

# Conjugated and Un-Conjugated Peptide RISK ASSESSMENT

Procedure name: Handling of translocation competent peptides unconjugated and conjugated to other peptides, proteins and DNA/RNA		Assessment Date:20/12/01 Review Date:20/12/02	Reference: Assessor Signature:Ken Bundell Co-ordinator signature: Alex Graham			
Substances used:	Hazard Category	Nature of Hazard	Quantity used	Type of Process	Exposure potential	Precautions
Unconjugated translocating peptides including: TAT Transportan Antennpedia kFGF	2 <b>HIGH</b> by default	Peptide has potential to enter all cell types but no hazard information available for the peptide itself. Should be degraded once within cell	Less than 1 gram and volumes less than 1 ml	Pipetting onto cells in tissue culture medium Cell lysis/harvesting	Medium due to peptide promoting skin absorption	Avoid contact with skin; avoid aerosols. Use PPE (gloves, eye protection) and BSC Dispose of all contaminated materials (i.e. plastics, tips etc) via sealed biohazardous waste bags. Aspirated medium to be disinfected in appropriate disinfectant prior to disposal via sink with copious amounts of water avoiding splashes or aerosols.
Above peptides conjugated to PNA/DNA, peptides and proteins: generic examples	2 <b>VERY HIGH</b>	Where conjugate would induce cell death, irreversible change, mutagenesis or carcinogenesis	Less than 1 gram and volumes less than 1 ml	Pipetting onto cells in tissue culture medium Cell lysis/harvesting	Medium	Avoid contact with skin; avoid aerosols. Use PPE (gloves, eye protection) and BSC Dispose of all contaminated materials (i.e. plastics, tips etc) via sealed biohazardous waste bags. Aspirated medium to be disinfected in appropriate disinfectant prior to disposal via sink with copious amounts of water avoiding splashes or aerosols.
Above peptides conjugated to PNA/DNA, peptides and proteins: generic examples	3 <b>HIGH</b> (OR <b>unknown by default</b> )	Where delivery of conjugate would induce reversible toxic or gene modulation effect	Less than 1 gram and volumes less than 1 ml	Pipetting onto cells in tissue culture medium Cell lysis/harvesting	Medium	Avoid contact with skin; avoid aerosols. Use PPE (gloves, eye protection) and BSC Dispose of all contaminated materials (i.e. plastics, tips etc) via sealed biohazardous waste bags. Aspirated medium to be disinfected in appropriate disinfectant prior to disposal via sink with copious amounts of water avoiding splashes or aerosols.

Disposal Method: See under “precautions”

Relevant references:

Comments and Exclusions: Due to unknown effect of cell delivery in most cases here, all peptides and conjugates should be treated as RG 1 or 2.

Emergency Procedures: Small spills to be disinfected and disposed of via sealed biohazard wastes bags; amounts used very small so large spills impossible

Key: CFH = Chemical Fume Hood, CB = Clean bench, and BSC = Biological Safety Cabinet