



This form is to be used in conjunction with the Environment Health and Safety Manual Procedure 3.2 Hazard Identification, Assessment and Control - Application.

Information of Activity

Activity: Use of Laser Pointers for presentations and lectures Location: Chemistry

Identified by: G. Papadopoulos Date: 28/6/07

Identified Hazard / Aspect: Possible injury to eye on exposure from incorrect use or deliberate misuse

Risk Analysis matrix – level of risk

Identified Hazards	Risk Assessment			Risk Score	Risk Level
	Exposure (E)	Likelihood (L)	Consequence (C)	E x L x C	
Exposure (personal injury to eye only)	1	0.3	5	1.5	L
Flash Blindness (5 mW or Higher)	1	1	5	5	M
Effective range of Exposure (50+ metres)	1	0.3	5	1.5	L

Definitions						
Exposure	E	Likelihood	L	Consequence	C	Risk Score
Continuously	10	Almost Certain	1.0	Catastrophic	20	E >20 H >10 M 3-10
Frequently	6	Likely	0.6	Major	10	
Occasionally	3	Possible	0.3	Moderate	5	
Infrequently	2	Unlikely	0.1	Minor	2	L < 3
Rarely	1	Rare	0.05	Insignificant	1	
Hierarchy of Risk Controls						
Elimination is a permanent solution and should be attempted in the first instance. Substitution involves replacing the hazard or environmental aspect by one of lower risk. Engineering controls involve physical barriers or structural changes to the environment or process. Administrative controls reduce hazard by altering procedures and providing instructions. Personal protective equipment last resort or temporary control.						

LEGEND

E: extreme/significant risk; immediate action required; must be managed by senior management with a detailed plan, notify RMO immediately.

H: high risk, senior management attention needed, detailed research and management planning at senior levels

M: moderate risk, management responsibility must be specified; manage by specific monitoring or response procedures

L: low risk, manage by routine procedures; unlikely to need specific allocation of resources

Details of Risk Controls to be Taken

Risk Controls: (These should be determined by both the person(s) identifying the risk and the responsible manager and HSR or Environmental Representative). When determining risk controls refer to Hierarchy of Risk Control. Some examples are operating manuals, safe work procedures, licenses, permits to work, training and instruction etc

- Never shine a laser pointer at anyone. Laser pointers are designed to illustrate inanimate objects.
- Do not allow minors to use a pointer unsupervised. Laser pointers are not toys.
- Do not point a laser pointer at mirror-like surfaces. A reflected beam can act like a direct beam on the eye.
- Do not purchase a laser pointer if it does not have a caution or danger sticker on it identifying its class. **Recommended:** The Laserex brand available from the Chemistry Store, as the maximum output is 0.95mW, is made in Australia and complies with relevant standards.

Deliberate staring into a 5 mW beam is potentially damaging to the eye, although most laser pointers are of lesser power. The natural aversion response of adults will protect their eyes from such lasers (such as the human blink reflex), although common sense says not to stare into the beam of any laser. The most serious



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hazard from laser pointers is accidents resulting from temporary effects on the eye. Momentary viewing of the beam from a laser pointer may cause temporary flash-blindness, similar in effect to viewing a photographic flash at close range. However, unlike the photographic flash, a laser pointer can cause flash-blindness up to 50 metres or more away. As with other types of laser products, laser pointers should always be used safely and in accord with relevant user guidelines as specified in AS/NZS 2211.1:2004.

Intentional exposure of another person may be treated as an assault, resulting in serious legal consequences.

Person assessing the risk: G. Papadopoulos Date: 28/6/07

Authorised by: G. Papadopoulos Planned completion date:

Risk Control Measures Completed

Actions by: G. Papadopoulos Completed (Initials & date): 28/6/07