

Appendix F

Glossary of Terms and List of Acronyms

Glossary of Terms

Acceptable daily intake (ADI): See *reference dose*.

Acetylcholine: See *neurotransmitter*.

Acetylcholinesterase: An enzyme that catalyzes the breakdown of the neurotransmitter acetylcholine. See *neurotransmitter*.

Action level: The point at which steps must be taken to reduce the concentration of a toxic substance in or on food, air, or water. An action level is based on the same criteria as a tolerance, but the action level is temporary, until a tolerance level can be set and is not legally binding. Compare *tolerance level*.

Active ingredient (of a pesticide): The component of a chemical compound that produces the desired biochemical effect; specifically, the pesticide itself. Compare *inert ingredient*.

Acute exposure: See *duration of exposure, frequency of exposure*.

Administrative controls: Methods of reducing worker exposures to occupational hazards through administrative arrangements. For example, rotating a worker from areas of high exposures to areas of low exposures reduces that worker's average exposure level.

Axon: The long extension, or process, of the neuron along which nerve impulses travel.

Axonopathy: Degeneration of axons. In central-peripheral distal axonopathy, degeneration usually begins at the end of the axon and proceeds toward the cell body (the cell body itself is not affected). In central-distal axonopathy, a less common form, degeneration of the spinal cord, but not the peripheral nervous system, occurs. Compare *neuronopathy, neuropathy*.

Biotransformation: The biochemical processes by which a foreign substance is altered or metabolized by the body (e.g., by the action of enzymes). Although biotransformation usually results in less toxic compounds, it can result in more toxic compounds.

Blood-brain barrier: A layer of tightly juxtaposed cells in blood vessel walls that protects much of the central nervous system by selectively filtering out some substances while allowing others to pass from the blood into the brain.

Carbamate: A synthetic organic insecticide. As pesticides, carbamates are reversible inhibitors of cholinesterase.

Carcinogen: A substance that causes cancer.

Cell body: The relatively compact portion of the neuron that contains the nucleus. Compare *process*.

Cell culture: Growth in the laboratory of cells isolated from multicellular organisms. Although the cells proliferate, they do not organize into tissue. See pure cell culture, *mixed cell culture, cell line, and cloned cells*.

Cell line: A group of malignant cells derived from a primary culture at the time of first subculture; an established cell line has the potential for indefinite subculture in vitro.

Central nervous system: One of the two major divisions of the nervous system, made up of the brain and spinal cord. Compare *peripheral nervous system*.

Cerebellum: The part of the brain involved in coordination of muscles and the maintenance of equilibrium.

Cerebrum: The portion of the brain responsible for conscious mental processes.

Cholinesterase inhibition: See *acetylcholinesterase*.

Chronic exposure: See *duration of exposure, frequency of exposure*.

Classical neurotransmitter: See *neurotransmitter*.

Clinical test: Experimental use (as of drugs) on humans.

Cloned cells: Asexually produced cells, all of them genetically identical to the original cell.

Commodity chemical: A compound produced by several companies. Compare *specialty chemical*.

Consent decree: A legally binding mutual agreement between EPA and the manufacturer of a chemical under which the manufacturer will conduct EPA-specified tests and EPA will not require further testing.

Cost-benefit analysis: A determination of whether the costs of regulating a toxic substance exceed the benefits in reducing risk to health or the environment. Both costs and benefits are measured in monetary units. Compare *risk-benefit analysis, cost-effectiveness analysis*. See *risk*.

Cost-effectiveness analysis: A determination of whether the costs of regulating a toxic substance exceed the effectiveness in reducing risks to health or the environment. Costs are measured in monetary units, effectiveness in natural units such as years of life saved, incidence of disease averted, and days of work loss avoided. Compare *cost-benefit analysis*. See *risk*.

Dementia: Loss of intellectual function.

Demyelination: Destruction of the myelin sheath of a nerve. See *myelin sheath*.

Dendrite: Any of the branched extensions, or processes, of the neuron along which nerve impulses travel toward the cell body.

Developmental neurotoxicity tests: Studies of the offspring of animals exposed to toxic substances during pregnancy and lactation in order to determine the nature and extent of structural or functional damage to the nervous system of the offspring.

Differentiation: The process of cells and tissues acquiring distinct characteristics during development.

Discounting: Relating costs or benefits that occur at different times to a common basis.

Dopamine: See *neurotransmitter*.

