Syringe Handling Guidelines

Choosing the syringe

Syringes come in many volumes and are made of either plastic or glass. For reactive chemicals it is best to use a glass syringe as they usually have a thicker barrel and are more inert than plastic. While all syringes have a head space, it is still good practice to use a syringe that has a volume 1 -2 ml larger than what you intend to draw up. This provides room for gases and makes it less likely that you accidentally knock the plunger out of the barrel.

Examining the syringe

Once you have chosen a syringe, examine it before use. Does the plunger slide easily and evenly the length of the barrel? Does it form a tight seal at the needle? Does it stop at the top of the barrel and then require a tug to remove it? If the answer to these questions is no, find another syringe or plunger.

Choosing the needle

Some syringes are Luer-Lock™ and only use Leur-Lock™ type of needles. These are usually metal and lock in place on the syringe. Others use plastic attachments that slip the needle onto the syringe. The two types are not interchangeable. Make sure you use the right gauge. Too small and the needle will clog. Too big and you risk losing control of the draw and causing a spill.

Testing the syringe

After you have assembled the syringe with the plunger and needle, test to make sure that it works. Put a small amount of an organic solvent (ether, hexane, acetone) in a beaker and draw some up with your syringe. If you see the solvent, then touch the tip of the needle to a Kemwipe™ , empty the syringe and see if there is a spot. Also look and see if there is a leak either filling or empting.

Transporting the syringe

Make sure that the needle has on a cap or is embedded in a stopper. Syringes should be carried flat when they contain a chemical and should be placed in a beaker or tray.

Cleaning the syringe

When you are finished with the syringe it needs to be cleaned even if it going to be disposed of in a sharps container. You don't want the residue (miniscule as it is) to react. Choose a compatible solvent, draw it into the syringe, and then squirt it into the waste. Repeat 2x more.

If it is a reusable syringe, take it apart to do a more thorough cleaning. You should also clean a reusable syringe before using it. Never trust a syringe you haven't cleaned.

Using a syringe

The most important factor is control over the syringe. Make sure the container is restrained in some way (hand, clamp, bucket). If you can, hold the barrel of the syringe with your thumb and 3rd finger and use the 1st and 2nd finger to move the plunger. Doing so provides a steady pull on the plunger and a natural brake.

If you are working with a chemical that must be kept air/moisture free so it is under an inert gas do the following:

1. Make sure that every needle you are going to use is the right gauge and unclogged. Have a beaker with an organic solvent near the set up and make sure bubbles are formed by the gas.
2. Check and adjust the rate of gas flow into the beaker. You should see individual bubbles, not a stream.
3. Make sure the needle for the gas inlet line is wired to the tube.
4. Make sure the reagent container is clamped securely. Remove the cap.
5. Insert the gas inlet needle into the container.
6. Insert the gas outlet needle into the container. Make sure the gas is exiting.
7. Insert the syringe needle into the container. Make sure you have one hand on the barrel at all times.
8. Slowly move the plunger up to the desired volume.
9. Remove the syringe needle, keeping one hand on the barrel. Do not hold on to the plunger.
10. Insert the syringe needle into the reaction or into a stopper.
11. Remove the gas outlet needle and then the gas inlet needle. Cap the reagent container.
12. Return the reagent container to proper storage.
13. Clean the 3 needles and the syringe.

Working with large volumes

While everyone has their own comfort level in working with syringes and reagents, it is recommend that you do not dispense more than 25 ml of a chemical at a time. If you have to add more than that, break it down into 25 ml portions. Alternatively, you can use a cannula to add large volumes to a reaction.

Storage of syringes/needles

After cleaning the syringe, cap the needle and put in a sharps container. If you are only disposing of the needle, make sure it is clean and capped. Syringes should be stored without needles and with the plunger remove to prevent freezing. Needles should be stored in a box or

other container that either has a slot for the point or a stopper that the needles are inserted into.

Disposal

Always dispose of used needles in a sharps container or a container that will not allow the needles to penetrate to the outside and harm someone. The container can be a fire can or plastic bucket. If using a bio hazard sharps container for chemically contaminated needles only: deface the bio hazard symbols before use of the container. All chemical containers for sharps must be labeled with a "hazardous waste" label, the first time the container is used. Mark the hazards of the chemical to which the needle has been exposed and list the chemical on the label. Always keep the container closed when not in use. When full, the closed sharps container must be disposed of as hazardous waste in accordance with UNM Environmental Health & Safety procedures (https://ehs.unm.edu/waste-management/index.html).

