Standard Operating Procedure

Alpha-Naphthylamine

*This is an SOP template and is not complete until: 1) lab specific information is entered into the box below 2) lab specific protocol/procedure is added to the protocol/procedure section and   
3) SOP has been signed and dated by the PI and relevant lab personnel.*

Print a copy and insert into your   
*Laboratory Safety Manual* and *Chemical Hygiene Plan*.   
Refer to instructions for assistance.

|  |  |
| --- | --- |
| **Department:** | Click here to enter text. |
| **Date SOP was written:** | Click here to enter a date. |
| **Date SOP was approved by PI/lab supervisor:** | Click here to enter a date. |
| **Principal Investigator:** | Click here to enter text. |
| **Internal Lab Safety Coordinator/Lab Manager:** | Click here to enter text. |
| **Lab Phone:** | Click here to enter text. |
| **Office Phone:** | Click here to enter text. |
| **Emergency Contact:** | Click here to enter text. |
| *(Name and Phone Number)* |
| **Location(s) covered by this SOP:** | Click here to enter text. |
| *(Building/Room Number)* |

**Type of SOP:** ☐ Process ☒Hazardous Chemical ☐ Hazardous Class

**Purpose**

Alpha-Naphthylamine is a Carcinogen. If not stored and handled properly, this can pose a serious threat to the health and safety of laboratory personnel, emergency responders and chemical waste handlers. Hence, it is important to follow safety protocols to handle this chemical.

Crystals of alpha-Naphthylamine are colorless and give off ammonia like odor. Alpha Naphthylamine is used as a tobacco additive, as a chemical intermediate for certain dyes, in toning prints and in certain herbicides. The chemical is mostly found as colorless crystals that darken in air to a reddish purple color, but is also found in solution. Butyl rubber, Nitrile gloves should be worn when handling this material

**Physical & Chemical Properties/Definition of Chemical Group**

CAS#: 134-32-7

Class: Carcinogen

Molecular Formula: C10H7NH2

Form (physical state): crystals

Color: colorless

Boiling point: 301 ºC

**Potential Hazards/Toxicity**

Alpha-Naphthylamine is a carcinogen (known to cause cancer to humans).

**Health Hazards:** Avoid direct physical contact. May be fatal or have adverse health effects if absorbed through skin, inhaled or swallowed.

Dust and/or vapors can cause irritation to the respiratory tract. May cause allergic skin reactions, sensitization by skin contact, skin irritation, bladder injury, blood disorders, and/or nervous system injury.

Symptoms of exposure include dermatitis, hemorrhagic cystitis, dyspnea (difficulty breathing), ataxia, methemoglobinema, hematuria (blood in the urine), and dysuria.

**Personal Protective Equipment (PPE)**

**Respirator Protection**

Respirators should be used only under any of the following circumstances:

* As a last line of defense (i.e., after engineering and administrative controls have been exhausted).
* When Permissible Exposure Limit (PEL) has exceeded or when there is a possibility that PEL will be exceeded.
* Regulations require the use of a respirator.
* An employer requires the use of a respirator.
* There is potential for harmful exposure due to an atmospheric contaminant (in the absence of PEL)
* As PPE in the event of a chemical spill clean-up process

Lab personnel intending to use/wear a respirator mask must be trained and fit-tested by ORS and should contact occhealt@uga.edu. This is a UGA requirement described in more detail in the [UGA Respiratory Protection Plan](https://esd.uga.edu/sites/default/files/respiratoryprotection.pdf) and supported by the [Office of Research Occupational Health and Safety Program](https://research.uga.edu/ohsp/).

**Hand Protection**

Wear compatible, chemical-resistant gloves such as nitryl or butyl gloves.

NOTE: Consult with your preferred glove manufacturer to ensure that the gloves you plan on using are compatible with Alpha-Naphthylamine..

Refer to glove selection chart from the links below:

<http://www.ansellpro.com/download/Ansell_8thEditionChemicalResistanceGuide.pdf>

OR

<http://www.allsafetyproducts.biz/page/74172>

OR

<http://www.showabestglove.com/site/default.aspx>

OR

<http://www.mapaglove.com/>

**Eye Protection**

Wear safety glasses/goggles.