- Dosage:** The amount, frequency, and number of doses administered in a test.
- Dose:** The amount of a substance absorbed in a unit volume or in an individual. Dose rate is the dose delivered per unit of time.
- Dose-response:** The quantitative relationship between exposure to a substance, usually expressed as a dose, and the extent of toxic injury or disease.
- Duration of exposure:** The length of time a person or test animal is exposed to a chemical. Duration of exposure is divided into four categories: acute (exposure to a chemical for less than 24 hours), subacute (exposure for 1 month or less), subchronic (exposure for 1 to 3 months), and chronic (exposure for more than 3 months). See *frequency of exposure*.
- Economic efficiency:** The 'state in which the greatest direct and indirect gains (benefits) are derived from the resources expended (costs) to achieve a stated objective. Compare *net efficiency*.
- Efficiency:** See *economic efficiency*.
- Electromyography, EMG:** Recording and measuring the electrical activity of muscles by means of an electromyograph. Electromyography is used in testing the effects of neurotoxic substances on humans.
- Electroneurography, ENG:** Recording and measuring the electrical signals generated by nerves by means of an electromyograph. Electroneurography is used in testing the effects of neurotoxic substances on humans.
- Electrophysiology:** Measuring and recording the electrical activity of the brain or nerve cells by means of electrodes.
- Encephalopathy:** Degeneration of the brain.
- Endpoint:** The disease, conditions, or adverse effect resulting from exposure to a toxic substance (e.g., memory loss, paralysis, dizziness, anxiety).
- Engineering controls:** Methods of controlling worker exposure by modifying the source or reducing the amount of contaminants released into the workplace. These include process design and modification, equipment design, enclosure and isolation, and ventilation.
- Environmental hypothesis:** The theory that exposure to toxic substances contributes significantly to neurological disorders such as Parkinson's disease, Alzheimer's disease, and amyotrophic lateral sclerosis (Lou Gehrig's disease).
- Epidemiology:** The study of the distribution of diseases and their precursors in human populations.
- Evoked potentials, sensory evoked potentials (EPs):** Electrical signals generated by the nervous system in response to a stimulus, whether auditory (brainstem auditory evoked responses, BAERs), visual (visual evoked potentials, VEPs, which include flash evoked potentials, PEPs, and pattern reversal evoked potentials, PREPs), or somatosensory (somatosensory evoked potentials, SEPs). EPs can be measured and the measurements used to identify which senses are affected by neurotoxic substances and how they are affected. See *electrophysiology*.
- Explant culture:** Tissue taken from its original site and placed in an artificial medium for growth.
- Experimental use permit (EUP):** An application to EPA by a manufacturer for permission to conduct fieldtests on a pesticide.
- Exposure:** The accidental or intentional contact of a person or animal with a substance, specifically a toxic substance. Exposure is measured by the amount of the substance involved (dose), how often and for how long contact took place (frequency and duration of exposure), and the means through which contact occurred (route of exposure). See *dose, duration of exposure, frequency of exposure, route of exposure*.
- Frequency of exposure:** The number of times a person or test animal is exposed to a chemical. Acute exposures "are generally single exposures, whereas subacute, subchronic, and chronic exposures are repeated exposures. See *duration of exposure*.
- Functional observational battery (FOB):** A collection of noninvasive tests to evaluate sensory, motor, and autonomic dysfunction in test animals exposed to substances or whose nervous systems have been damaged, FOBS are generally used to screen for neurotoxic substances. See *screening test*.
- Ganglion:** A collection of nerve cells outside the brain or spinal cord.
- Glia, glial cells:** The second basic cell type of the nervous system. Glia perform support functions for neurons: namely, nutrition, insulation (through the production of myelin), and structural support. Compare *neuron*.
- Hazard:** The likelihood that a pesticide will cause immediate or short-term adverse effects or injury under ordinary circumstances of use.
- Hen test:** An observational assay in which the observer ranks the animals' motor ability.
- Hydrophilic:** Having an affinity for water; that is, soluble in water. These substances may also be termed lipophobic, or insoluble in lipids.
- Hydrophobic:** Insoluble in water; these substances may also be termed lipophilic.
- Inert ingredient (of a pesticide):** The solvent or "inactive" solid that dilutes or carries a pesticide; inert ingredients are so called because they have no effect on the targeted pest, not because they are inherently inactive. An inert ingredient as defined by EPA *can*, in some cases, cause adverse effects on human health.
- Inorganic:** Matter generally not containing carbon (i.e., not animal or plant matter). Compare *organic*.
- Integrated pest management (IPM):** A system for controlling pests in which pesticides are used in conjunction with biological controls (natural predators and parasites, disease-causing microorganisms, pheromones, pest-resistant plants) and cultural controls (crop rotation, removal of pest-harboring crop residues

after harvest).

