

Fact Sheet



Instruments that generate large magnetic fields such as NMR Spectrometers are present in research laboratories. These magnets have fields of 1.4-23.5 tesla (T). The tesla is a unit of magnetic field strength.

The magnitude of magnetic fields decreases with distance. Many instruments have internal shielding which reduces the strength of the field.

Health Hazards:

The health hazards of magnets are being actively researched. There is currently no clear evidence of negative health impacts from exposure to static magnetic fields. Recently, guidelines have been issued by the International Commission on Non-ionizing Radiation (ICNIRP, 2009).

Physical Hazards

Magnets use liquid nitrogen and liquid helium coolants, so procedures regarding the use and handling of cryogenic liquids must be followed.

Labeling Requirements

Since magnetic fields operate in 3 dimensions, the field strength has to be checked with a magnetic field monitor on the floors above and below where the magnet is located. A .005T line should be identified, and warning signs should be posted.



A more detailed narrative regarding magnetic fields can be found in *Prudent Practices in the Laboratory*, 2011.