



Lao People's Democratic Republic
Peace Independence Democracy Unity Prosperity

Ministry of Agriculture and Forestry

No.2860/MAF
Vientiane Capital, dated 11 Jun 2010

Regulation
on the Control of Pesticides in Lao PDR

- Pursuant to the Law on Agriculture No.01/98/NA, dated 6 November 1998;
- Pursuant to the Environment Protection Law No.02/99/NA, dated 3 April 1999;
- Pursuant to Law on Local Administration No.03/NA of 21 October 2003;
- Pursuant to the Law on Food No.04/NA, dated 15 May 2004.

The Minister of Agriculture and Forestry issues the Regulation on the Control of Pesticides as follows:

Part I
General Provision

Article 1. Objective

This regulation defines the principles, rules, and measures for controlling activities that involve pesticides in Lao PDR in order to protect human, animal and plant health, and the environment, and to be harmonized with international obligations and regulations in which Lao PDR is contracting party.

Article 2. Output

This regulation is a tool for the monitoring and control of production, processing, import-export, distribution, transportation, storage, use, and proper disposal of pesticides to ensure the safety of people, animals, plants, and the environment. It applies to all stakeholders involved in the use and management of pesticides.

Article 3. Definitions

Terms used in this regulation shall be interpreted as follows:

Pesticide means any substances or mixture or substances intended for the prevention, destruction or control of any pest, including vectors of human or animal disease, unwanted species of plants

or animals causing harm during or otherwise interfering with the production, processing, storage, transport or marketing of food, agricultural commodities, wood and wood products or animal feedstuffs, or substances which may be administered to animals for the control of insects, arachnids or other pests in or on their bodies. The term includes substances intended for use as a plant growth regulator, defoliant, desiccant or agent for thinning fruit or preventing the premature fall of fruit, and substances applied to crops either at pre- or post harvest to protect the commodity from deterioration during storage and transport.

Banned pesticide means a pesticide for which all uses have been prohibited by final regulatory action, in order to protect human health or the environment. The term includes a pesticide that has been refused approval for first-time use, or had been withdrawn by industry either from the domestic market or from further consideration in the domestic approval process, and where there is clear evidence that such action has been taken in order to protect human health or the environment.

Unwanted plant means any plant that is not grown intended and is considered undesirable.

Pesticide industry means all those organizations and individuals engaged in manufacturing, formulating or marketing pesticides and pesticide products.

Trader means anyone engaged in trade, including export, import and domestic distribution.

Formulation means the combination of various ingredients designed to render the product useful and effective for the purpose claimed; the form of the pesticide as purchased by users.

Active ingredient means the biologically active part of the pesticide.

Registration means the process whereby the responsible national government or regional authority approves the sale and use of a pesticide following the evaluation of comprehensive scientific data demonstrating that the product is effective for the intended purposes and does not pose an unacceptable risk to human or animal health or the environment.

Label means the written, printed or graphic matter on, or attached to, the pesticide or the immediate container thereof and also to the outside container or wrapper of the retail package of the pesticide.

Manufacturer means a corporation or other entity in the public or private sector or any individual engaged in the business or function (whether directly or through an agent or entity controlled by or under contract with it) of manufacturing a pesticide active ingredient or preparing its formulation or product.

Distribution means the process by which pesticides are supplied through trade channels to local or international markets.

Advertising means the promotion of the sale and use of pesticides by printed and electronic media, signs, displays, gift, demonstration or word of mouth.

Personal protective equipment means any clothes, materials or devices that provide protection from pesticide exposure during handling and application.

Disposal means any operation to recycle, neutralize, destroy or isolate pesticide waste, used containers and contaminated materials.

Residue means any specified substances in or on food, agricultural commodities or animal feed resulting from the use of a pesticide. The term includes any derivatives of a pesticide, such as conversion products, metabolites, reaction products and impurities considered to be of toxicological significance. The term “pesticide residue” includes residues from unknown or unavoidable sources (e.g. environmental) as well as known uses of the chemical.

Risk is function of the probability of an adverse health or environmental effect, and the severity of that effect, following exposure to a pesticide.

Toxicity means a physiological or biological property which determines the capacity of a chemical to do harm or produce injury to a living organism by other than mechanical means.

Integrated Pest Management (IPM) means the careful consideration of all available pest control techniques and subsequent integration of appropriate measures that discourage the development of pest populations and keep pesticides and other interventions to levels that are economically justified and reduce or minimize risks to human health and the environment. IPM emphasizes the growth of a healthy crop with the least possible disruption to agro-ecosystems and encourages natural pest control mechanisms.

Natural enemies mean beneficial diseases or insects, such as predators, parasitoids, and pathogens, which can play a role in natural pest control.

Article 4. Scope

This regulation applies to all persons, juristic persons or organizations engaged in manufacturing, importing, exporting, selling, using, transporting, storing, destroying and disposing pesticides in Lao PDR.

Part II Business on pesticides

Article 5. Business on pesticides

A person, juristic or organization having the intention to conduct business involving pesticides shall require a license from Agriculture sector and other related sector for approval and shall register the enterprise with industry and commerce sector as determined by the Law on Enterprises.

Article 6. Import and export license, selling license

Any person, juristic or organization intending to import or export registered pesticides shall apply for a license from the Ministry of Agriculture or its provincial representatives at least 3 working days prior to import or export and 20 days prior to sale of pesticides.

Article 7. Record maintenance

A person, juristic person or organization involved in import, export, manufacture or storage of pesticides shall maintain records and other information needed for monitoring the management of these pesticides.

Article 8. Responsibility of pesticide business

A person conducting pesticide business shall ensure risks to human health, animal health and the environment are minimized. In the event of an accident whereby pesticides cause damage to humans, animals or the environment, the pesticide business operator shall be punished by applicable laws.

The pesticide business operators shall cooperate with pesticide inspectors and other relevant authorities to facilitate corrective action.

Part III Registration of pesticides

Article 9. Registration of pesticides

All pesticides produced, imported, exported, distributed and used in Lao PDR must be registered with the Department of Agriculture, Ministry of Agriculture and Forestry.

Article 10. Exceptions for pesticide registration

1. Registration is not required for botanical pesticides that are not packed for sale; and
2. After inspection by Ministry of Agriculture and Forestry, provisional registration can be granted for products imported for the purpose of research, trial or exhibition, if evidence is provided that the products are registered in the country of origin.

Article 11. Qualifications for pesticide registration

Any person, juristic person or organization eligible to register pesticide shall have the following qualifications:

1. Person holding a license as described in **article 19** of this regulation; and
2. Imported pesticide shall be registered in exporting country.

Article 12. Application for registration

The registration application shall comprise the following documents:

1. Copy of enterprise registration certificate;
2. Copy of pesticide registration certificate of exporting country or/and country of origin;

3. Nomination letter for registration from manufacturer or exporting country;
4. Use instructions for the pesticide concerned; and
5. A sample of the pesticide.

Article 13. Registration consideration

Department of Agriculture shall review the request and decide to approve or reject registration within 60 days from the date the application is received. In the case of rejection, written notice shall be given to the applicant by the DOA.

Article 14. Pesticide registration certificate

A pesticide registration certificate is an official document issued by the Director General of DOA, Ministry of Agriculture and Forestry and remains valid for two years. Two months prior to expiration, the owner shall submit a request for renewal of the certificate to the DOA. The application and process of consideration will proceed as described in **article 12** and **13** of this regulation.

Article 15. Withdrawal of pesticide registration certificate

The pesticide registration certificate may be withdrawn prior to its expiration date by the Director General of Department of Agriculture in any of the following cases:

1. There is a serious violation of this regulation or other related laws by the certificate holder or their authorized representatives;
2. The pesticide is no longer effective for its intended use; or
3. The pesticide has been withdrawn from the market.

In case of cancellation of a registration, the Department of Agriculture shall fix a reasonable phasing-out period for the distribution and use of the product concerned. Withdrawal of a certificate of registration shall be communicated to all relevant agencies.

Article 16. Pesticide Registration Unit

The Pesticide Registration Unit is a unit under the administration of the Department of Agriculture, Ministry of Agriculture and Forestry, which has the following main roles and duties:

1. Review applications for the registration of pesticides and take registration decisions;
2. Regularly review the list of registered pesticide to determine whether these still meet the requirements, taking into consideration the latest scientific information;
3. Edit and approve labels of pesticides; and
4. Implement others rights and task as described in related legislations.

Part IV

Management of production, import, export, distribution, transportation, storage and transit of pesticides

Article 17. Formulating pesticides

A person, juristic person or organization having the intention to formulate pesticides shall submit an application to the Ministry of Agriculture and Forestry, which should include a report of a feasibility study and a description of the techniques to be used.

