



Owner C.H.O	DOC. NO. SOP	REV. 2	DATE 12/9/2019
DOC. TITLE SOP FOR BOUIN'S SOLUTION			

Environmental Health & Safety

STANDARD OPERATING PROCEDURES (SOP) FOR WORKING WITH BOUIN'S SOLUTION AT AMHERST COLLEGE

General Information

Bouin's Solution is a yellow liquid made up of formaldehyde, picric acid, and acetic acid. It is classified as a **category 1A carcinogen** due to the presence of Formaldehyde. If the solution dries out, the picric acid can become explosive.

Bouin's solution is often used as a fixative in Biology laboratories to preserve soft and delicate tissue structures

Personal Protective Equipment

When working with Bouin's Solution, the following personal protective equipment (PPE) **must** be worn:

Splash goggles

Lab coat

Long pants

Close toed shoes

Nitrile Gloves (Double-gloving recommended; change as often as needed)

Safety Devices

Fume hood – always work with Bouin's Solution in a fume hood to prevent exposure by inhalation

Identify the location of all the safety devices in the room before starting your procedure. Also, familiarize yourself with all the possible means of egress

Specific Health Hazards

Bouin's Solution has a Permissible Exposure Limit (PEL) of 0.1ppm, time weighted average. This means that lab personnel shall not be exposed to more than this concentration, over an 8-hour workday, on average



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The Short Term Exposure Limit (STEL) is set at 0.3ppm; which means that, at no point shall personnel be exposed to a concentration higher than this value

Bouin's Solution may cause cancer. Skin contact may cause severe burns. Repeated exposure may lead to impairment of the nervous system



Pictogram:

Hazards: Carcinogenic, Corrosive, Irritant

Routes of Entry:

Inhalation, eye/skin contact, ingestion

If *any part of your body* comes in contact with Bouin's Solution, call the Amherst College Emergency phone number 413-542-2111. Also call this number if you begin to feel ill after working with or in the vicinity of this chemical

Inhalation

If inhaled, move to fresh air, and get help. if you begin to feel ill during / after working with Bouin's Solution, Call the Amherst College Police Department (ACDP) at x2111 to report it

Eye contact

Use eyewash to flush eyes with water for at least 15 minutes

Skin Contact

Wash skin with plenty of water for 15 minutes. Use safety shower, if needed.

Ingestion

Do not induce vomiting; rinse mouth

Storage and Special Handling

Store in a tightly closed plastic container in a cool, dry area, such as a ventilated cabinet.

Do not store on shelf



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Store away from acids, bases, oxidizers, sources of ignition, and direct sunlight

If you have Bouin's Solution that you no longer need, please contact Jason Williams, x2736, for disposal

Special Handling

Always keep containers with Bouin's Solution tightly capped when not in use as picric acid is an explosive when dry

Store away from direct sunlight

Spill clean up

Do not attempt to clean up a Bouin's Solution spill, due to the low exposure limits

If a spill of any volume or concentration occurs:

Alert everyone in the area

Leave the room

Close the door behind you

Call Jason Williams (Chemical Hygiene Officer) or The Amherst College emergency number (x2111) to report it.

Disposal

Disposal pipets, pipet tips, and any other disposable devices that come into contact with Bouin's Solution may be disposed of in the regular trash, provided that they are not grossly contaminated

Waste containing Bouin's Solution may be disposed of into a "non-halogenated aqueous waste" container, provided that it is not incompatible with other materials in the container. you may also dispose of Bouin's Solution or any other chemical by themselves

If you have Bouin's Solution that you no longer need, contact the Chemical Hygiene officer

Questions

Contact Jason Williams or Environmental Health and Safety if you have any questions about this SOP or this compound.

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