

NDMRB-RA-097

Risk Assessment: isothermal calorimetry and biolayer interferometry

Scope

The Risk Assessment outlines biophysical techniques including isothermal calorimetry (ITC) and biolayer interferometry (BLI). These techniques can be carried out in the Screening Laboratory at the Target Discovery Institute, 1st Floor. Currently, there are 1 VP-ITC, 1 ITC200, 1 nanoITC for isothermal calorimetry titrations and a forteBIO Octet RED for BLI measurements. They are all connected to Windows computers.

This replaces TDI-RA-037

Name of assessor:	Cynthia Tallant	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
Hamilton syringes for loading samples for the ITC cell and the use of needle-like BLI sensors. - Needle stick injury	Staff and students	In order to dispose broken or unused syringes: dispose of in an appropriate sharps container. DO NOT re-sheath needles	Low	
Methanol - Use of methanol to dry out the cell and syringes on the ITC 200. In case of disposal, use the appropriate organic solvent bin.	Staff and students	Full PPE to be worn	Low	All RA, SOP and COSHH are to be read and understood by all users before handling this chemical
Various protein inhibitors mainly dissolved in DMSO - DMSO is irritant to skin, eye and when swallowed.	Staff and students	Wear laboratory coat, gloves, and safety glasses to be worn when handling samples.	Low	All RA, SOP and COSHH are to be read and understood by all users before handling this chemical
Neutracon - 2% neutracon solution is used to clean up the equipment.	Staff and students	Full PPE to be worn	Low	All RA, SOP and COSHH are to be read and understood by all users before handling this chemical

Signed By Author:

Approved by (sign and print):

Reviewed by:

Review date: