I'd like to welcome all of the new students, staff, and faculty that have joined us for this school year. You have all been chosen specially because of your promising backgrounds and talents to study at the University. Each of you has the potential to be a real contributor to your chosen field of study and to advance the state of science during your careers. Science is an exciting thought provoking activity with enormous rewards and challenges. Working on the cutting edge of science by definition means that you are working in the realms of the known and the unknown simultaneously. That means that there is the potential for danger as well as achievement and the satisfaction of discovery.

Working safely does 1dopsa1ÉÌlng so32g80Td0902315Tj/TT01Tf0.001280Tde35Td2nr[Threquires

o detail. When preparing to embark on a trip, the first item of address

destination is selection of the items required while away from home. This

looking forward to see what your needs might be and to plan for your needs.

Likewise, when embarking on a journey of discovery you also need to set your

destination and plan ahead to understand as best you can what your experiment safely. You sh

what chemicals, glassware or other equipment will be needed.

involve hyd 1turn your hair white? All of these factors should

the experiment. Once the extremes are known you can th

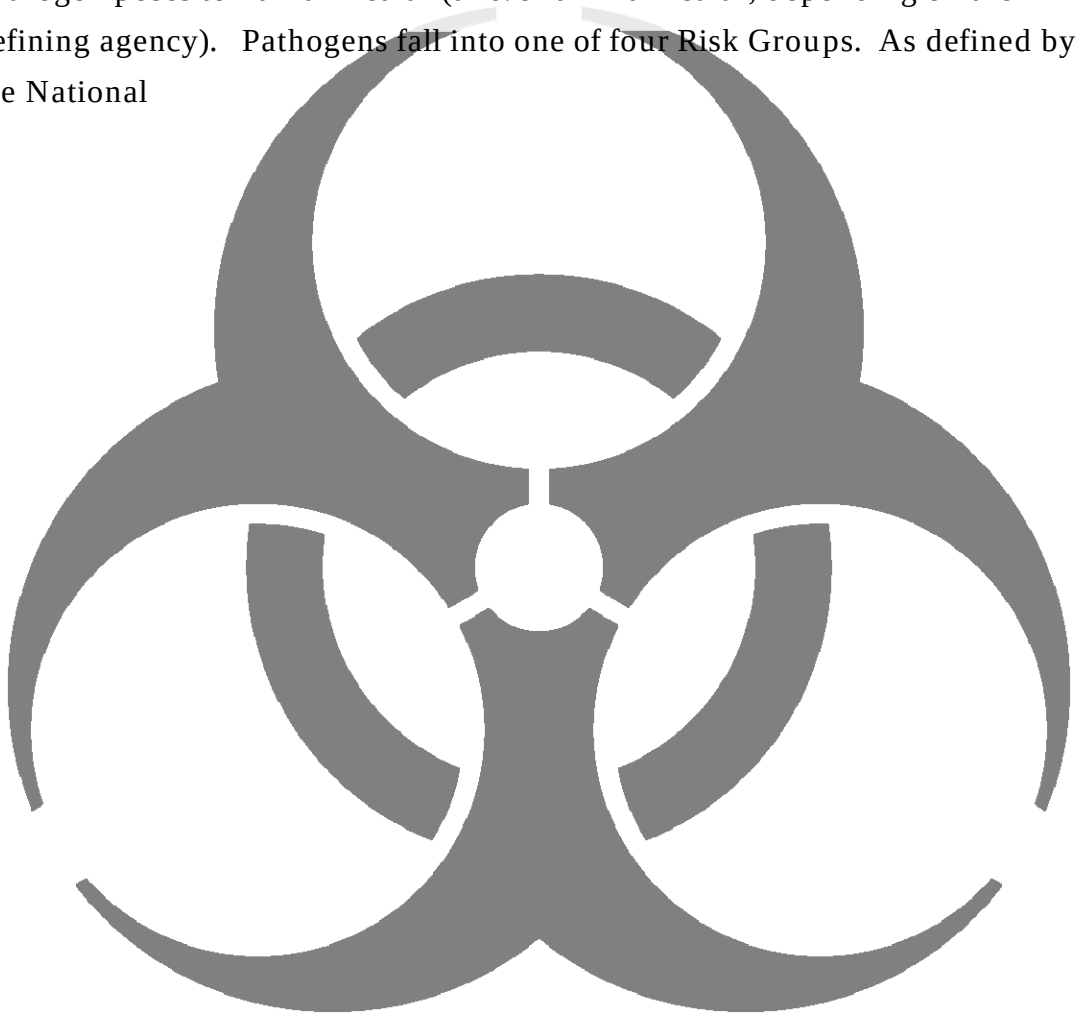
ematically look at

the safety requirements of the experiment.

