

## NDMRB-RA-107

### Risk Assessment: Prepacked clean up columns

#### Scope:

Prepacked and in house prepared clean up columns are used frequently in the TDI for a whole range of processes. Clean up columns can be used either under pressure, vacuum or gravity. This RA is not applicable to column chromatography (silica powder in glass columns, prepared in house) which is covered by its own risk assessment NDMRB-RA-091.

The risks associated with this process are outlined within this assessment.

This replaces TDI-RA-047

<b>Name of assessor:</b>	Kathryn Pugh	<b>Date of Assessment:</b>	Nov 2015	<b>Review Date:</b>	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
<p>Silica gel, reverse-phase silica gel, alumina</p> <p>Irritation due to skin/eye contact with dry powder</p> <p>Irritation due to inhalation of dust.</p>	<b>Staff and Students</b>	<p>Use of prepacked columns avoids the risk of coming into contact with Silica gel, reverse-phase silica gel, alumina. However, on occasion specific, specialised columns may need to be prepared.</p> <p>Silica gel to be handled in a fume hood and relevant PPE to be worn during use – safety glasses, lab coat and gloves as a minimum</p>	<b>Medium</b>	None
<p>Organic solvents</p> <p>Irritation due to skin/eye contact with organic solvents</p> <p>Risk of fire with flammable organic solvents</p> <p>(see COSHH Assessments for Individual solvents)</p>	<b>Staff and Students</b>	<p>All staff must wear safety glasses, lab coat and gloves when handling organic solvent. All solutions must be prepared in a fume hood and kept away from all sources of ignition.</p> <p>All staff must read all relevant SOP, RA and COSHH associated with any chemical that they are working with.</p>	<b>Medium</b>	All staff must be trained in safety aspects for handling chemicals
<p>Solvent spray on pressurisation/application of vacuum</p>	<b>Staff and Students</b>	<p>All staff must wear safety glasses, lab coat and gloves. The sash on the fume hood must not be raised higher than is safe while the column is under pressure.</p>	<b>Medium</b>	All staff must be trained in the use of fume hoods and

		<p>If using a vacuum manifold on the bench ensure that the lid is properly before applying vacuum and apply vacuum slowly.</p> <p>When using gravity to clean up samples ensure that they are secured in a way that they will not be knocked over accidentally</p>		<p>columns under pressure/vacuum.</p>
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Signed By Author:

Approved by (sign and print):

Reviewed by:

Review date: