

Research Ethics Office, 3F Henry Sy Sr. Hall De La Salle University Manila 2401 Taft Avenue, Manila 1004, Philippines REO@dlsu.edu.ph (632) 524-4611 loc. 513

| SOP No.: 2 | |
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| Form No.: 2(I) | |
| Version No.: 2 | |
| Version Date: November | |
| 2016 | |

DE LA SALLE UNIVERSITY

Checklist E¹ Research Ethics Checklist on the Use of Toxic Substances

This checklist must be completed <u>AFTER the De La Salle University Code of Research Ethics and Guide to Responsible Conduct of Research has been read and BEFORE gathering data</u>. The University Code of Research Ethics is available at http://www.dlsu.edu.ph/offices/urco/forms/URCO-Code-of-Research-Ethics August2011.pdf

NOTE: This checklist is completed after the research proponent fills out the General Checklist Form

Only answer this Checklist if you answered YES on question 5 of the General Checklist.

| Researcher Details | | |
|---|--|--|
| Lead Researcher's Signature | | |
| Lead Researcher's Name (Please Print) | | |
| Email Address | | |
| Department | | |
| Proposed Title of the Research | | |
| Term(s) and academic year in which research project is to be undertaken | | |
| Other faculty members involved in project and their department affiliation(s) | | |

¹ This checklist serves as a guide to make the researcher aware of the ethical issues that may have to be addressed in planning a study.



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| | you classify the toxic chemicals ⁱ that will be used in your study (see last page hemicals that require special permits): |
|--------------------------|--|
| | Corrosive (can injure body tissue or corrode metals) Flammable (have the potential to catch fire readily and burn in air) Oxidizer and reactive (chemicals that can explode or react violently with water or atmospheric oxygen) Toxin (substances that even in small amounts can injure body tissues) Mutagen/Carcinogen (can cause mutation or cancer) Allergen (can cause adverse reaction to the immune system) Irritant (can cause inflammatory effects on living tissues) Neurotoxin (can induce adverse effect on the central or peripheral nervous system) |
| NOTE: | If a special permit is required, please secure permit from the Department of Environment and Natural Resources-Environmental Management Bureau (DENR-EMB) indicating that permission was granted. Please attach the documents to the research proposal. |
| | |
| Please prov research: | ide a brief description of the data collection procedure to be undertaken in the |



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IMPORTANT NOTE: The proponent is required to read/ check the Material Safety Data Sheet (MSDS) for each of the chemicals to be used. MSDS is a detailed description of the chemical's composition and properties provided by the company where this chemical will be purchased. It also provides information on the first-aid measures, accidental release measures, appropriate personal protective equipment (PPE) and necessary precautions to ensure safety and proper handling of chemicals. This can be found at the Science Lab website at https://www.sciencelab.com/msdsList.php. The proponent is also required to coordinate with the University Pollution Control Officer (c/o the Campus Sustainability Office), for the inclusion of hazardous chemicals that will be used by the research.

The following items refer to some important ethical and safety considerations in the conduct of research with toxic chemicals. Provide a check for the appropriate answer to each question.

| | | YES | NO | Not Applicable |
|----|---|-----|----|-------------------|
| 1. | Will the toxic chemical/s be used as components/materials to generate another product? | | | |
| | If yes, please indicate the product to be generated on the space provided. | | | |
| 2. | Will the toxic chemical/s be generated as a byproduct of another process? If yes, please attach a description of the process to this checklist form. | | | |
| 3. | Are these chemicals going to be purchased and transported to the laboratory? | | | |
| | Answering with a "NO" indicates that the chemicals to be used are available in the laboratory. Please | | | |



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| attach a listing of personal protective equipment (PPE) that will be used by the researcher. If yes, please attach a description of the safety measures to be undertaken during the transport. Please attach a listing of personal protective equipment (PPE) that will be used by the researcher. | | |
|---|--|--|
| Are you conducting part of your research/experiments outside the University? If yes, indicate the laboratory where you are going to conduct your experiment on the space provided: | | |



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| | YES | NO | Not Applicable |
|--|-----|----|-------------------|
| 6. Do you intend to use/introduce the toxic agent/substance to an organism? | | | |
| If yes, please indicate the organism and the manner of introduction by which the agent will be introduced on the space provided: | | | |
| | | | |
| | | | |
| 7. Will the experiment require your exposure to the toxic chemical for a long period of time? | | | |
| If yes, please indicate the duration of exposure: | | | |
| | | | |
| 8. Will the experiment require recurrent exposure to the toxic chemical? | | | |
| If yes, please indicate the frequency and duration of exposure: | | | |



