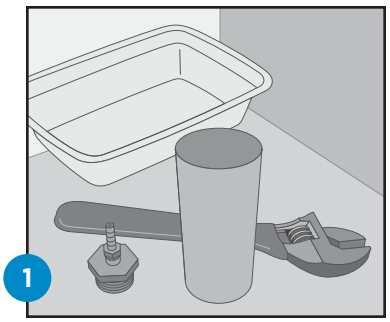
LIQUID SAMPLING INSTRUCTIONS

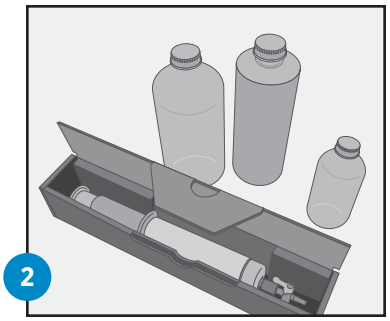
These instructions are intended to provide some basic guidance on drawing your own transformer liquid samples. They assume the reader is familiar with high-voltage transformers, the risks and liabilities involved in working with and/or around energized electrical equipment, the required safety procedures and PPE, regulations including those from OSHA, NESC, and other state and local regulators. **Safety is the number one priority.**

This information is provided for guidance only. SDMyers assumes no responsibility or liability for any use or misuse of this information. **Contact SDMyers at 330.630.7000 with any questions**, or consult a qualified electrical technician.

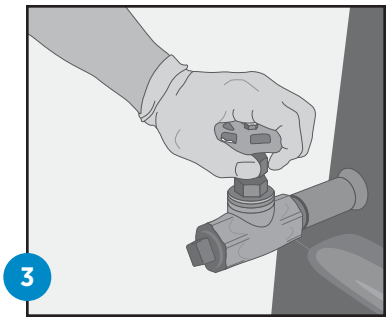
SDMyers provides required sampling containers. Failure to provide liquid samples only in these SDMyers-approved containers may result in the Company's refusal to process your order. Thank you for your understanding and cooperation!



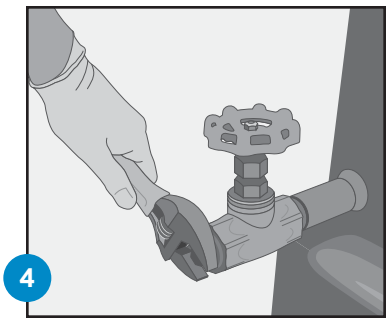
1. Prepare the **tools and supplies** required to complete each step of the liquid sampling process.



2. Make sure you have the **proper sampling containers** for the tests your are ordering. Please refer to the order form for details.



3. Verify that **the valve is shut off** before removing the front plug.



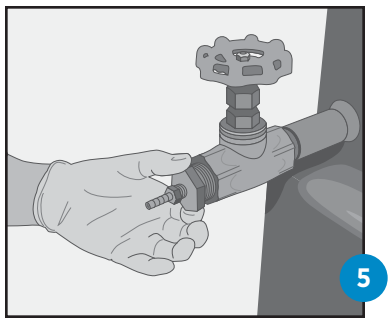
4. **Remove the front plug** and inspect for debris. Wipe the inside of the valve fitting with a clean cloth.

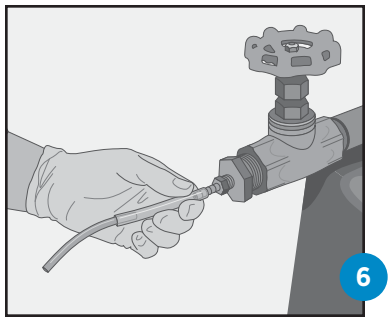
5. **Affix the tubing reducer** to the inside of the clean valve fitting. Tighten with moderate torque.

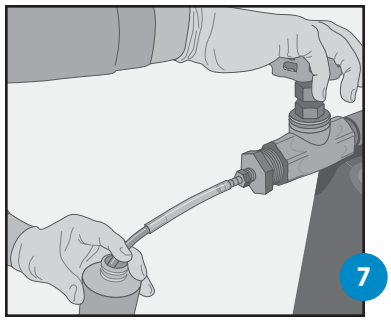
6. **Flush the valve** as follows: 50 oz. for a 1" valve. 60 oz. for a 2" valve. (Tubing here is optional.)