Investigational new drug (IND): Application to FDA by a manufacturer for permission to conduct clinical trials on a drug.

In vitro test: Experiment using cells, tissues, or explants grown in a nutritive medium as a model system in toxicity testing rather than using living animals or human beings. Toxicity is assessed by adding a test substance to the culture and observing any changes that occur. See *cell culture*, *tissue culture*, *explant culture*.

In vivo: Literally, in the living; pertaining to a biological process or reaction taking place in a living cell or organism.

Latent effect: A reaction to a toxic substance that is not immediately evident but that appears later in life; also referred to as a silent effect.

Lipids: Fat-like substances that are an important constituent of cell structure; the nervous system is composed of high concentrations of lipids.

Lipophilic: Having an affinity for lipids; that is, soluble in fat-like material. These substances may also be termed hydrophobic, or insoluble in water. Many toxic substances are lipophilic, making them especially dangerous to the nervous system. See *lipids*.

Margin of exposure: See *margin of safety*.

Margin of safety: Division of the NOEL or NOAEL by the current, desired, or most feasible human exposure level. See *NOEL*, *NOAEL*.

Maximum allowable concentration (MAC): The limit on atmospheric contaminants in manned spacecraft for missions of up to 7 days; set by the National Aeronautics and Space Administration.

Maximum contaminant level (MCL): An enforceable standard set by EPA for pollutants in drinking water, to be set as close as possible to the maximum contaminant level goals. See *maximum contaminant level goals*, *recommended maximum contaminant level*.

Maximum contaminant level goal (MCLG): Nonenforceable goal set by EPA for pollutants in drinking water. MCLGs for carcinogenic pollutants are set at zero; goals for noncarcinogenic pollutants are set by establishing the lowest dose at which harmful effects can be observed, compensating for uncertainties, and calculating predicted human exposure from food and air. See *maximum contaminant level*.

Me-too registration: A practice by which subsequent products that are identical to an initial, registered product can be registered without undergoing regulatory tests.

Mixed cell culture: A culture of more than one type of cell.

Mixed neuropathy: Degeneration of both sensory and motor neurons.

Motor activity tests: Observation and evaluation of the

movements of test animals after acute or subchronic exposures to a substance; used as a screen for neurotoxic substances. See *screening test*.

Motor neuron: See *neuron*.

Mutagenic: Causing increases in the mutation of genes.

Myelin: A fatty substance (of which the myelin sheath surrounding axons is made) that acts as an electrical insulator to speed the conduction of nerve impulses. Myelin is formed in the peripheral nervous system by Schwann cells and in the central nervous system by glial cells.

Myelin sheath: Concentric layers of myelin surrounding the axons of some neurons. The myelin sheath speeds the conduction of electrical impulses.

Myopathy: Degeneration of muscle fiber.

Narcosis: Nonspecific, reversible depression of central nervous system function, marked by stupor or unconsciousness and produced by drugs.

National primary drinking water regulations (NPDWRs): Enforceable standards for contaminants in drinking water set by EPA that include maximum contaminant levels or required treatment techniques, or both. See *maximum contaminant level*.

Net efficiency: The difference between direct benefits and direct costs, generally in regard to regulation.

Neuromuscular junction: The site at which chemical or electrical information is transmitted from a nerve cell to muscle fiber. Compare synapse.

Neuron, nerve cell: The basic functional unit of the nervous system. The neuron is typically composed of a relatively compact cell body containing the nucleus, several short radiating processes (dendrites), and one long process (the axon) with branches along its length and at its end. Information in the form of electrical impulses travels from the cell body along these processes to other cells. Sensory neurons send information to the brain and spinal cord; motor neurons send instructions to the muscles. See *axon*, *dendrite*.

Neuronopathy: A primary damage to the nerve cell body which results in a rapid, but secondary, degeneration of nerve processes.

Neuropathological tests: Postmortem examination of test animals in order to determine changes in the structure and function of the nervous system as a result of exposure to a toxic substance. These tests may be used to screen for toxic substances. See *screening test*.

