MK-V Bi-Directional Closed Loop Extractor

User Manual

BUILDING VISION AND VARIETY

Table of Contents

Introduction:

The MK-V Bi-directional closed loop is intended to perform hydrocarbon botanical extraction within a sealed system. Utilizing a solvent input manifold, the MK-V can flow solvent in both directions through the material column, ensuring the entire column is efficiently saturated. This feature ensures the highest yield possible.

General Uses and Extraction Information

Hydrocarbon extraction is performed by passing an alcane solvent over an organic material to separate terpenes and other hydrocarbon compounds. Solvent is then distilled to leave the extracted compounds behind. This system is intended to be run with 100% butane (R-600) or iso-butane (R-600a)***. Solvents always seek the lowest pressure in the system. By chilling the receiving vessel below the boiling point of the solvent used, the liquid solvent will seek that vessel to reduce its pressure.

***If propane(R-290) is to be used, inline sight glasses must be removed from system.

General Safety Information

When operated and maintained according to the directions in the manual, common practices and safety procedures, the MK-V system should provide a safe and reliable extraction process. This unit should be run only in extremely well ventilated areas. If running the unit indoors, it must be operated in areas approved by local fire marshal, in accordance to local and state laws/ordinances. Always pressure check system prior to every use. Make sure all gasket seals are cleaned with compatible solvents, and checked for wear before each use.

The MK-V system uses flammable solvents. Use EXTREME caution while operating unit.
ALWAYS OPERATE IN EXTREMELY WELL VENTILATED AREAS

Vacuum Pump is to be located OUTSIDE of extraction room, with hosing piped through the walls. NEVER use pump when flammable vapors are in present in system.

Preparing to Extract

Before you begin, you are going to want to make sure you have the necessary supplies to run the unit. Here is a list of some things that will be needed to operate the unit.

- Tools (various wrenches/sockets)
- Dry Ice
- Alcohol or Glycol for condensers
- Butane
- Nitrogen gas cylinder with regulator
- Refrigerant scale
- Combustible Gas Leak Detector (recommended)
- Explosion-proof exhaust fan (recommended)
- Cleaning solvent (D-limonene is recommended)

Once the machine is packed with material and assembled, always pressure test the gasket and clamp connections. Pressurize the entire unit to 90 PSI with nitrogen gas using the vacuum valve. Allow pressure to sit for at least 10 minutes, checking to make sure no pressure is lost. If the unit is sealed, connect vacuum pump to manifold and pull a full vacuum.

Always tighten clamps evenly on each side. Unit MUST be pressure tested to 90 PSI before each use. Failure to do so could result in solvent leaks.

Manipulating Thermals

In order to move the solvent through the system, you must ensure that the supply vessel is of higher pressure than the receiving vessel. This can be achieved by making sure the receiving vessel is colder than the supply vessel. Temperature is pressure, so maintaining a temperature gradient to transfer solvent within the system is important.

If you refer to (fig. 1), you can see that solvent pressure is directly related to its temperature. As the solvent increases in temperature above the boiling point (*fig.2),* pressure will increase. Alternatively, since we are working in a system that is at a full vacuum, as the solvent gets colder than the boiling point, pressures will start to go into the negative.

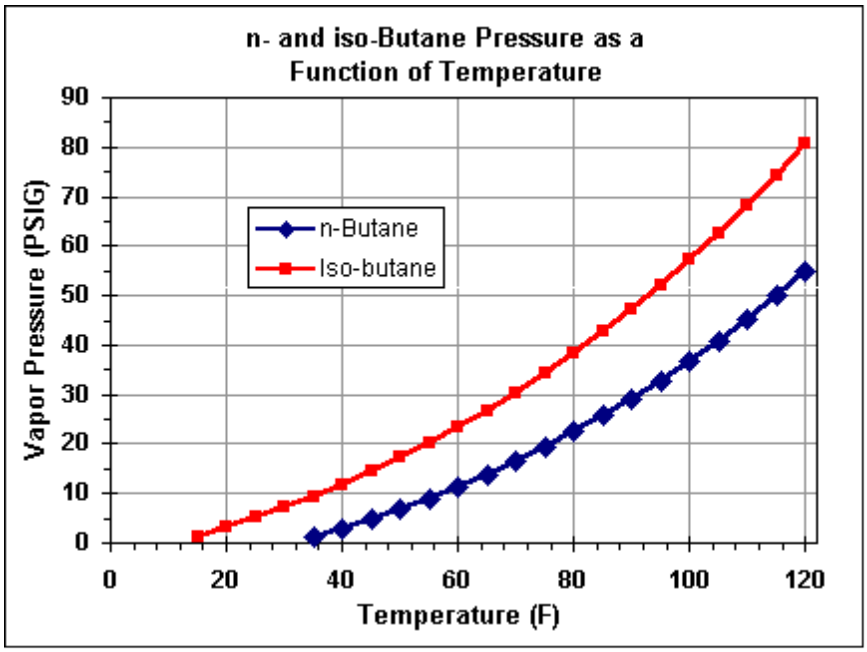


FIG. 1

Solvent	Boiling Point
n-Butane (R-600)	30.2 °F (-1 °C)
Isobutane (R-600a)	10.94 °F (-1

FIG. 2

For the best results, it is recommended to chill the solvent. It is important to not chill the solvent below the boiling point of the chosen solvent, removing any pressure from the supply. Chilled solvent will aid in the dewaxing process, however, since there is a separated dewaxing chamber, there is no need to go overboard on chilling the solvent initially.

