CHEMICAL HYGIENE PLAN
AND
HAZARDOUS MATERIALS SAFETY MANUAL
FOR LABORATORIES

Emergency Contact Telephone Numbers

Revised March 2015

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UNIVERSITY OF NEW ENGLAND
CHEMICAL HYGIENE PLAN
AWARENESS CERTIFICATION

UNIVERSITY OF NEW ENGLAND
POLICY STATEMENT

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PART I

THE OSHA LABORATORY STANDARD

AND

THE OSHA LABORATORY STANDARD

HAZARDOUS CHEMICALS

physical hazard

Laboratory supervisors and principal investigators

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CONTROL MEASURES

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SAFE HANDLING OF CHEMICALS

Questions you should consider:

GENERAL SAFETY GUIDELINES

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MODEL WRITTEN STANDARD OPERATING PROCEDURES
SPECIAL PRECAUTIONS FOR WORKING WITH HAZARDOUS CHEMICALS

Special Precautions for Working with Corrosives:

Special Precautions for Working with Pyrophoric Materials:

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Special Precautions for Working with Compressed Gases:

Special Precautions for Working with Cryogens:

HEALTH HAZARDS

Special Precautions for Working with Embryotoxins and Reproductive Toxins

Special Precautions for Working with Chemicals of Moderate Chronic or High Acute Toxicity:

Special Precautions for Working with Chemicals of High Chronic Toxicity

Special Precautions for Animal Work with Chemicals of High Chronic Toxicity

BIOLOGICAL HAZARDS

RADIOACTIVE MATERIAL HAZARDS

IONIZING AND NON-IONIZING RADIATION HAZARDS

TRANSPORTATION OF HAZARDOUS MATERIALS

TRANSPORTATION OVER THE ROAD

larger spills

INJURY AND ILLNESS

GENERAL

APPENDICES

APPENDIX A

University-wide Safety Committee Charter

APPENDIX B

Incompatible Chemicals

The list should not be considered complete

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APPENDIX D
Shock-Sensitive Materials

APPENDIX E -

Cumulative poisons

Substances in combination

synergistic potentiating

Other Factors Affecting Toxicity

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-
-
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-
-

Physical Classifications of Toxic Materials

Gas

vapor

solubility

primary irritant

secondary irritant's

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- Eye hazards affect the eye or vision

APPENDIX F

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! R]<?5 : B7<(I M@BM(+5X7(5(+@KM(17KJ77(; A(- BR?7($; Q@B@?9(
T

Anabolic steroids (androgenic steroids)	
Analgesic mixtures containing phenacetin	
Angiotensin converting enzyme (ACE) inhibitors	

Gyromitrin (Acetaldehyde methylformylhydrazone)	[16568-02-8]
Halazepam	[23092-17-3]
Halothane	[151-67-7]
HC Blue No. 1	[2784-94-3]
Heptachlor	[76-44-8]
Heptachlor epoxide	[1024-57-3]
Hexachlorobenzene (benzene hexachloride, C6Cl6)	[118

Nitrilotriacetic acid salts	
Nitrilotriacetic acid, trisodium salt monohydrate	[18662-53-8]
Nitrobenzene	[98-95-3]
Nitrofurantoin	[67-20-9]
Nitrofurazone	[59-87-0]
Nitrogen Dioxide	[10102-44-0]
Nitrogen mustard (N,N-bis(2-chloroethyl)methylamine,	[51-75-2]
nitrogen mustard hydrochloride (Mechloroethamine	[55-86-7]
Nitrogen mustard N-oxide	[126-85-2]
Nitrogen mustard N-oxide hydrochloride (2-chloro-N-(2-	

APPENDIX G
Chemical Resistance Examples

	1	**2**	**3**	**4**
*Acetaldehyde	VG	G	VG	G
Acetic acid	VG	VG	VG	VG
*Acetone	G	VG	VG	P
Ammonium hydroxide	VG	VG	VG	VG
*Amyl acetate	F	P	F	P
Aniline	G	F	F	P
*Benzaldehyde	F	F	G	G
*Benzene	P	P	P	F
Butyl acetate	G	F	F	P
Butyl alcohol	VG	VG	VG	VG
Carbon disulfide	F	F	F	F
*Carbon tetrachloride	F	P	P	G
*Chlorobenzene	F	P	F	P
*Chloroform	G	P	P	E

[redacted]

APPENDIX H
Glossary

ACGIH

ACUTE

ACUTE EXPOS24 0 S24 0 S24 0 S2 1 ((r) 2 (a)2 ( )Gr) 123 60.36m BT 4 0 0 4 0 0 Tm /TT5 1 Tf ( ) Tj ET Q q 0.24

CHEMICAL FAMILY

CHEMICAL HYGIENE OFFICER

CHEMICAL HYGIENE PLAN

CHEMICAL MANUFACTURER

CHEMICAL NAME

CHEMICAL REACTION

CHRONIC
CHRONIC EXPOSURE

COMBUSTIBLE LIQUID

COMMON NAME

DESIGNATED AREA

DILUTION VENTILATION

DOT

DUSTS

DYSPNEA

EMPLOYEE

EMPLOYER

EPA

EPA NUMBER

EPIDEMIOLOGY

ERYTHEMA

EVAPORATION RATE

EXPLOSIVE

APPENDIX H -

HAZARD WARNING -

HAZARDOUS MATERIAL

HAZARDOUS MATERIAL (DOT)

APPENDIX

MELTING POINT

mg
mg/kg
mg/m^3
MILLIGRAM (mg)

MILLIGRAMS PER CUBIC METER (mg/m^3)

MILLIGRAMS PER KILOGRAM (mg/kg)

MILLILITER (ml)

MIST

MIXTURE

ml
MSHA

MUTAGEN

NARCOSIS
NATIONAL TOXICOLOGY PROGRAM (NTP) -

NFPA

NIOSH

ORAL

ORGANIC PEROXIDE

TIME-

APPENDIX I

26. Martin, A., Harbison, S. Radiation Protection, Chapman and Hall, Ltd.: London, England, 1979.
27. Matheson Gas Products, Inc. Guide to Safe Handling of Compressed Gases, Matheson Gas Products, Inc.: 1983.
28. Morgan, K., Turner, J. Principles of Radiation Protection, Robert E. Krieger Publishing Co.: Huntington, NU, 1973.
29. NIOSH/OSHA Product Guide to Chemical Hazards, DHEW(NIOSH): Sept. 1978, Publ. No. 78-210.
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