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| 9. Will you need t | to treat, store and di | ispose | | |
|---|--------------------------------------|-----------------|--|--|
| toxic/hazardous waste generated by your research? | | | | |
| | | | | |
| | ndicate the Waste (| | | |
| | of the toxic/hazardo | | | |
| table below" (s | see last page for wa | ste codes): | | |
| Waste Code: | Classification: | Volume: | | |
| wasie code. | Classification. | v orunic. | | |
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| 10 Door vous so | goardh aim to produ | lao/gonoreto e | | |
| | search aim to produ ommercial value? | ice/generate a | | |
| product with e | ommerciai varue: | | | |
| If ves. do vou | wish to apply for a | patent for your | | |
| research? | 11 7 22 3 | 1 | | |
| | | | | |
| Please check: | | | | |
| Yes | | | | |
| No | | | | |

Answering <u>YES</u> to any of the items will signal an ethical issue that needs to be addressed. Some actions that will allow for the adherence to research ethical principles are provided with each item. The researcher will have to determine how these actions are to be incorporated into the research procedure. The researcher is advised to refer to the University's Guide to the Responsible Conduct of Research for other procedures to ensure adherence to ethical principles in the conduct of research.

Declaration



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I certify that I have read and understood the De La Salle University Code for the Responsible Conduct of Research and will abide by the ethical principles in this document. I have coordinated with the University Pollution Control Officer for the proper treatment, storage and disposal of hazardous wastes that the research will generate.

Name and Signature of Principal Investigator

Date

FOR GRADUATE and UNDERGRADUATE DLSU STUDENTS ONLY

I confirm that the student(s) is/are capable of undertaking this research in a safe, responsible and ethical manner.

Date

Signature

Priority Chemical List:

Adviser's Name

| i Hority Chemical List. | | | |
|-------------------------|----------------------|-------------------|-------------------|
| 1,1,1,- | Carbon Tetrachloride | Ethylene Oxide | PCB |
| Trichloroethane** | | | |
| 1,2 Diphenylhydrazine | ChloroflouroCarbons | Halons** | Pentachlorophenol |
| | CFCs)** | | |
| Arsenic compounds | Chloroform | Hexachlorobenzene | Phosgene |
| Asbestos* | Chlorinated Ethers | Hexachloroethane | PBB |
| Benzene | Chromium Compounds | Lead Compounds | Selenium |

¹ Chemicals included in the Priority Chemical List (PCL) and the Chemical Control Order (CCO) will require special permit applications with the DENR – EMB. For reference, see lists below or researcher may coordinate with the University Pollution Control Officer.



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| Berylium Compounds | Cyanide Compounds* | Mercury Compounds* | Tributyltin |
|--------------------|--------------------|--------------------|----------------|
| Cadmium Compounds | Ethylene Dibromide | Mirex | Vinyl Chloride |

Note: * Are now subject to CCO

Addition of 20 chemicals and compounds to the previous list of 28:

| 1,4 Chlorobenzene | Chloropicrin | Methylene chloride (Methylene, |
|------------------------|----------------------------|--|
| | | dichloro) |
| 1,2 Dibromoethane | Diethyl sulfate | Perchloroethylene(Ethene, tetrachloro) |
| 0-Dichlorobenzene | Glutaraldehyde) | Phenicacid (Phenol) |
| 1,4-Dichlobenzene | Formaldehyde | PhtalicAnhydride |
| 1,2-Dichloroethane | Hydrazine | Trichloroethylene(Ethene, dichloro) |
| 3-Hydroxyphenol | Mercaptan, Perchloromethyl | MBT (2(3H)-Benzothiazolthione |
| Antimony Pentachloride | Methyl Chloride (Methene, | |
| | chloro) | |

Note: users, manufacturers, distributors, and importers are required to register as hazardous waste generatorat the EMB ROs and submit biennial report on their production and management information. Per DAO 2007-23, must also secure PCL Compliance Clearance from EMB-CO.

Chemicals subject to CCO

- Mercury & Mercury Compounds (DAO 97-38)
- Cyanide & Cyanide Compounds (DAO 97-39)
- Asbestos (DAO 2000-2)
- Ozone Depleting Substances (DAO 2013-25; 2004-08; 2000-18 and 2002-22)
- PCB (DAO 2004-1)
- Lead & Lead Compound (DAO 2013-24)

ii DENR – EMB Hazardous Waste Codes and Classification: The researcher is required to properly label all hazardous and toxic wastes generated by the research, according to the waste codes and classification presented below:

| Waste Code | Classification |
|--------------------------|--|
| B201-B299 | Acid Wastes |
| C301-C399 | Alkali Wastes |
| D402-D499 | Wastes with Inorganic Chemicals |
| E501,E502,E503,E599 | Reactive Chemical wastes |
| F601-F699 | Inks/Dyes/pigments/Resins/Adhesive/Latex/organic/ sludge |
| G703-G704 | Waste organic Solvent |
| H802 | Grease Wastes |
| I101 | Used oil |
| J201 | Containers |
| K301-K303 | Stabilized Wastes |
| L401,L402,L403 | Organic Chemicals |
| M501,M503,M504,M506,M507 | Miscellaneous Wastes |

^{**}now belong to CCO for ODS



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The researcher should coordinate with the University Pollution Control Officer for the storage, transport, treatment and disposal of Toxic/Hazardous Waste materials generated by the research.