Article 18. Import-Export of pesticide

Only registered pesticides can be imported or exported. Registration has to be obtained from the Department of Agriculture, Ministry of Agriculture and Forestry. Import and export shall comply with other related laws. This does not apply to pesticides determined in **article 10** of this regulation.

Article 19. Distribution or selling of pesticides

Distributors or traders must meet the following criteria:

1. They should have attended a training course on pesticide management and hold a related certificate;
2. They should possess safety instructions for the handling and use of pesticides to ensure that they are not causing negative effects to people and the environment;
3. They should supply protective clothing to customers;
4. Storage must strictly meet the requirements in article 21 of this regulation;
5. They must maintain records of sales and purchase orders.

Distributors or traders of pesticides are prohibited to:

1. Distribute pesticides without the necessary licenses obtained from the concerned authorities;
2. Sells pesticides that
 - are not registered in Lao PDR
 - exceeded their expiry date, have deteriorated (changed physical appearance or initial formulation, such as color, sedimentation, solubility) or have a broken or leaking container;
 - lack a label or have a damaged or otherwise not readable label; or
 - have been repacked for sale in inappropriate packaging.

Article 20. Transportation

Transporters carriers of pesticide shall adhere to the following rules:

1. For consignment of pesticides, either of same or different products, exceeding 1,000 liters (liquids) or 1,000 kg (solids), separate documentation has to be issued and be kept with the driver. The documentation shall have the following contents:
 1. Name, address and phone number of owner and shipper
 2. Trade name or common name of transported pesticide
 3. Formulation types and concentrations of pesticides transported
 4. Volume of pesticides

5. Emergency procedures in the case of breakage or spill
 6. A safety data sheet for each of the products transported.
2. For consignments greater than 1,000 liters or 1,000 kg the transport route must be declared in advance;
 3. Pesticides carried by means of public transport shall not exceed 20 liters for liquids or 20 kg for solids. Products shall be packed properly and kept separately from the passengers and other goods;
 4. The drivers of vehicles carrying pesticides shall be selected properly and shall be reliable and competent; and
 5. Transportation of pesticides together with living organism and others goods is prohibited.

Article 21. Storage

If pesticides are stored in amounts of more than 10 liters or kilograms, the following requirements should be met:

1. A pesticide storage facilities should be located in an area where flooding is unlikely and at least 100m distance from housing and domestic animal farm;
2. All pesticides must be kept in a facility that can be locked and labeled as a pesticide storage area;
3. Pesticides must be kept away from heat or direct sun exposure;
4. Pesticides should be separated from other goods;
5. Pesticides must be stored by group of hazard classification;
6. Pesticides should be kept in their original containers with label;
7. Absorbent substances such as charcoal, sawdust or sand should be available;
8. Storage floors should be kept clean and dry, and cleaned up if spillage or leaking of pesticides occurs;
9. Soap and water should be available for washing in case of contact with a pesticide;
10. Use stands or pallets for placing of pesticides in order to avoid direct contact with the floor;
11. Keep empty containers in a safe place prior to disposal.

Article 22. Transit

All pesticides passing in transit through Lao PDR shall comply with relevant bilateral or multilateral agreements to which Lao PDR is a party.

Part V Use and disposal of pesticides

Article 23. Use of pesticides

Any person intending to use a pesticide shall recognize its characteristics and pay attention to following matters:

1. Use Integrated Pest Management and give priority to controlling pests by using natural enemies;
2. Use pesticide properly and as described on the label;
3. Wear protective equipment whenever applying pesticides. Employers should provide employees with proper equipment and training in pesticide application;
4. Ensure that the necessary measures are taken to prevent harmful effects of pesticides to human health, animals and the environment; and
5. Any accident involving pesticides that requires specialist assistance or poses a threat to human health or the environment should immediately be reported to the relevant authority.

Article 24. Disposal of pesticides

Substandard or counterfeit pesticides, expired products or pesticide waste, including empty containers shall be properly disposed or buried in an approved landfill without risk to environment. The location should be on a flat ground, far from water resources, well or ground water and follow the technical guidelines specified by Water Resources and Environment Administration (WREA).

Part VI

Packaging Labeling and Advertising

Article 25. Packaging

Repacking of pesticides is prohibited unless specific permission has been obtained from the Pesticide Registration Unit, DOA. Pesticides should be kept in their original packaging during the importation, transportation, storage and distribution in order to prevent harmful effects to human and/or animal and the environment.