Neuropathy: Degeneration of nerve cells; a general description for any disease of the peripheral or central nervous system.

Neuropeptide: See *neurotransmitter*.

Neurophysiological tests: Techniques for measuring the electrical signals, or evoked potentials, of charged ions; the measured potentials reflect the functioning of the neuron or neurons that generated them. See *electrophysiology*, *evoked potentials*.

Neurotoxic esterase (NTE) assay: A procedure for

measuring the inhibition of the enzyme NTE in the brain or spinal cord of hens exposed to organophosphates. The test can be used to determine the delayed effects of acute and subchronic exposures to organophosphates. See *organophosphates*.

Neurotoxicant, neurotoxic substance: A chemical that adversely affects the nervous system.

Neurotoxicity, neurotoxic effect: An adverse change in the structure or function of the nervous system following exposure to a toxic substance.

Neurotoxicology: Study of the effects of toxic chemicals on the nervous system, including the modes by which neurotoxic substances enter the body, the effects these substances have on the nervous system, the biochemical and physiological mechanisms through which the effects occur, the prevention of damage to the nervous system, and the treatment of neurological and psychiatric disorders caused by exposure.

Neurotransmitter: Specialized chemical messenger synthesized and secreted by neurons to convey information from one nerve cell to another (serotonin, norepinephrine, dopamine) or from a nerve cell to muscle fiber (acetylcholine). Neurotransmitters act on the receptors of other cells: classical neurotransmitters (e.g., the four mentioned above) typically interact with receptors of adjacent cells; neuropeptides (e.g., the endorphins and vasopressin) may transmit messages to receptors on distant cells. See *receptor*.

New drug application (NDA): Submission of evidence, including results of clinical trials, to FDA by a manufacturer that a drug is both safe and effective. Approval of the NDA is required before the drug can be marketed. Compare *investigational new drug*.

NOAEL, no observed adverse effect level: That dose below which no adverse effect is observed. Compare *NOEL*.

No-effect levels: See *NOEL, NOAEL, threshold*.

NOEL, no observed effect level: That dose below which no effect of any sort is observed. Compare *NOAEL, threshold*.

Norepinephrine: See *neurotransmitter*.

No-threshold: The situation in which any dose greater than zero increases risk. Compare *threshold*.

Oligodendrocyte: A type of glial cell that appears to play a role in myelin formation in the central nervous system. Compare *Schwann cell*. See *glia*.

Opportunity cost: The value of alternative endeavors that might have been undertaken with the resources used for the particular endeavor chosen.

Organ culture: A type of tissue culture in which a whole organ is maintained in vitro.

Organic: Matter containing carbon (i.e., animal or plant matter). Compare *inorganic*.

Organic farming, organic production: Farming without the use of or with limited use of chemical pesticides or fertilizers.

Organic solvents: Generic name for a group of simple organic liquids that are volatile (that is, in the presence of air they change from liquids to gases) and therefore are easily inhaled.

Organoleptic: Stimulating any of the organs of sensation or susceptible to a sensory stimulus.

Organophosphates, organophosphorous pesticides: A class of pesticides with neurotoxic properties; organophosphates have also been used as nerve gases.

Organotypic culture: A type of primary tissue culture in which the structure of the original organ is maintained in vitro. This method is useful in neurotoxicity studies because the connections and spatial relations between neurons and glia can be maintained.

Pattern of exposure: The dose, duration, frequency, and route of exposure; used in risk assessment. See *dose, duration of exposure, frequency of exposure, route of exposure*.

Peripheral nervous system: One of the two major divisions of the nervous system, made up of the nerves connecting the spinal cord and sensory organs, glands, blood vessels, and muscles. Compare *central nervous system*.

Permissible exposure limit (PEL): The maximum exposure to a given chemical that an industrial worker is allowed during an 8-hour workday and 40-hour workweek, set by the Occupational Safety and Health Administration. Compare *reentry interval*.

Personal protective equipment: Equipment and clothing designed to control hazards: it includes hard hats, safety shoes, protective eyewear, and various types of respirators.

Pesticide: A generic term referring to toxic substances developed to control pests; it includes insecticides, fungicides, rodenticides, and herbicides.

Potentiation: The process through which a nontoxic substance increases the toxicity of another substance.

Preclinical test: Experimental testing (as of drugs) on animals.

Presumption of risk: The probability that an existing hazard, combined with the potential for human exposure to it, creates risk. Compare *risk assessment*.

