
Contents

General

Laboratory Accident Liability: Academic and Industrial.....	1
Laboratory Safety Orientation Lecture for the First Chemistry Course.....	5
Safety in the Clinical Laboratory.....	8
Analysis and Automated Handling of Technical Information at the Nuclear Safety Information Center.....	10
Science Experiment Safety in the Elementary School.....	13
Biological Health Aspects of Ultrasonic Cleaning and Cutting.....	16
The Disposal of Chemical and Radioactive Waste	18

Toxic Materials

Means of Contact and Entry of Toxic Agents... ..	24
Mode of Action of Toxic Substances.....	26
Registry of Adverse Reactions Due to Occupational Exposures.....	30
Industrial Hygiene Problems Within Research Laboratories.....	31

Ventilation and Laboratory Equipment

Planning for Fume Hoods in the Design of Science Buildings.....	33
Emergency Eye Wash Fountain.....	36
Explosion-Proof Electrical Equipment.....	38
Instrument and Equipment Hazards.....	40

Flammable and Chemical Hazards

Safe Use of Flammable Liquids in Laboratories..	43
Fire and Explosion Problems in Laboratories and Pilot Plants.....	46
Dangers due to Increased Flammability of Materials in Oxygen-Enriched Atmospheres.....	49
Some Aspects of Hazard Evaluation Testing. ...	51
Hazard Identification Signals.....	56
Hazardous Chemicals Data.....	59
Chemical Safety Slide Rule.....	69
Ozone Hazards.....	71
Chlorine Trifluoride.....	72
Hydrofluoric Acid Burn Treatment.....	76

Safety Manuals and Handbooks

Merck, Sharp and Dohme Research Laboratories	79
Honeywell Corporate Research Center.....	87
Ohio State University Chemistry Department... ..	95
Harvard University.....	102
Mallinckrodt Chemical Works.....	108
Monsanto Chemical Company Research Center..	112
Lederle Laboratories Division, American Cyanamid Company.....	116

Accident Case Histories.....	121
Subject Index.....	123
Author Index.....	131