APPENDIX 2 — HANDS

GLOVES

Gloves should be used in the following cases:

- To protect against accidental contact with chemical substances or biological hazards.
- To protect against abrasions and general mechanical hazards, e.g. when moving bricks and rubble, or when handling gas cylinders.
- To protect against extreme cold, for example when decanting liquid nitrogen via un-insulated pipework, or into an open vessel.
- To protect against heat. e.g. when welding or cutting, or when taking things such as agarose gels out of an oven or furnace.
- To give a good grip.
- To protect against electricity, or to have anti-static properties.

For each case, the glove specification is different.

NB Gloves must NOT be worn when using machinery as they can catch in moving parts, drawing the hand(s) into the machine.

PROTECTION AGAINST COLD

The current British Standard for these gloves is BS EN 511. If cold liquids are being handled, it is important to choose gloves that cannot soak up the liquid, and it is desirable to have gloves that will not allow liquid to dribble down inside and become trapped next to the skin.

Gloves for cryogenic service are NOT designed to allow you to immerse your hands in cryogens. This could cause serious injury.

The gloves insulation properties may be affected by for example air temperature, humidity, wind speed, time of exposure, activity level, health and well being of the user. If wet, the glove may lose its insulative properties.

Gloves worn to protect the hands from cold environments must be carefully selected—eg long insulating gauntlets when delving into –80 deep freezers, or cuffed insulating gloves when working with liquid nitrogen to prevent it from going inside the gloves.

PROTECTION AGAINST HEAT

Gloves and gauntlets for use when welding and thermal cutting should be approved to BS EN 407. These have no external seams to burn.

For less demanding applications, such as protecting the hand when withdrawing items from furnaces, or for kitchen wear, or for more specialised requirements, consult a supplier's catalogue.

PROTECTION AGAINST MECHANICAL HAZARDS

Gloves classified under BS EN 420 offer protection against superficial cuts, abrasions and mild detergents. They are suitable for general handling and light site work, packing, gardening and kitchen work.

Mechanical protection for intermediate risks is classified under BS EN 388, with four rated categories (see following table):

Abrasion	Performance index 1-4 (1 is the lowest performance rating)
Blade cut	Performance index 1-5
Tear	Performance index 1-4
Puncture	Performance index 1-4

A glove classified under this system could therefore have four performance indices associated with it. An X would indicate that a particular test was not appropriate (e.g. puncture in a knitted glove). These gloves are suitable for heavier handling tasks such as sheet metal handling, glass handling and refuse collection.

SINGLE-USE AND REUSABLE GLOVES

The College's Occupational Health Department conducted a survey of single-use disposable gloves and reviews this at intervals. The survey involved researchers, safety and technical personnel in many areas of the College, as well as the Purchasing Department. This resulted in a range of gloves selected for comfort, strength, dexterity, cuff length, durability etc. Suppliers continue to provide the gloves that were favourites in the survey at a discount to the College.

Please go to the College Occupational Health website: http://www.imperial.ac.uk/occupational-health/health-protection-at-work/gloves/ for the College Latex Glove policy and a wealth of advice on single-use gloves and their selection, skin care, and with links to Purchasing.

Commonly used disposable gloves are not suitable for extensive wet work with chemicals, or use with aggressive chemicals, as they only provide splash protection in most instances.

HAZARDOUS SUBSTANCES AND GLOVES

There are stringent requirements to ensure contamination from gloves is not spread to equipment, controls, taps etc within or outside of the laboratory, such as door handles and lift buttons. Such requirements seem obvious, but are not always followed and may need to be enforced by the laboratory manager and the supervisor.

Please note too, that there are specific requirements when working with ionising radiation, which should be detailed in the Local Rules and in any associated risk assessment and Radiation Dose Risk Assessment, such as the type of gloves to wear, the need to monitor them frequently, and the need to change them immediately if any damage or permeation is suspected, and finally to dispose of as contaminated waste. Contact the relevant Radiation Protection Supervisor for advice.

SINGLE GLOVED HAND TO PROTECT THE WORK

Researchers often wish to protect their work from RNA or other contamination whilst they are carrying it, and opt to wear a single glove on the relevant hand, leaving an un-gloved hand free to open doors, operate lift buttons etc. This practice is not acceptable. Instead items must be double-contained in a sealed box if necessary. This avoids any possibility of sample contamination and considerably reduces the additional risk of spillage outside of the laboratory.

In any case the use of gloves on *both* hands outside of the laboratory, no matter for how short the distance or time period, is absolutely forbidden. It sends the wrong message to other lab users and students who may think this is acceptable, and gives a poor impression to staff and sponsors visiting to the College.

To help enforce the message of no gloves and why this is important, the following poster is available electronically from the Safety Department.

Imperial College
London

Gloves must not be worn outside the research laboratory



Gloves may become contaminated during research procedures

WEARING GLOVES IN PUBLIC AREAS MAY LEAD TO CROSS-CONTAMINATION

Gloves must be removed before entering any unrestricted areas.

Everybody has a duty of care to other building users

TRANSPORTING SPECIMENS


You must use secondary containers to transport samples between locations eliminating the need for gloves,

reducing the risk of contaminating your samples – and of spills in the corridor

Imperial College
London

Safety Department - 2013