Primary culture: Cell, tissue, or organ culture initiated directly from an organism rather than from another culture. Compare *explant culture*.

Prior informed consent (with respect to pesticides): Agreement on the part of one government to import a pesticide banned or severely restricted by another government in full knowledge of the reasons for that ban or restriction.

Processes, nerve processes: Extensions of the neuron, whether axons or dendrites, along which nerve impulses travel. Compare *cell body*.

Receptor: Sensory neuron terminal; also, a molecule in the cell membrane that recognizes and combines with a specific chemical substance, such as a neurotransmit-

ter. See *neurotransmitter*.

Recommended exposure limit (REL): Standard for maximum exposure of industrial workers to toxic substances, set by the National Institute for Occupational Safety and Health. Compare *permissible exposure limit, threshold limit value*.

Recommended maximum contaminant level (RMCL): Nonenforceable goals set by EPA for pollutants in drinking water; renamed maximum contaminant level goal. See *maximum contaminant level goal, maximum contaminant level*.

Red Book: Guidelines for toxicological testing of direct food additives and color additives used in food under the Federal Food, Drug, and Cosmetic Act published by the Center for Food Safety and Applied Nutrition of FDA,

Reentry interval: The time that must elapse between application of a pesticide and the return of agricultural workers to the treated area without special protection.

Reference dose (RfD): A term used to characterize risk and derived by applying safety factors to NOELs or NOAELs. If human exposure to a substance is below the RfD, no risk is assumed to exist; if exposure exceeds the RfD, risk is assumed to exist. The term may be used interchangeably with acceptable daily intake, although EPA uses the term RFD. See *NOEL, NOAEL*.

Reuptake: Process by which neurotransmitters and their metabolites are recycled.

Right-to-know laws: State and local laws requiring companies to inform workers and communities of the chemical names and hazards of their products.

Risk: The probability of injury, disease, or death for persons or groups of persons undertaking certain activities or exposed to hazardous substances. Risk is sometimes expressed numerically (as a fraction) and sometimes qualitatively (e.g., high, moderate, or low).

Risk assessment: The analytical process by which the nature and magnitude of risk are identified. Four steps make up a complete risk assessment: hazard identification, dose-response assessment, exposure assessment and risk characterization. Compare *risk management, presumption of risk*. See *risk, exposure, dose-response*.

Risk-benefit analysis: A determination of whether the risks to health and the environment of using a chemical or drug exceed the economic benefits that accrue from its use. In the case of pesticides, benefits are measured in terms of the monetary value of crop yields; in the case of drugs, benefits are measured in terms of therapeutic efficacy.

Risk management: The process of determining whether or how much to reduce risk through regulatory action. Decisions depend on data from risk assessments and may also depend on political, social, ethical, economic, and technological factors.

Route of exposure: The means by which a person or animal comes into contact with a chemical: namely, intravenous (injected into the bloodstream), inhalation (through the lungs), oral (through ingestion), and dermal (through the skin).

Safety factor: Division of the NOEL or NOAEL and succeeding measures by a factor, typically 10, to yield a reference dose; used interchangeably with uncertainty factor. Safety factors account for uncertainties in the extrapolation of data from, for example, short- to long-term exposures, and animals to humans.

Scaling factor: Weighting disparate measures of health outcomes for cost-effectiveness analysis on the basis of value judgments concerning their relative worth.

Schedule-controlled operant behavior (SCOB): A test in which an experimental animal's response to a stimulus is reinforced on a predetermined schedule in order to produce a predictable pattern of behavior. SCOB is used to evaluate the effects of acute or chronic exposure to toxic substances on the rate and pattern of the animal's responses.

Schwann cell: A glial cell in the peripheral nervous system that produces myelin for the myelin sheath. Compare *oligodendrocyte*.

Screening test: Broad-based initial test of a chemical designed to detect adverse health effects. Screening can help determine what further tests should be performed to evaluate a substance's toxicity.

Sensitivity analysis: Deliberately varying the uncertainties in an assessment in order to examine their effects on the decision taken.

Sensory neuron: See *neuron*.

Serotonin: See *neurotransmitter*.

Silent effect: See *latent effect*.

Specialty chemical: A compound produced by only one company. Compare *commodity chemical*.

Structure-activity relationship: The relationship between a chemical's structure and the biochemical changes it induces.

Subchronic exposure: See *duration of exposure, frequency of exposure*.