Article 26. Labeling

All packaging of pesticides should have affixed labels on the pesticide container. The label must be in Lao and/or English language and be easy to read. It should not tear easily.

1. The contents and form of label shall be approved by the Pesticide Registration Unit, and contain the following information:

- 1.1. Trade name;
- 1.2. Chemical (common) name, formulation and concentration of active ingredient(s);
- 1.3. Purpose of usage, e.g. which crops and pests;
- 1.4. Dosage and mode of application;
- 1.5. Signs and instructions as described in paragraph 2 of this article;
- 1.6. Directions for storage, mixing, usage, packaging and recommended personal protection from hazards;
- 1.7. Withholding period;
- 1.8. Warnings;
- 1.9. Symptoms of poisoning, antidote, directions for physician;

- 1.10. Hazard classification;
- 1.11. Name of producer;
- 1.12. Volume of package;
- 1.13. Production or expiry date; and
- 1.14. License number.

2. Instructions for labeling:

- 2.1. Pesticide under WHO hazard Class Ia must be labeled with a clear danger sign, the skull and crossed bones, and bear the text ‘extremely toxic’ which should be accompanied by the appropriate signs on red stripe as under 3 below;
- 2.2. Pesticide under WHO hazard Class Ib must be labeled with a clear danger sign, the skull and crossed bones, and bear the text ‘highly toxic’, accompanied by the appropriate signs on yellow stripe as under 3 below;
- 2.3. Pesticide under WHO hazard Class II must be labeled with a clear danger sign, flash, and bear the text: ‘dangerous’, accompanied by the appropriate signs on blue stripe as under 3 below;
- 2.4. Pesticide under WHO hazard Class III must bear the text ‘caution’ accompanied by the appropriate signs as under 3 below.

3. The following symbols and phrases shall be used to mark the precaution measures:

- 3.1. Keep away from children;
- 3.2. Wash after handling;
- 3.3. Dangerous to animals;
- 3.4. Dangerous to fish and aquatic animals, prohibited to contaminate water resource;
- 3.5. The following phrases shall be used in either “usage” or “mixing” directions as appropriate:
 - 3.5.1. Wear eye protection;
 - 3.5.2. Wear breathing protection;
 - 3.5.3. Wear mask;
 - 3.5.4. Wear gloves;
 - 3.5.5. Wear protective clothing during spraying or handling;
 - 3.5.6. Wear rubber boots.

Article 27. Advertising

A person, juristic person or organization shall only advertise registered pesticides. False statements or exaggerations that may lead to misunderstanding among users are prohibited.

**Part VII
Management and inspection**

Article 28. Management and inspection of pesticides

Pesticide management and inspection sections comprises of:

- Department of Agriculture, Ministry of Agriculture and Forestry;
- Provincial Agriculture and Forestry Office;
- District of Agriculture and Forestry Office.

These three sections will assign staff to a pesticide inspection unit which will include trained staff on pesticide management from DOA.

Article 29. Inspection of pesticide

Inspection of pesticides refers to monitoring of pesticide manufacturing process, import-export, sale, distribution, advertising, storage, use of pesticides, and disposal of expired pesticide or pesticide waste including empty containers for compliance with laws of Lao PDR. This is also applies to individual farms, concession farms, government and private farms.

Article 30. Types of pesticide inspection

There are three types of pesticide inspections:

1. Regular inspection;
2. Inspection with advance notice; and
3. Immediate inspection.

Regular inspection refers to an inspection performed regularly according to plan at pre-determined times which shall be conducted at least once a year.

Inspection by advance notice refers to an inspection which is not included in the plan, which is performed when deemed necessary and for which advance notice is given.

Immediate inspection refers to a sudden inspection performed without advance notice to the person to be inspected.

Article 31. Right and duties of Department of Agriculture

The Department of Agriculture has following rights and duties regarding the management and inspection of pesticides:

1. To conduct research on policies, laws and regulations on management and inspection of pesticides and make proposals to the Minister for consideration;
2. To disseminate policy, laws and regulations on pesticide management and inspection, and provide training;
3. To cooperate with related agencies and local administration for pesticide management and inspection;
4. To implement the pesticide registration scheme as specified in PART III and make available regular updated of the lists of registered and banned pesticides;
5. To monitor the validity of licenses for the import-export of pesticides;
6. To train and upgrade officials involved in pesticide management and inspection on political, ideological, moral, and technical aspects;

7. To appoint inspectors and to provide them with the necessary badge to empower them to conduct their task;
8. To provide training to traders for obtaining basic knowledge about pesticides and their risks;
9. To cooperate with international organizations on pesticide management and inspection;
10. To regularly report to government on the implementation of its duties on pesticide management and inspection throughout the country;
11. To exercise other rights and duties as stipulated in related legislations.