**Skin and Body Protection**

Wear a lab coat, long pants, and closed-toes shoes while handling.

**Hygiene Measures**

Wash and dry hands after working with alpha-Naphthylamine, even if using an isolation chamber.

Leave lab coats, gloves, and other personal protective equipment in the lab once your work is complete to prevent the spread of this or other chemicals outside of the lab.

**Engineering Controls**

Always handle alpha-naphthylamine in a certified chemical fume hood. Proper personal protective equipment must always be worn while in the regulated area. If not working under a hood or if working in an open system, a respirator must be worn and decontamination procedures followed.

**First Aid Procedures**

**If inhaled**

Move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

**In case of skin contact**

Remove contaminated clothing and immediately wash the affected area with soap and copious amounts of water for 15 minutes

**In case of eye contact**

Immediately flush eyes with copious amounts of water for at least 15 minutes, preferably in emergency eyewash.

**If swallowed**

Obtain medical attention.

**Special Handling and Storage Requirements**

**Precautions for safe handling**

All work with alpha-Naphthylamine is to be done in a designated area in order to keep contamination to a minimum. Any persons in this area are required to wear personal protective equipment. Safety shower and eye wash stations should be easily accessible where alpha-Naphthylamine is used.

Avoid contact with skin and eyes. Avoid formation of dust and aerosols.

**Conditions for safe storage**

Keep container tightly closed in a dry and well-ventilated place. Light sensitive.

**Spill and Accident Procedure**

**Chemical Spill Dial 911**

**24-7 On-Call Response to Research, Environment, Health or Safety Concerns Dial 2-5561 from a campus phone or 706-542-5561 from a non-campus line.**

**Spill** – Follow the procedures set out in the [UGA Chemical and Laboratory Safety Manual.](http://research.uga.edu/docs/units/safety/manuals/Chemical-Laboratory-Safety-Manual.pdf)

[If there are any chemical-specific protocols for responding to a spill, insert them here or mark “none”:]

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# **Medical Emergency Dial 911**

**Life Threatening Emergency, After Hours, Weekends And Holidays** – Dial **911** or the emergency phone numbers listed at the beginning of the UGA Chemical and Laboratory Safety Manual

*Note: All incidents that result in an injury or property damage must be reported to ORS / ESD using a University Incident/Accident Report.*

**Non-Life Threatening Emergency** – Follow the instructions in the UGA Chemical and Laboratory Safety Manual.

*Note: All incidents that result in an injury or property damage must be reported to ORS / ESD using a University Incident/Accident Report.*

**Decontamination/Waste Disposal Procedure**

**For general hazardous waste disposal procedures, see Appendix H of the UGA Chemical and Laboratory Safety Manual.**

**Chemical Specific Procedures: [to be inserted or marked as “none”]**

All alpha-Naphthylamine waste shall be disposed of into waste containers specifically designated for alpha-Naphthylamine waste. Wash contaminated surfaces to remove any residue. Once the waste container is full, dispose of as hazard waste.

Dispose of contaminated packing material as unused product.

**Safety Data Sheet (SDS) Location**

UGA personnel can access Online SDS through a link in the upper left corner of the ESD home page (<https://esd.uga.edu>) and logging in by using their UGA email user name and password.

**Protocol/Procedure (Add lab specific Protocol/Procedure here)**

Click here to enter text.

**NOTE**

Any deviation from this SOP requires approval from PI.

**Documentation of Training** (signature of all users is required)

* Prior to conducting any work with Alpha-Naphthylamiine, designated personnel must provide training to his/her laboratory personnel specific to the hazards involved in working with this substance, work area decontamination, and emergency procedures.
* The Principal Investigator must provide his/her laboratory personnel with a copy of this SOP and access to the SDS provided by the manufacturer.
* The Principal Investigator must ensure that his/her laboratory personnel have attended appropriate laboratory safety training or refresher training within the last 12 months.

**Principal Investigator SOP Approval**

Print name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Signature\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Approval Date:

I have read and understand the content of this SOP:

|  |  |  |
| --- | --- | --- |
| **Name** | **Signature** | **Date** |
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