

SAFE OPERATING PROCEDURE (HIGH PRESSURE LIQUID CHROMTOGRAPHY HPLC) WATERS HPLC SYSTEM, SHIMADZU OPERATING/DATA SYSTEM,

LOCATION DETAILS

School/Branch: Medical Sciences

Task/activity (including specify particular equipment, substance)
Fast Analysis and/or separation of small samples, proteins, sugars,
peptides, disaccharides, amino acids.

Date prepared:
5/ 06 / 08

PREPARED BY Name, Position and Signature (insert names of the supervisor, HSR, HSO and operator involved)

Name Betty Reinboth

Position School HSO

Signature

RISK ASSESSMENT

Has a risk assessment been completed and
have all other environmental considerations
been made?

Yes No

See Risk Assessment dated:
3/ 06 / 08

Risk Rating: Low
 Medium
 High
 Very High

SAFE OPERATING PROCEDURE DETAILS

Procedure (Include control measures listed in risk assessment within the procedure):

HAZARDS: --

- Inhalation of toxic solvents
- Solvents and chemicals under high pressure
- Handling dangerous, hazardous and toxic chemicals and solutions
- Apparatus operated under high pressure

PREPARATION:

Wear PPE, including lab coat, gloves, glasses and use fume hood when ever possible when preparing solutions.

1. Any operator to be fully trained and initially supervised by an experienced operator.

Prepare, filter and degas all solutions in fume hood. Ensure all solution containers have cap or covers to prevent fumes escaping and dust entering solutions. Ensure all solutions are labelled with all details, safety phrases, name and date.

2. Turn on all pumps, detectors required, computer softwear program etc to warm up. Select appropriate program to be used (eg protein separation, disaccharide analysis etc). Modify program as required.

3. Prime all pumps and tubing with solutions ensure no air bubble in the system. Attach appropriate column, monitor flow and pressure to ensure no air bubbles.

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OPERATION:

4. Prime pumps, column and system with the mobile phase, ensuring no leaks in the system and the waste is collected in a sealed, appropriately labelled container.
5. When finished, flush the column with storage solution and remove and then flush pumps well with distilled water. Flush the system then with 20% methanol as a storage solution to prevent microbial growth..
5. Turn off power supply to all the pumps, detectors and computer system.
6. If using any salts be sure to flush the system well and clean up any leaks or residual buffer as this will corrode the stainless steel tubing and parts of the system. Neglecting to do this will reduce the life of the system and column.

Note: This Safe Operating Procedure must be reviewed :

- a) after any accident, incident or near miss;
- b) when training new staff;
- c) if adopted by new work group;
- d) if equipment, substances or processes change; or
- e) within 5 years of date of issue.