

Analytical X-Ray Safety Training

4. Legislation



Training Outline

- history
- sources and uses of X-Rays
- **legislation**
- biological and health effects
- X-Ray safety in the lab
 - exposure
 - SOPs
 - security
 - emergencies
 - summary
- references
- quiz

Ontario Ministry of Labour

- operates in accordance with the *Ontario Occupational Health and Safety Act*:
 - enforces its mandate by inspections
 - sets standards
 - establishes regulations for the possession and safe use of X-Ray equipment for non-medical uses

Ontario Reg 861 - X-Ray Safety

Sets criteria for controlling exposures to X-Rays and prescribes the requirements for registering all X-Ray equipment with the Ministry before equipment is used

Worker Protection: Occupational Dose Limits (designated X-Ray worker)

- 50 mSv annually whole body
- 50 mSv annually – to any organ, skin, or extremity
- 150 mSv annually – eye dose equivalent

General Public: 5 mSv annually (whole body)

Federal Guidelines

- Health Canada Safety Code 32: Safety Requirements & Guidance for Analytical X-Ray Equipment
- subject to workplaces regulated by Labour Canada

Federal Guidelines: Labour Canada Safety Code 32

- for any equipment using X-Ray tube in analytical equipment
- mainly for use for X-Ray diffraction equipment
- outlines responsibilities of owners of equipment, monitoring and decommissioning

Legislation Summary

Ontario Ministry of Labour establishes regulations for the possession, safe use of X-Ray equipment for non medical uses.

Ontario Regulation 861 sets worker exposure standards:

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Continue to: Biological and Health Effects