

The Johns Hopkins Hospital Pathology General Policy Manual	Policy number	PATH 22
	<i>Effective date</i>	9/8/09
<i>Subject</i> REAGENT AND SOLUTION LABELING POLICY	Page	1 of 5
	<i>Supercedes</i>	3/27/06

I. OBJECTIVES

Guidelines are to ensure that reagents and solutions are completely and accurately labeled.

II. RESPONSIBILITIES

Laboratory Testing Personnel	Label reagents and solutions to insure that their identities are never in doubt Store reagents as required by manufacturer
Managers, Supervisors	Ensure that staff is educated on their responsibilities regarding labeling requirements

III. GENERAL –REAGENT AND SOLUTION LABELING PROCEDURES

All containers must be dated and inventoried upon arrival and dated again when first opened. If any container is missing a label or required information, corrective action must be taken.

A. Guidelines for Labeling

1. Identity

- a. The identity for all reagents must be clearly indicated on the outside of the container:
 1. Reagent or solution name
 2. Lot number of product used
 3. Expiration date
- b. If label is no longer legible, a new one shall be placed on the outside of the container.
- c. If a material is transferred from an original container to another container, such as making a solution of a chemical or repackaging into smaller bottles for redistribution all such *secondary containers* need to be properly labeled. The labeling must include:
 1. Full name of the materials in the container
 2. lot #
 3. expiration date
 4. preparation date
 5. preparer's name
- d. Fixative, transport media and solutions that have been repackaged into containers for use with slides or specimens may be labeled with only the name of the medium so long as the full name of the chemical(s) in the container and the information about any potential hazards are posted in the laboratory or other place of use.
- e. Secondary containers filled with cleaning supplies may be labeled with only the common name of the contents (e.g., "10% bleach") so long as the full name of the chemical(s) in the container and the information about any potential hazards are posted in the laboratory or other place of use.

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2. Strength

- a. The concentration or titer of a solution or mixture must be listed on the label.

3. Cautionary Information

- a. Indicate on label any necessary health or physical precautions, as indicated.
- b. Labels and other forms of warning- Labels or other markings on each container must include the identity. Appropriate hazard warnings, including target organs affected by the hazardous chemical must be available in the laboratory or other places or use. See III.A.1.d and III.A.1.e. for policies concerning specimen containers and cleaning supplies.

Definitions of chemicals designated as a hazardous material include:

Corrosive. A substance that causes visible destruction or permanent changes in human skin tissue at the site of contact.

Flammable liquid. A liquid with a flash point of less than 100°F. (The flash point of a liquid is the lowest temperature at which it can form an ignitable mixture with air.) Such liquids can cause a fire or explosion.

Irritant. A chemical that is not corrosive, but which causes a reversible inflammatory effect on living tissue by chemical action at the site of contact.

Toxicity. A relative property of a chemical agent that refers to its harmful effect on some biologic mechanism and the conditions under which this effect occurs

Reactivity (chemical). A substance's susceptibility to undergo a chemical reaction or change that may result in dangerous side effects, such as an explosion, burning, and corrosive or toxic emissions.

Sensitizer. A chemical that causes a substantial proportion of exposed people or animals to develop an allergic reaction in normal tissue after repeated exposure to the chemical

Carcinogen. A substance or agent capable of causing or producing cancer in mammals, including humans. A chemical is considered to be a carcinogen if: a) it has been evaluated by the International Agency for Research on Cancer (IARC) and found to be a carcinogen or potential carcinogen; or b) it is listed as a carcinogen or potential carcinogen in the Annual Report on Carcinogens published by the National Toxicology Program (NTP) (latest edition); or c) it is regulated by OSHA as a carcinogen.

If a hazardous material is made into a solution or liquid, in a concentration at which it is still considered hazardous in the diluted form, it should have a label which duplicates the hazard warnings and target organs, precautions and first aid steps found on the original label.

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4. Preparation

- a. Label all primary and secondary containers of prepared reagents in accordance with the procedures specified in section 1.

5. Expiration Dates

- a. Review the expiration dates on reagents and solutions prior to use.
- b. If an expiration date of a reagent changes upon opening reagent, indicate new expiration date on kit or container.
- c. If an expiration date is temperature dependent, indicate the new expiration date when the container or kit is placed in service at a temperature different from storage (i.e., a kit is stored in the refrigerator, but has a new expiration date when placed in service at room temperature).
- d. If no expiration date is indicated by the manufacturer for a reagent or solution, the solution should be evaluated for its reactivity on an annual basis.

B. Expired Reagents

1. No reagent is to be used after its listed expiration date. If the expiration date was changed as specified in III.A.5 b or c above, then the reagent may not be used after its modified date.
2. Expired reagents are to be sent for disposal vial the Johns Hopkins Hazard Materials Program.
3. Reagents or chemicals without a manufacture's expiration date:
 - a. Stored chemicals should be evaluated annually to determine suitability and integrity for continued use.
 - b. Chemicals that have been stored for 10 years are also to be sent for disposal via the Johns Hopkins Hazardous Materials Program. 955-5918.

C. Safety requirements for Labeling

1. Hazardous reagents must be clearly labeled to indicate the hazard associated with the reagent.
 - a. Any reagent that may pose a hazard to staff is identified with the necessary precautions on the labels.
 - b. MSDS sheets may be obtained from the Health Safety and Environment at 955-5918 to request a copy or on the HSE website under Environmental Health.
 - c. See III.A.1.d and III.A.1.e for policies concerning specimen containers and cleaning supplies.

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D. Unlabeled Solutions and Reagents

Any and all unlabeled or illegibly labeled chemicals must be disposed of immediately.

E. Label Resources

The reagent /chemical labels are available for each laboratory to order individually from TimeMed Labeling System Co.

The labels can be obtained two ways:

- through HopkinsOne vendor ID # 1010650 Product # MV07SW6715 Solution Labels
- OR if only a few labels are needed Attachment 1 may be copied.

IV. GENERAL Reagent and Solution Storage PROCEDURES

1. Storage requirements are to be indicated on container labels:
 - a. Temperatures
 1. Store reagents at required temperatures indicated by manufacturer
 2. Reagents with temperature storage requirements shall have these listed on the labels.
 3. Store reagents and solutions that must be refrigerated or frozen in freezers or Refrigerators with the required temperature ranges. Freezer and refrigerator temperature logs must show that the appropriate temperature ranges are monitored Freezer and refrigerator temperature logs must show that the appropriate temperature ranges are monitored.
 - b. Light sensitivity
 1. If indicated store in cabinets or in a dark container where required.

REFERENCES:

- OSHA Regulations (Standards - 29 CFR) Occupational exposure to hazardous chemicals in laboratories. - 1910.1450
- McElrath, Susan. <http://www.webworldinc.com/wes-con/flamable.htm>

DEVELOPER

- Pathology Continuous Quality Improvement Office

SPONSOR

- Pathology Department

COMMUNICATION AND EDUCATION

This policy will be communicated to the appropriate JHHS personnel via the following channels:

- A copy of the policy will be distributed to the Pathology General Policy Manual
- Pathology personnel will be educated through Pathology administration and through education by supervisors and departmental educators.
- Departments will identify additional target individuals to receive information on the implementation of this policy.

Attachment 1

Reagent _____
Lot # _____
Concentration _____
Storage Temp _____
Open/Prep Date _____
Expiration Date _____
Prepared by _____
Location _____
Precautions _____

Reagent _____
Lot # _____
Concentration _____
Storage Temp _____
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