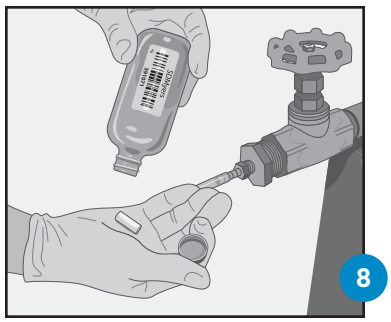
7. **Fill the plastic bottle** 2/3 full. Shake bottle. Discard oil. Fill the bottle to the neck and secure the cap tightly.

8. **Remove and discard the desiccant tablet** from the glass bottle. (This is an ***extremely important*** step.)

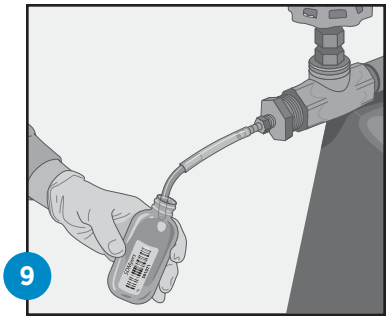






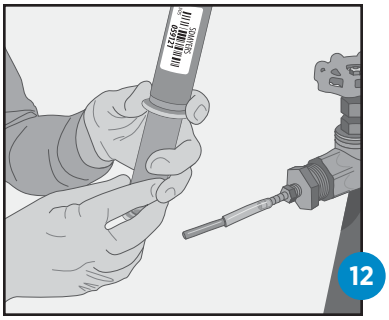


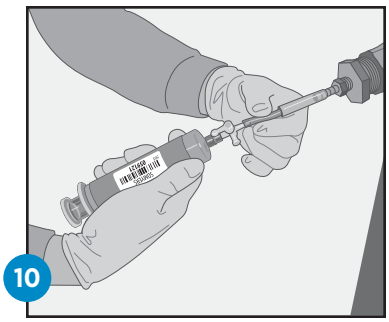
Failure to provide liquid samples only in SDMyers-approved containers may result in the Company's refusal to process your order. If you have any questions, please contact us at 330.630.7000. Thank you!



9 **Fill the small glass bottle** 2/3 full. Shake the bottle. Discard the oil. Fill the bottle to the neck. Secure the cap tightly.

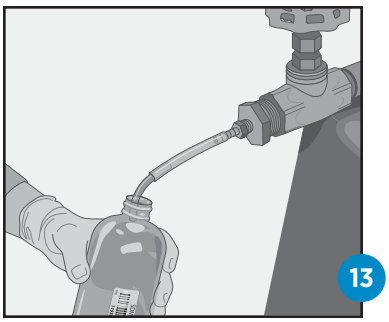
10 **Evacuate air** from the sampling syringe. Attach the flexible tubing provided inside the box.

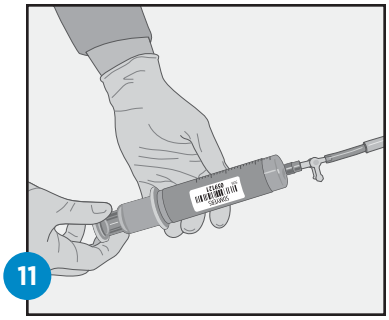




11 **Draw 50 ml of liquid** into the sampling syringe and evacuate the syringe. **Draw another 50 ml of liquid** into the syringe.

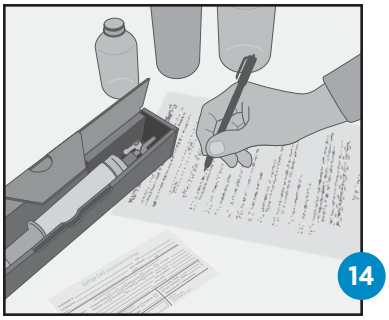
12 **Hold the syringe upright** so that air bubbles rise to the stopcock. D**ispel the bubbles. Reduce the volume in the syringe to 42 ml.**





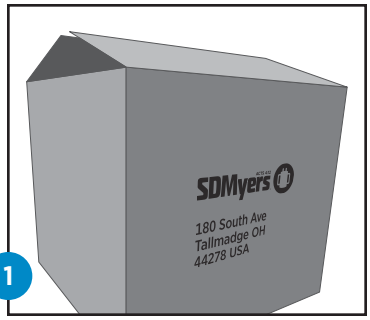
13 **Fill the large glass bottle** 2/3 full. Shake the bottle. Discard the oil. Fill the bottle to the neck. Secure the cap tightly.

