

EXPIRED DEVICES, MATERIALS, DRUGS AND FLUID

1. Policy statements

The intent of this policy is to ensure that adequate veterinary care is provided and the health and welfare of animals is not compromised when expired device, material, drug and fluid are used for animal research.

2 DEFINITIONS

In-date	Before the use-by or expiration date provided by the manufacturer.
Survival Procedure	A procedure, surgical or non-surgical, for which an animal receives an anaesthetic agent and regains consciousness.
Terminal or Non-survival Procedure	A procedure, surgical or non-surgical, for which an animal receives an anaesthetic agent and is euthanised before regaining consciousness.

3 Scope

This policy applies to all animal work covered under NUS IACUC oversight and applies to the following:

- Devices: under this policy include any device implanted to the animal, such as intended for the purpose of experiment or clinical care, include but not limited to delivery of compound (e.g. infusion pump), or to access specific anatomical structure (e.g. head post, cranial implant, etc.), or implant to be assessed as part of study or affecting the function of (e.g. bone implant, heart valve, bio-electronic, etc.).
- Materials: any supplies to be used in animal procedure e.g., sutures, catheter, etc.; and/or reagent to be used for diagnosis or monitoring animal parameters (for clinical or experimental use) that affect animal care or data.
- Drugs and Fluids: administered in animal for the purpose of experiment or clinical/veterinary care, include but not limited to pharmaceutical drugs (e.g., anesthetic, analgesic, euthanasia agent, antibiotic, other therapeutic or emergency drugs), non-pharmaceutical drugs (e.g., experimental compound, chemicals,); other compound (e.g. vehicles, PBS, oils, etc.); and fluid (e.g. infusion fluids, saline, etc.).

4 Guidelines

4.1 Principles

- 4.1.1 The use of expired device, material, drug and fluid on animals is not considered to be acceptable veterinary practice and does not constitute adequate veterinary care.
- 4.1.2 Anesthetics, analgesics, euthanasia agents, emergency drugs, and drugs for clinical use must be used before their expiration dates.

- 4.1.3 Expired device, material (e.g suture), drug and fluid may not be used for survival procedures (either clinical or experimental). They may only be used for terminal procedures as outlined in 4.3.

4.2 Documentation, storage and disposal of expired device, material, drug and fluid

- 4.2.1 All device, material, drug and fluid must be used before the expiration date, and that any expired device, material, drug and fluid used for non-survival animal work such as those listed in Annex A are identified and segregated. This includes labelling all drug preparations with the date of preparation and the earliest expiration date of the component drugs.
- 4.2.2 All expired device, material, drug and fluid must be disposed of or segregated in an appropriately labelled, physically separated location from in-date supplies (see 4.3).
- 4.2.3 Expired supplies should be disposed according to section 7.7 “*Chemical Waste Disposal*” of OSHE “*NUS Laboratory Chemical Safety Manual*”. Controlled substances obtained from the CM pharmacy shall be returned to the CM pharmacy for disposal

4.3 For Terminal Procedures

Expired device, material, drug and fluid may be used in terminal procedures, including non-survival surgeries, provided that:

- they are marked as “Expired — Use ONLY in TERMINAL Procedures.”
- they are stored in a different location (cabinet, drawer, etc.) from supplies used for survival procedures
- their use does not adversely affect the animal’s well-being or compromise the validity of the scientific study
- anaesthetics, analgesics, euthanasia agents, and drugs to support the animal’s physiological condition during the procedure (e.g., atropine, dopram, epinephrine, etc) must be in-date for terminal procedures.

Please refer to Annex A for a general guideline on the use of expired device, material, drug and fluid in animal work for easy reference.

5. References

- [Guide for the Care and Use of Laboratory Animals. National Research Council, 2011.](#)
- [Guidelines on the Care and Use of Animals for Scientific Purposes. National Advisory Committee for Laboratory Animal Research. 2022](#)
- Office of Laboratory Animal Welfare, National Institutes of Health. [Frequently asked questions: PHS Policy on humane care and use of laboratory animals. F.5.](#)

6 Related documents/SOPs

- [NUS Laboratory Chemical Safety Manual](#)

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Revisions	Author	IACUC approval date
Created	Dr Foo Tet Wei, John	15 Aug 2013
P214.01. Revisions:	AP Veronique Angeli	19 Jul 2021
1. General: Reformatted to use current policy template	Mr Foo Siang Heng	
2. Revise policy title to "Expired Devices, Materials, Drugs and Fluid"	Dr Lois Zitzow	
3. Remove references to "responsible officials" and laboratory/departmental procedures/policies/SOPs for the identification, use and/or disposal of expired devices, materials, drugs, and fluids.	Dr Chew Li Li	
4. Addition of Annex A for easy visualization of what can and cannot be used in terminal procedures		
P214.02. Revisions:	Dr Lois Zitzow	11 Aug 2021
1. Administrative change to removed reference to CM SOP 705 and replaced with "Controlled substances obtained from the CM pharmacy shall be returned to the CM pharmacy for disposal".	Dr Chew Li Li	
P214.03. Reviewed to:	Dr Chew Li Li	3 January 2023
1. ensure policies are in compliance with the NACLAR Guidelines 2022 and the updated Animals and Birds (Care and Use of Animals for Scientific Purposes) Rules 2004; and	IACUC	
2. up-to-date with current practices		
Changes made under section 5, updated to "Guidelines on the Care and Use of Animals for Scientific Purposes. National Advisory Committee for Laboratory Animal Research. 2022".		

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CONFIDENTIAL**Annex A**

General guideline on the use of expired device, material, drug and fluid. No expired device, material, drugs or fluid can be used for survival procedures.

	Terminal/Non-survival procedures
Can be used	Expired device, drug and fluids, such as: <ul style="list-style-type: none">• Parenteral fluids• Suture materials• Supplies (i.e. gauze, needles, butterfly catheters, etc.), implantable materials or devices (i.e., cardiac catheters, etc.)• Surgical instruments
Cannot be used	<ul style="list-style-type: none">• Anaesthetics• Analgesics• Euthanasia agents• Drugs to support the animal's physiological condition during the procedure (e.g. atropine, dopram, epinephrine, etc) must be in-date for terminal procedures.