Synapse: The site at which chemical or electrical information is transmitted from one nerve cell to another, typically by a neurotransmitter. Compare *neuromuscular junction*. See *neurotransmitter*.

Synaptic cleft: A narrow gap between two adjacent neurons into which neurotransmitters are secreted. See *neurotransmitter*.

Synergism: The state in which the combined adverse effects of a chemical exceed the sum of the effects of each chemical acting alone.

Teratogenic: Producing defects in the developing embryo. (A substance that causes physical defects in the offspring.)

Test rule: A statement written by EPA of what chemical or chemicals in a compound must be tested by the

manufacturer and how they are to be tested. Test rules are written under the Toxic Substances Control Act when it can be shown both that inadequate data on the effects of a compound exist and that testing is required to obtain such data.

Threshold: The highest dosage at which no effect is observed. Compare *no-threshold*.

Threshold limit value (TLV): That concentration (by volume in air) of a hazardous substance to which the majority of industrial workers may be repeatedly exposed every day without adverse effects; set by the American Conference of Governmental Industrial Hygienists. Compare *reference dose*.

Tiered testing: A strategy for identifying the toxicological effects of a substance by proceeding from general toxicity tests to progressively more specific and sophisticated tests.

Time-weighted average: An average over a given (working) period of a person's exposure, as determined by sampling at given times during the period.

Tissue culture: The maintenance or growth of tissue, organs, or cells *in vitro*. Tissue culture can be subdivided into cell culture and organ culture. See *cell culture*, *organ culture*.

Tolerance level: The maximum permissible concentration of a toxic substance in or on food, water, or air, as set by a regulatory agency. Compare *action level*.

Toxicology: The study of adverse effects of natural or synthetic chemicals on living organisms.

Uncertainties: Questions involved in risk assessment, ranging from fundamental questions (e.g., How useful are animals as predictors of toxicity in humans?) to specific questions arising from incomplete or imperfect data on a particular substance (e.g., Do responses differ with route of exposure? What exposures are likely for various populations?).

Uncertainty factor: See *safety factor*.

List of Acronyms

ACGIH	—American Conference of Governmental Industrial Hygienists	CBI	-confidential business information
ADAMHA	—Alcohol, Drug Abuse, and Mental Health Administration	CDC	-Centers for Disease Control
ADI	—acceptable daily intake	CEH	—Center for Environmental Health
AETT	—acetyethyl tetramethyl tetralin	CERCLA	-Comprehensive Environmental Response, Compensation, and Liability Act
ALS	—amyotrophic lateral sclerosis	CFSAN	—Center for Food Safety and Applied Nutrition (FDA)
ATSDR	—Agency for Toxic Substances and Disease Registry	CIIT	—Chemical Industry Institute of Toxicology
AZT	—azidothymidine	COHb	-carboxyhemoglobin
BAER	—brainstem auditory evoked response	CPDA	-central-peripheral distal axonopathy
BHC	—benzene hexachloride	CPSA	—Consumer Product Safety Act
BHMH	—Lucl-7	CPSC	—Consumer Product Safety Commission
BPI	—Bureau of Plant Industry (Philippines)	CSA	—Controlled Substances Act
CAA	-Clean Air Act	CSPI	—Center for Science in the Public Interest
CAP	-Consumers Association of Penang (Malaysia)	CWA	—Clean Water Act
		DBCP	-dibromochloropropane
		DHHS	—Department of Health and Human Services
		DOE	—Department of Energy
		EDB	--ethylene dibromide
		EEC	—European Economic Community
		EEG	-electroencephalograph
		EMG	-electromyography
		ENG	-electroneurography
		EP	-evoked potential
		EPA	—Environmental Protection Agency
		EPN	-ethyl-p-nitrophenyl phosphonothionate
		EUP	—Experimental Use Permit
		FAO	—Food and Agriculture Organization (United Nations)
		FDA	—Food and Drug Administration
		FEA	—Federal Environmental Agency (West Germany)
		FEP	—flash evoked potential
		FFDCA	—Federal Food, Drug, and Cosmetic Act
		FHSA	—Federal Hazardous Substances Act
		FIC	—Fogerty International Center
		FIFRA	—Federal Insecticide, Fungicide, and Rodenticide Act
		FIOH	—Finland Institute of Occupational Health
		FLT	—fenvalerate
		FMSHA	—Federal Mine Safety and Health Act
		FOB	—functional observational battery
		FPA	—Fertilizer and Pesticide Authority (Philippines)
		FWPCA	—Federal Water Pollution Control Act
		GAO	—General Accounting Office
		GFAP	—glial fibrillary acidic protein
		HCH	—hexachlorocyclohexane
		HHANES	—Hispanic Health and Nutrition Examination Survey
		HUD	—Department of Housing and Urban Development
		IND	—investigational new drug
		IPM	—integrated pest management
		IRIS	—Integrated Risk Information System