14 **Complete all accompanying paperwork** thoroughly and accurately. Proceed to **Packing Instructions.**

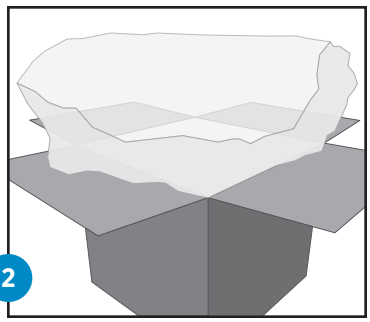


PACKING INSTRUCTIONS

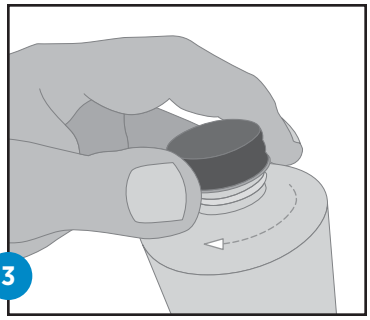
These instructions are provided to make sure your samples will arrive safely to our facility and will be processed successfully. **Improper packing will greatly compromise your samples.** (Unfortunately, we see it all too often.) **If you have any question whatsoever, please contact us at 330.630.7000**. We always welcome your call!



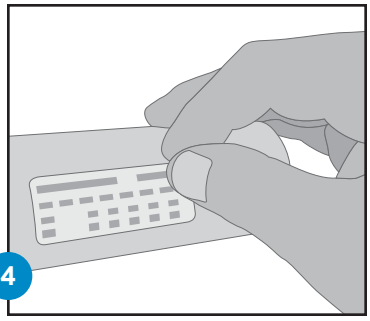
1. Use only **approved shipping cartons** provided by SDMyers. These cartons will accommodate a total of 12 sample kits.



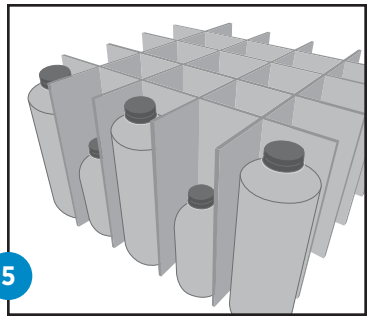
2. **Use a plastic bag** as a liner for the shipping carton to help contain fluid spills in the event of damage during shipping.



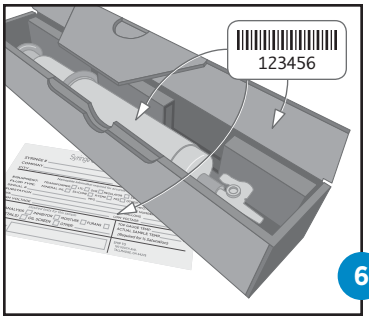
3. Be sure to **tighten all bottle caps** securely before loading the bottles into the shipping carton.



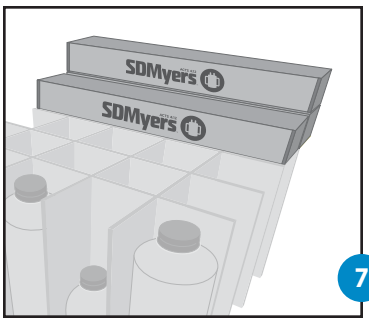
4. **Label each bottle properly** so that the samples can be successfully received, identified and processed.



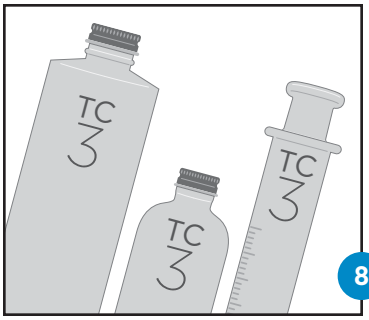
5. **Place all bottles vertically** (upright) in the partitioned slots designated for them in the shipping carton.



6. **Place all syringes in their respective boxes** (keeping all bar codes matched up) and position them horizontally across the top of the bottles in the bottom tier.