Injury

If you suffer an accidental needle stick, let your advisor know, let the Department Safety Officer know and seek medical attention at either SHAC (for undergraduate work study students), Employee Occupational Health Services (EOHS- for staff, faculty, graduate students and non work study students receiving a paycheck from the University, or UNM Hospital or Urgent Care (for afterhours exposure). Be prepared to tell the medical personnel what was in the syringe (you can bring an SDS if you have the time). Also be prepared for the fact that you will probably know a lot more about the properties and dangers of the chemical you were working with. The First aid measures in the SDS are very basic and general. Within 48 hours of the injury please fill out the attached form and at the EHS website (https://ehs.unm.edu/accident-incident-spill-reporting/index.html). These forms are required to ensure that medical bills are covered by the employer (UNM) and not the injured. Please turn the forms into the Safety Officer.

NOTICE OF ACCIDENT OR OCCUPATIONAL DISEASE DISABLEMENT
NOTIFICACIÓN DE ACCIDENTE O ENFERMEDAD DE OFICIO

In accordance with New Mexico law, Section 52-1-29, Section 52-3-19 and Section 52-1-49, NMSA 1978; NMAC 11.4.4.11
Conforme a la Ley de la Compensación de los Trabajadores, Sección 52-1-29 ,Sección 52-3-19 y Sección 52-1-49, NMSA 1978; NMAC 11.4.4.11

I,_____, was involved in an on-the-job accident or was disabled
Yo, (name of employee/*nombre del empleado)* *me lastimé en un accidente en el trabajo o fui incapacitado*

by an occupational disease at approximately_____, on_____, 20_____.
por enfermedad de oficio aproximadamente (time/*a la(s) hora(s)*) *el* (date/*fecha)* *del 20_____.*

Employee's social security number:_____ Where did the accident occur?

Número de seguro social del empleado: *¿Dónde ocurrió el accidente?*

What happened?

¿Qué ocurrió?

To be completed by Employer:	**Worker will choose health care provider. Yes_____No____**
Completado por el empleador:	*Trabajador elegirá proveedor de atención médica.*
If Yes, Employer has right to change health care provider after 60 days. If No, Worker has the right to change health care provider after 60 days.	
En caso afirmativo, el empleador tiene derecho a cambiar de	*En caso que no elige, el trabajador tiene derecho a cambiar de proveedor*

Signed:_____ Signed/Notice Received: _____
Firma: (employee/*empleado*) *Firma/Notificación recibida:* (employer or representative/*empleador o representante)*

Date/Fecha:_____ Date/*Fecha*: _____

ANY PERSON WHO KNOWINGLY PRESENTS A FALSE OR FRAUDULENT CLAIM FOR PAYMENT OF A LOSS OR BENEFIT OR KNOWINGLY PRESENTS FALSE INFORMATION IN AN APPLICATION FOR INSURANCE IS GUILTY OF A CRIME AND MAY BE SUBJECT TO CIVIL FINES AND CRIMINAL PENALTIES.

PREVIOUS NOA FORMS ARE STILL VALID FOR USE

Worker --

For emergency medical care, go to any emergency medical facility.
Workers and Employers with questions about workers' compensation may contact an Ombudsman at any New Mexico Workers' Compensation Administration office for information and assistance. The offices are open Monday through Friday, 8 a.m. to 5 p.m., except holidays.

Trabajador

Para emergencias médicas vaya a cualquier clinica / hospital.
Trabajadores y empleadores con preguntas acerca de la compensación de los trabajadores pueden comunicarse con un asesor ("ombudsman") a cualquier oficina de la Administración de la Compensación de los Trabajadores para información y asistencia. Las oficinas están abiertas desde las ocho de la mañana hasta las cinco de la tarde de lunes a viernes, con la excepción de dias festivos.

Statewide Helpline -- *Linea de Asistencia*

1-866-WORKOMP / 1-866-967-5667

toll free -- *llamada sin costo de larga distancia*

New Mexico Workers' Compensation
Administration PO Box 27198,
Albuquerque, NM 87125

Albuquerque: (505) 841-6000 - 1 (800) 255-7965 Las Vegas: (505) 454-9251 - 1 (800) 281-7889 Santa Fe: (505) 476-7381
Farmington: (505) 599-9746 - 1 (800) 568-7310 Lovington: (575) 396-3437 - 1 (800) 934-2450 TDD for the deaf: (505) 841-6043
Las Cruces: (575) 524-6246 - 1 (800) 870-6826 Roswell: (575) 623-3997 - 1(866) 311-8587 ***www.workerscomp.state.nm.us***

Form NOA-1-W (4/12)
Employer/employee: Each keep one copy.
Empleador/empleado: Retener una copia.