ITC	—Interagency Testing Committee	NIOSH	—National Institute for Occupational Safety and Health
LBPPPA	—Lead-Based Paint Poisoning Prevention Act	NLM	—National Library of Medicine
LMIN	—Laboratory of Molecular and Integrative Neuroscience (NIEHS)	NOAEL	—no observed adverse effect level
MA	—motor activity	NOEL	—no observed effect level
MAC	—maximum allowable concentration	NPDWR	—national primary drinking water regulations
MCL	—maximum contaminant level	NRC	—National Research Council
MCLG	—maximum contaminant level goal	NRDC	—Natural Resources Defense Council
MCPA	—2-methyl-4-chlorophenoxyacetic acid	NTD	—Neurotoxicology Division (EPA)
MNAF	—Ministry of Nutrition, Agriculture, and Forest (West Germany)	NTE	—neurotoxic esterase assay
MnBK	—methyl-n-butyl ketone	NTP	—National Toxicology Program
MND	—motor neuron disease	OECD	—Organization for Economic Cooperation and Development
MOE	—margin of exposure	OPP	—Office of Pesticide programs (EPA)
MOS	—margin of safety	OSH Act	—Occupational Safety and Health Act
MPRSA	—Marine Protection, Research, and Sanctuaries Act	OSHA	—Occupational Safety and Health Administration
MSHA	—Mine Safety and Health Administration	OTA	—Office of Technology Assessment
MPTP	—1-methyl-4-phenyl- 1,2,3,6-tetrahydropyridine	OTS	—Office of Toxic Substances (EPA)
MTBE	—methyl-tert-butyl ether	PAN	—Pesticide Action Network
NAPARE	—National Association for Perinatal Addiction Research and Education	PCB	—polychlorinated biphenyl
NAS	—National Academy of Sciences	PCP	—phencyclidine; pentachlorophenol
NASA	—National Aeronautics and Space Administration	PDDP	diisodecyl phenyl phosphite
NBS	—National Bureau of Standards	PEL	—permissible exposure limit
NBT	—Neurobehavioral Toxicology Team	PIC	—prior informed consent
NCHS	—National Center for Health Statistics	PMN	—premanufacture notice
NCTB	—Neurobehavioral Core Test Battery	PPPA	—Poison Prevention Packaging Act
NCTR	—National Center for Toxicological Research	PREP	—pattern reversal evoked potentials
NDA	—new drug application	RCRA	—Resource Conservation and Recovery Act
NFPA	—National Food Processors Association	REL	—recommended exposure limit
NHANES	—National Health and Nutrition Examination Survey	RfD	—reference dose
NHLBI	—National Heart, Lung, and Blood Institute	RMCL	—recommended maximum contaminant level
NIA	—National Institute on Aging	RQ	—reportable quantity
NIAAA	—National Institute on Alcohol Abuse and Aging	SAP	—Science Advisory Panel
NIAID	—National Institute of Allergy and Infectious Diseases	SARA	—Superfund Amendments and Reauthorization Act
MDA	—National Institute on Drug Abuse	SCOB	—schedule-controlled operant behavior
NIEHS	—National Institute of Environmental Health Sciences	SDWA	—Safe Drinking Water Act
NIGMS	—National Institute of General Medical Sciences	SEP	—somatosensory evoked potential
NIH	—National Institutes of Health	SMSA	—Standard Metropolitan Statistical Area
NIMH	—National Institute of Mental Health	SNUR	—significant new use rule
NINCDS	—National Institute of Neurological and Communicative Disorders and Stroke	STEL	—short-term exposure limit
		TDM	—triadimeform
		TLV	—threshold limit value
		TPT	—triphenyltin
		TRI	—Toxics Release Inventory
		TSCA	—Toxic Substances Control Act
		TWA	—time-weighted average limit
		USDA	—U.S. Department of Agriculture
		USDJ	—U.S. Department of Justice
		WHO	—World Health Organization