Metabolism

Measurement of bacterial metabolism

Risk assessment is valid for

Determination of metabolism

Analysis

The risk associated with this procedure will be minimized by following of this protocol.

List of Chemicals and Reagents

Chemical/reagent	Link	Stock/ User Concentration	Special Waste Disposal?* Y/N
Sulfuric acid	MSDS	18M / 0.00125M	N
Isotope ^{14}C	MSDS	1mCi / 0.1µCi	Y

Secure Job Analysis

Tasks	Unwanted Incidents	Precautions	Actions
Dilution of Isotope 1mCi ^{14}C	Inhalation and Skin contamination	Use double nitrile gloves and mouth masks. The work should be done in fume hood.	Wash the contaminated local with Plenty of water. Rinse eyes with water and Contact emergency if necessary.
Dilution of strong sulfuric acid 97% 18M	Burns on skin/eyes	Use nitrile gloves and Dilution of concentrated acid should be done in fume hood	Cool skin with cold water. Rinse eyes with water using eyewash spray head. Contact emergency if necessary.
Usage of 0.00125M sulfuric acid as mobile phase in HPLC system	Burns on skin/eyes	Use nitrile gloves	Cool skin with cold water. Rinse eyes with water using eyewash spray head. Contact emergency if necessary.

*Check SOP (Standard operating procedure) for further details

HPLC

SHIMADZU High Performance Liquid Chromatography (HPLC)

Risk assessment is valid for

Operation of HPLC

Analysis

If this protocol is followed, there is **minimal risk** associated with use of this procedure.

List of Chemicals and Reagents

Chemical/reagent	Link	Stock/ User Concentration	Special Waste Disposal
None		None	None

Secure Job Analysis

Tasks	Unwanted Incidents	Precautions	Actions
Loading of Samples	Spill of the isotope (^{14}c) mix from injector	Cover with foil during reading	Use wipe paper to wipe off spill use 70% ethanol as decontaminant and disinfectant. Sort the contaminated paper as radioactive trash. Cut the contaminated area of bench paper and Sort it as radioactive trash

Centrifuge

Centrifuges

Risk assessment is valid for

Operation of cetrifuges

Analysis

If this protocol is followed, there is **minimal risk** associated with use of this procedure.

List of Chemicals and Reagents

Chemical/reagent	Link	Stock/ User Concentration	Special Waste Disposal
None	MSDS	None	None

Secure Job Analysis

Tasks	Unwanted Incidents	Precautions	Actions
Loading of bacterial cultures and chemicals	Spill of chemicals and bacterial culture from samples	Use spicific tubes which tolerate proper chemicals and speed The use of gloves and lab coat are strongly recommented.	Use wipe paper to wipe off spill and ethanol 70% to decontaminate surfaces. And autocalving of rotor in worst cases of contamination
Usage of Rotor	Expired age of rotor corrosion	The use of a LOG book or other means of determining rotor usage is required	LOG book