The first compliance date of the revised Hazard Communication Standard (HCS) is December 1, 2013. By that time employers must have trained their workers on the new label elements and the Safety Data Sheet (SDS) format. This training is needed early in the transition process since workers are already beginning to see the new labels and SDSs on the chemicals in th

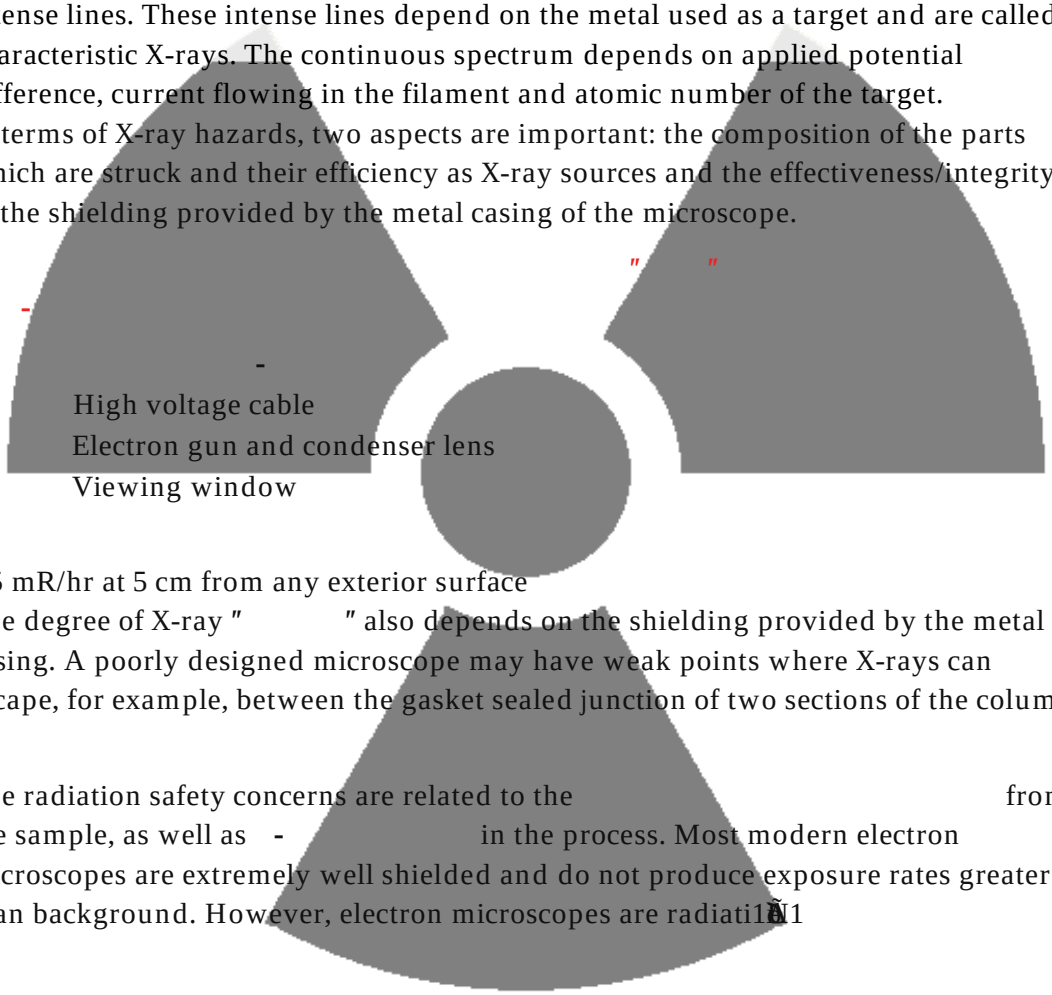
Many researchers will use the terms Risk Group (RG) and Biosafety Level (BSL) interchangeably, while some researchers aren't aware of the term Risk Group at all. So what do these words mean and how are they different?

A Risk Group is a term used to identify and categorize the danger a given pathogen poses to human health (and/or animal health, depending on the defining agency). Pathogens fall into one of four Risk Groups. As defined by the National



X-rays are produced in the electron microscope whenever the primary electron beam or back scattered electrons strike metal parts with sufficient energy to excite continuous and/or characteristic X-rays.

When we study X-rays from a target it is observed to be continuous spectrum with intense lines. These intense lines depend on the metal used as a target and are called characteristic X-rays. The continuous spectrum depends on applied potential difference, current flowing in the filament and atomic number of the target.
In terms of X-ray hazards, two aspects are important: the composition of the parts which are struck and their efficiency as X-ray sources and the effectiveness/integrity of the shielding provided by the metal casing of the microscope.



High voltage cable
Electron gun and condenser lens
Viewing window

0.5 mR/hr at 5 cm from any exterior surface
The degree of X-ray " " also depends on the shielding provided by the metal casing. A poorly designed microscope may have weak points where X-rays can escape, for example, between the gasket sealed junction of two sections of the column.

The radiation safety concerns are related to the from the sample, as well as - in the process. Most modern electron microscopes are extremely well shielded and do not produce exposure rates greater than background. However, electron microscopes are radiati1Ñ1

may be used as determined by appropriate risk assessment;

Laboratory personnel must have specific training in the procedures conducted in the laboratory and must be supervised by a scientist with training in microbiology or a related science.

Biosafety Level 2 builds upon BSL-1. BSL-2 is suitable for work involving agents that pose moderate hazards to personnel and the

either to confirm continued work at this level, or re-designate the level.

Laboratory staff must have specific and thorough training in handling extremely hazardous infectious agents;

Laboratory staff must understand the primary and secondary containment functions of standard and special practices, containment equipment, and laboratory design characteristics;

All laboratory staff and supervisors must be competent in handling agents and procedures requiring BSL-4 containment;

The laboratory supervisor in accordance with institutional policies controls access to the laboratory; and

There are two 1 1staf.t/TT31Tf0f0.0231Tj/TT31Tf0.0005Tcs0Tdj/n3T5Mac6TTf0T