

NDMRB-RA-026

Risk Assessment: AEC/DMF in ELISPOT assays

Scope

The Enzyme-Linked Immunosorbent Spot (ELISPOT) Assay is a powerful immunologic technique for detecting and characterizing antigen-specific, cytokine-secreting T cells at high resolution. However, some of the reagents used in this assay are particularly toxic and users must have read and understood the COSHH risk assessment before they can commence work on this technique.

This assay must be carried out in the Containment Level 3 suite if the cells of interest contain pathogen categorised as Hazard group 3 by the ACDP.

3-Amino-9-ethylcarbazole (AEC), COSHH: toxic, health hazard (H301 Toxic if swallowed.H350 May cause cancer)

Dimethyl Formamide (DMF), COSHH: harmful/irritant, health hazard, flammable (H226 Flammable liquid and vapour. H312 + H332 Harmful in contact with skin or if inhaled H319 Causes serious eye irritation. H360D May damage the unborn child.)

It is the users responsibility to ensure what controls are needed to ensure that the health of themselves and others around them. It is imperative that you **DO NOT** start any work until you are absolutely sure of the appropriate precautions that need to be employed. If you are unsure seek advice from your line/laboratory manager or your departmental safety officer (DSO).

Name of assessor:	Tiphaine Bouriez-Jones/Andrea Keepence-Keyte	Date of Assessment:	April 2015	Review Date:	Every 3 years
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Risk Matrix:

Risk Matrix		Likelihood			
		High	Medium	Low	Negligible
Consequence	Severe	High	High	Medium	Effectively Zero
	Moderate	High	Medium	Medium/low	Effectively Zero
	Insignificant	Medium/Low	Low	Low	Effectively Zero
	Negligible	Effectively Zero	Effectively Zero	Effectively Zero	Effectively Zero

Risk Assessment:

Hazard (Cause and consequence)	Affected Groups	Existing controls	Risk	Further Action
Work in CL3 – potential exposure to pathogen leading to the user illness.	Staff/students	Users will undergo a safety induction with the CL3 Safety Officer. They will be given on the job training and will have to demonstrate their experience before being given access to the CL3 suites. All work in the CL3 is subject to the CL3 Code of Practice.	Medium	All training must be completed to gain access to Cat 3 All SOP, RA and guidance must be read and included on training forms Health surveillance may be required, please speak to your supervisor before commencing work in Cat 3
AEC substrate – contains AEC and DMF, COSHH toxic, health hazard.	Staff/students	All users must have read and understood the COSHH form prior to commencing work. All controls highlighted in the SDS must be adhered to. Only tablet form of AEC will be used to reduce the exposure via inhalation and must be used in a fume hood at all times. DMF is purchased in liquid form only to reduce risk via inhalation. The preparation of the substrate must be done in a fume hood. Users must wear labcoat, gloves and safety glasses at all time whilst carrying out the procedure.	Medium	COSHH and SDS to have been read and signed off on training record

Signed By Author:

Approved by (sign and print):

Reviewed by:

Review date: