

Risk Assessment: Transfection of 293T Cells

Scope

Human Embryonic Kidney 293 cells, also often referred to as **HEK 293, HEK-293, 293 cells**, or less precisely as **HEK cells**, are a specific cell line originally derived from human embryonic kidney cells grown in tissue culture. HEK 293 cells are very easy to grow and transfect very readily and have been widely used in cell biology research for many years. They are also used by the biotechnology industry to produce therapeutic proteins and viruses for gene therapy.

It is the users responsibility to ensure what controls are needed to ensure that the health of themselves and others around them. It is imperative that you **DO NOT** start any work until you are absolutely sure of the appropriate precautions that need to be employed. If you are unsure seek advice from your line/laboratory manager or your departmental safety officer (DSO).

This replaces VI-RA-017

Name of assessor:	Tiphaine Bouriez-Jones	Date of Assessment:	May 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
Exposure to Trypan Blue Health hazard: H350 May cause cancer	Staff, students and visitors	Chemical stock are available in solution only. Via skin adsorption: User must wear gloves and labcoat at all time. Only plastic slides will be used to reduce the risk of cut. Via instillation (eye): User must wear safety spectacles at all time. See specific COSHH risk assessment.	Medium	None
Exposure to Virkon powder or Virkon solution	Staff, students and visitors	Via inhalation: stock of powdered Virkon kept away from draft, with its lid in place. Via skin adsorption: User must wear gloves and labcoat at all time. Via instillation (eye): User must wear safety spectacles at all time. See specific COSHH risk assessment.	Medium	None
Exposure to chemical involve in the procedure Geneticin (G418) H317 -May cause an allergic skin reaction H34 -May cause allergy or asthma symptoms or breathing difficulties if inhaled H316 -Cause mild skin irritation	Staff, students and visitors	Users are trained to use and store chemicals safely. Inhalation: Stock are in solution only – no aerosol should be produced in this assay. Skin adsorption: Users must wear gloves whilst working in CL2 laboratories. Eye instillation: users must wear safety spectacles at all times whilst working in CL2 laboratories.	Medium	None

<p>Industrial Methylated Spirit (IMS): H225 Highly flammable liquid and vapour. H302 Harmful if swallowed.</p> <p>Lipofectamine: H316 -Cause mild skin irritation H351 -Suspected of causing cancer</p>				
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Signed By Author:

Approved by (sign and print):

Reviewed by:

Review date: