 514287.

| | | |
|---|-----|----|
| Are you satisfied that the control measures outlined above are adequate to control the risks to health from the hazardous substances used in the work activity described to the lowest level reasonably practicable? If no, work can not continue until safe to do so | Yes | No |
| | | |



11.0 Accreditation and verification of COSHH risk assessment

When this assessment is complete it should be signed and dated by the assessor and then checked and signed by the person responsible for operations in that section of the School/Unit where the work is being carried out. You must ensure that the person undertaking the task is competent to do so and has received sufficient information, instruction and training and has seen and signed the Safe System of Work.

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| Assessed by: | Lyndsey Boswell | Checked by: | Robin Sellar |
| Signature: | | Signature: | |
| Date: | | Date: | |

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