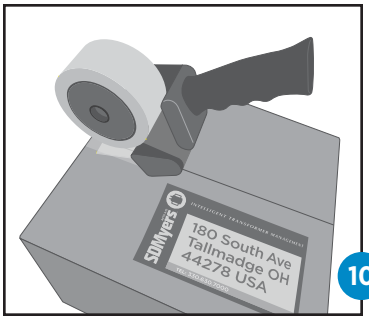


7. **Arrange all bottles and syringes as complete kits** (comprised of a 12-oz bottle, a 4-oz bottle, and a syringe) within the shipping carton.



8. **Do not separate the components** of the sample kits between different shipping cartons.

9. **Include the completed *Order Form*** and ***Sample Return Check-list*** inside a sealed ziplock bag and place it on top of the samples inside the shipping carton.



10. **Secure the shipping carton** with clear packing tape and **place an adhesive address label** on the top surface of the carton.

LIQUID TESTING ORDER FORM

SDMyers ACTS 4:12

COMPANY NAME		CUSTOMER #	
CONTACT PERSON		PHONE	
ADDRESS			
CITY		STATE	ZIP
SAMPLE DATE	P. O. NUMBER		

	NO.	QTY	TEST NAME	TEST DESCRIPTION	REQUIRED CONTAINERS 12 oz	4 oz	SYR	16 oz
PACKAGED TESTS	4000		**CriticalPac**	Critical transformers	1	1	1	-
	4001		**PowerPac1**	Non-critical transformers, baseline	1	1	1	-
	4002		**PowerPac2**	Non-critical transformers, ongoing	1	1	1	-
	4003		**DistributionPac**	Distribution-class transformers	1	1	1	-
	4004		**LTCPac**	LTC testing without PC/FC	1	1	1	-
	4012		**LTC Complete**	Load Tap Changers	2	1	1	-
	4005		**RegPac—Single**	Regulators < 500 gallons	1	1	1	-
	4006		**RegPac—Three**	Regulators > 500 gallons	1	1	1	-
	4007		**RegPac—Step**	Step-voltage regulators	1	1	1	-
	4008		**OCBPac**	Oil Circuit Breakers	1	1	1	-
	4009		**SwitchPac**	Switchgear	1	1	1	-
	4051		**SilPac**	Silicone	1	1	1	-
	4060		**SilPac Plus**	SilPac with furanic compounds	1	1	1	-
	4010		**S-FluidPac**	FR3, Biotemp, ENV-200, Midel, Alpha 1	1	1	1	-
	4063		**Natural Ester Pac**	Natural ester critical transformers	1	1	1	-
	4064		**FR3 Pac Plus**	New transformers with FR3	1	1	1	-
	4052		**AskPac**	Askarel package				
	4058		**WecPac**	Wecosol/Perclene				

***Hazmat:** These liquids require special handling. Please refer to DOT for complete instructions.*

NOTE: EACH TEST BELOW REQUIRES THE FOLLOWING ADDITIONAL CONTAINERS.

INDIVIDUAL TESTS	4041		**Oil Screen**	7 tests of basic fluid quality	1	-	-	-
	4042		**DGA**	Dissolved Gas Analysis	-	-	1	-
	4043		**Karl Fischer**	Measures moisture content	-	1	-	-
	4046		**Dissolved Metals**	Copper, iron, aluminum	1	-	-	-
	4047		**Inhibitor Content**	Oxidation inhibitor	-	-	1	-
	4050		**Furan Analysis**	Paper degradation compounds	-	1	-	-
	4054		**Liquid Power Factor**	Measures dielectric losses	1	-	-	-
	4067		**D1816 Dielectric**	Dielectric breakdown voltage	-	-	-	1
	4044		**PCB—Fluid**	Regulatory compliance	1	-	-	-
	4048		**PCB—Solid**	Regulatory compliance	1	-	-	-
	4049		**PCB—Wipe**	Regulatory compliance	1	-	-	-
	4025		**Corrosive Sulfur**	Determines presence or absence	1	-	-	-
	4066		**PC/FC**	Particle count/filming compounds	1	-	-	-
	4081		**Particle Count**	Determines size and number	1	-	-	-

IMPORTANT!

- Use **only** the containers we provide.
- **Remove** desiccant tablet before filling.
- Fill all containers **completely** to the neck.

WARNING: All non-compliant samples will be rejected.