Article 32. Right and duties of Provincial Agriculture and Forestry Office (PAFO)

Provincial Agriculture and Forestry Office have following rights and duties regarding the management and inspection of pesticides:

1. To supervise the implementation of laws and regulations on pesticide management and inspection within its own province;
2. To issue import licenses to persons or juristic persons who request such licenses and meet the requirements. Pesticides to be imported should be registered and quantities should be in line with use requirements of the local province to avoid over-supply and products being stored beyond their expiry date;
3. To issue sale and/or import licenses to persons or juristic persons who meet the requirements for such business;
4. To conduct inspection of pesticide shops in their provinces and to follow up on cases of violation;
5. To make available the necessary staff and budget to fulfill the duties assigned under this regulation;
6. To propose staff to serve as provincial pesticide inspectors for approval by the Minister of Agriculture and Forestry;
7. To cooperate with other agencies involved in pesticide management and inspection;
8. To regularly report to the Ministry of Agriculture and Forestry on the implementation of its duties in pesticide management and inspection; and
9. To exercise other rights and duties as stipulated in related legislations.

Article 33. Right and duties of District Agriculture and Forestry Office (DAFO)

Right and duties of District Agriculture and Forestry Office have the following rights and duties:

1. To implement the laws and regulations on pesticide management and inspection within its responsible area;
2. To cooperate with other agencies involved in pesticide management and inspection;
3. To regularly report to PAFO on the implementation of its duties in pesticide management and inspection; and
4. To exercise other rights and duties as stipulated in related legislations.

Article 34. Roles and duties of pesticide inspectors

Pesticide inspectors have the following roles and duties:

1. Inform all stakeholders concerned with pesticides of this regulation;
2. The inspectors shall present their identity card and the authorization to the person to be inspected every time and should strictly follow this regulation;
3. Carry out periodic inspections of all persons or organizations involved in import-export, manufacturing, packing or repacking, labeling, storing, selling, distributing, advertising or using pesticides for adherence to this regulation;
4. Carry out regular checking of the products, trading patents, pesticides licenses and records as well as other documentation or authorization granted or issued under this regulation;
5. Collect samples of any pesticide, substances or other objects related to pesticide for analysis;
6. Seize any equipment, pesticide, document, record, or other item which the Inspector believes has been used in, or which appears to afford evidence of, a violation of this regulation, as long as:
 - The inspector hands over a receipt in the prescribed form to the person from whose custody the item was taken;
 - the item is returned to the person once the inquiry has been completed, except for illegal pesticides, which if so declared by the court, shall be disposed as prescribed in **article 11** of this regulation;
7. Take the appropriate action with the responsible authorities to follow up on violation;
8. Prepare the report of violation that required fining to the PAFO and DG of DOA.

Part VIII

Fees and Service Charges

Article 35. Fees and Service Charges

Fees and service charges for pesticide registration certificates or licenses shall be based on a circular of the Ministry of Finance on fees and service charges which are promulgated from time to time.

Part IX

Rewards and Sanctions

Article 36. Rewards

Any person, juristic person or organization performing well in implementing this regulation shall be adequately rewarded and appropriately recognize as determined by Ministry of Agriculture and Forestry.

Article 37. Rewards for government officials

Government official involved with pesticides continuously over 5 years shall receive an early retirement pension as described in article 59 of the Labor Law.

Article 38. Measures towards violators

Any person, juristic person or organization having violated this regulation shall be educated, warned, fined or punished, depending on the severity of the case, as follows:

1st violation: educate, warn and record in file;

2nd violation: seize goods and fine 50 percent of the good's value according to the market price and record in the file;

3rd violation: seize goods and fine twice of the good's value according to the market price, record in the file, collaborate and submit to the concerned authority for temporary closure or full closure of the business depending on case severity.

Any violation, first, second or third, that causes severe consequences to the environment or human, animal or plant health, shall be punished according to criminal law. Any person, who suffers damage caused by the import-export, manufacture, packaging or storage of pesticides which are unqualified and dangerous to human health or environment, or results from illegal action, shall be compensated by the competent court. In case of such violation, disposal or returning the pesticides to the exporting country, all expenditure shall be borne by the violator.

Part X Final Provision

Article 39. Implementation

The Department of Agriculture, Ministry of Agriculture and Forestry, in collaboration with other concerned organizations shall implement this regulation effectively.

Article 40. Effectiveness

This regulation is effective from the date of signature by Minister of Agriculture and Forestry. Any decrees, regulations or provisions contradicted to this regulation are repealed.

Minister of Agriculture and Forestry
Sitaheng RASAPHONH

Annex 1 - List of banned pesticides in Lao PDR, June 2010

Insecticides and acaricides

1. Aldrin
2. BHC
3. Chlordane
4. Chlordimeform
5. Chlorfenvinphos

6. Chlorthiophos
7. Cyhexatine
8. DDT
9. Dieldrin
10. Dimefox
11. Dinitrocresol
12. Demeton
13. Endrin
14. Endosulfan
15. Ethyl Parathyon
16. EPN
17. Heptachlor
18. Hexachloro cyclohexane
19. Leptophos
20. Lindane
21. Methamidophos
22. Methomyl
23. Methyl parathion
24. Monocrotophos
25. Polychlorocamphene
26. Phorate
27. Schradan
28. TEPP
29. Toxaphene

Fungicides

30. Binapacryl
31. Captafol
32. Cycloheximide
33. Mercury and mercury compounds
34. MEMC
35. PMA
36. Selenium compound

Rodenticides

37. Chlorobenzilate
38. Sodium fluoroacetate

Herbicides

39. 2, 4, 5 –T
40. Dinoseb
41. Dinoterb acetate

42. Paraquat
43. Sodium chlorate

Fumigants

44. EDB
45. Ethylene oxide
46. Methyl bromide

Others

47. Arsenic compound
48. Calcium arsenate – herbicide, rodenticide, molluscicide, insecticide
49. DBCP – Nematocidide
50. Daminozide – Plant growth regulators
51. Fluoroacetamide – Insecticide, rodenticide
52. Oxamyl – Insecticide, acaricide, termiticide
53. Phosphamidon – Insecticide, nematocidide
54. Sodium Arsenite – Insecticide, fungicide, herbicide, rodenticide
55. Thallium (i) sulfate – Rodenticide, insecticide.

Annex 2 – Different classification of pesticides

I. Classification of pesticides based on their purpose

1. Algicides
2. Antifouling agents
3. Antimicrobials and biocides
4. Attractants
5. Biopesticides
6. Disinfectants and sanitizers
7. Fungicides
8. Fumigants
9. Herbicides
10. Insecticides
11. Miticides (also called acaricides)
12. Microbial pesticides
13. Molluscicides
14. Nematicides
15. Ovicides
16. Pheromones
17. Repellents
18. Rodenticides

The term pesticide also includes:

1. Defoliants
2. Desiccants
3. Insect growth regulators
4. Plant growth regulators

II. Classification of pesticides by hazard

1. WHO defines the following hazard classes:

- Ia – Extremely toxicity
- Ib – Highly hazardous
- II – Moderately hazardous
- III – Slightly hazardous
- U – Unlikely to present acute hazard

2. Classification of pesticide by hazard:

2.1. Chemical substances or pesticides chemicals which are classified should refer to The WHO Recommended Classification of Pesticides by Hazard and Guideline to Classification.

2.2. Any products which not belong to 2.1 should follow the particular regulation

3. The classification of pesticides by hazard shown in 2.1 refer to the Formulated Product or Finished Product are defined by Lethal Doses (LD₅₀) present in this table:

WHO Class		LD ₅₀ for the rat (mg/kg body weight)	
		Oral	Dermal
Ia	Extremely hazardous	- < 5	< 50
Ib	Highly hazardous	5 - 50	50 - 200
II	Moderately hazardous	50 - 2000	200 - 2000
III	Slightly hazardous	> 2000	> 2000
U	Unlikely to present acute hazard	5000 or higher	

LD₅₀ (Lethal Doses) value is statistical estimate of the number of mg of toxicant per kg of body weight required to kill 50% of a large population of test animals; the smaller the LD₅₀ value indicates higher acute toxic.

Mg – mass of toxic substance

Kg – body weight of live animal