When distilling the solvent in the collection, it is important to note the boiling point of the most delicate compound in your extract; *i.e. when extracting hops or rosemary, your recovery temperature should not exceed the boiling point of your lowest boiling terpene, Beta-caryophyllene. It is important to note that boiling points decrease as the level of vacuum increases. The change in boiling points can be calculated using the Clausius Clapeyron Equation. For B-caryophyllene,*

- *[246.2°F @760torr (-0.00in.hg) 0% vac]*
- *[180.00°F @100torr (-25.98 in.hg) 87% vac]*
- *[159.99°F @50torr. (-27.95 in.hg) 93.5% vac]*
- *[138.82°F @23.4torr (-29 in.hg) 96.9% vac]*
- *[109.44°F @7.6torr. (-29.62 in.hg) 99% vac]*

By keeping the warm water bath below the boiling point of the lowest boiling compound, you are able to preserve the full spectrum of your extract.

MK-V Bi-Directional Assembly Guide

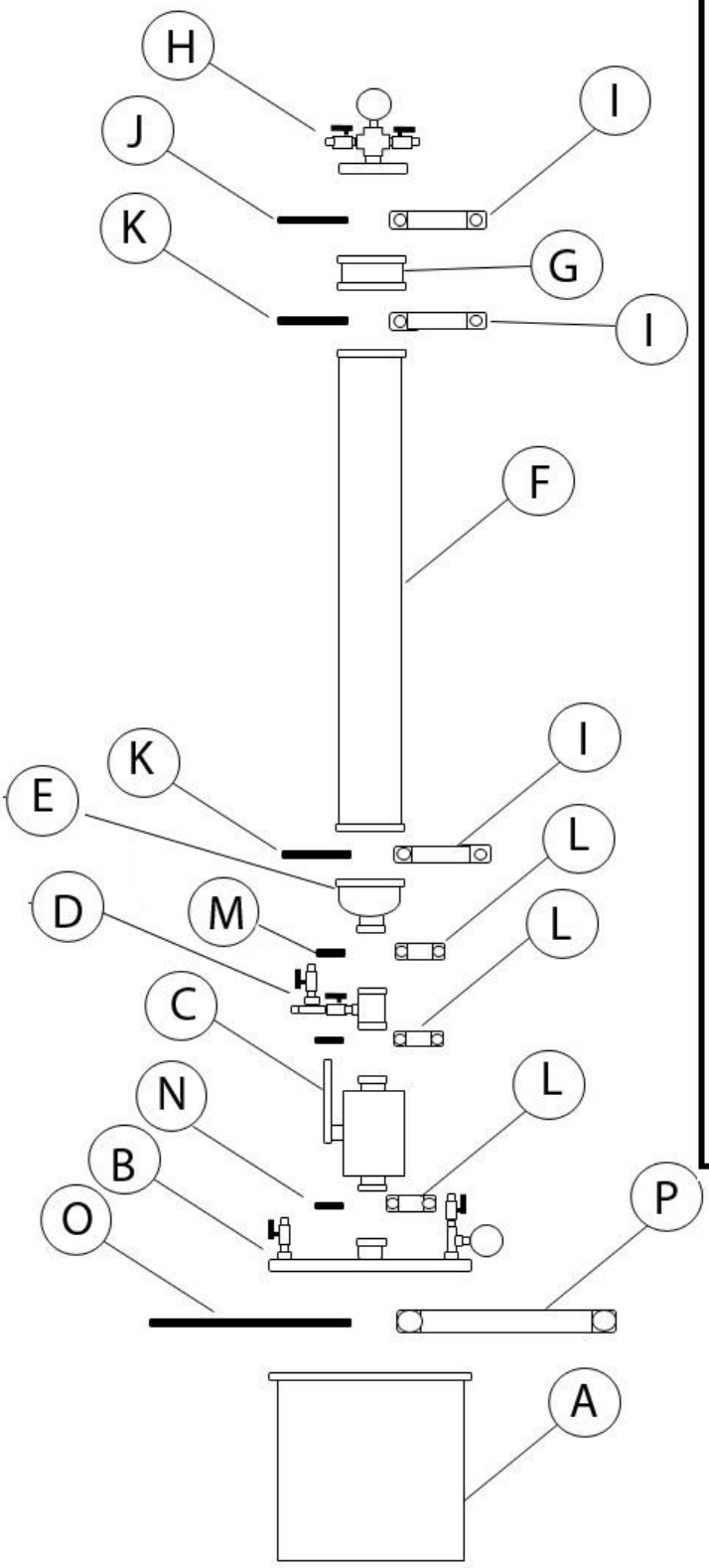


Table	
A	Collection Base
B	Collection Base Lid
C	Inline Ball Valve
D	Solvent Input Manifold
E	Hemispherical Reducer
F	Material Column
G	Filter Plate
H	Material Column Lid
I	4" High Pressure Clamp *
J	4" Gasket *
K	4" 100 Mesh Screen Gasket*
L	1.5" High Pressure Clamp **
M	1.5" 150 Mesh Screen Gasket **
N	1.5" Gasket **
O	10" Gasket ***
P	10" High Pressure Clamp ***

* - For 1lb unit, size is 3"

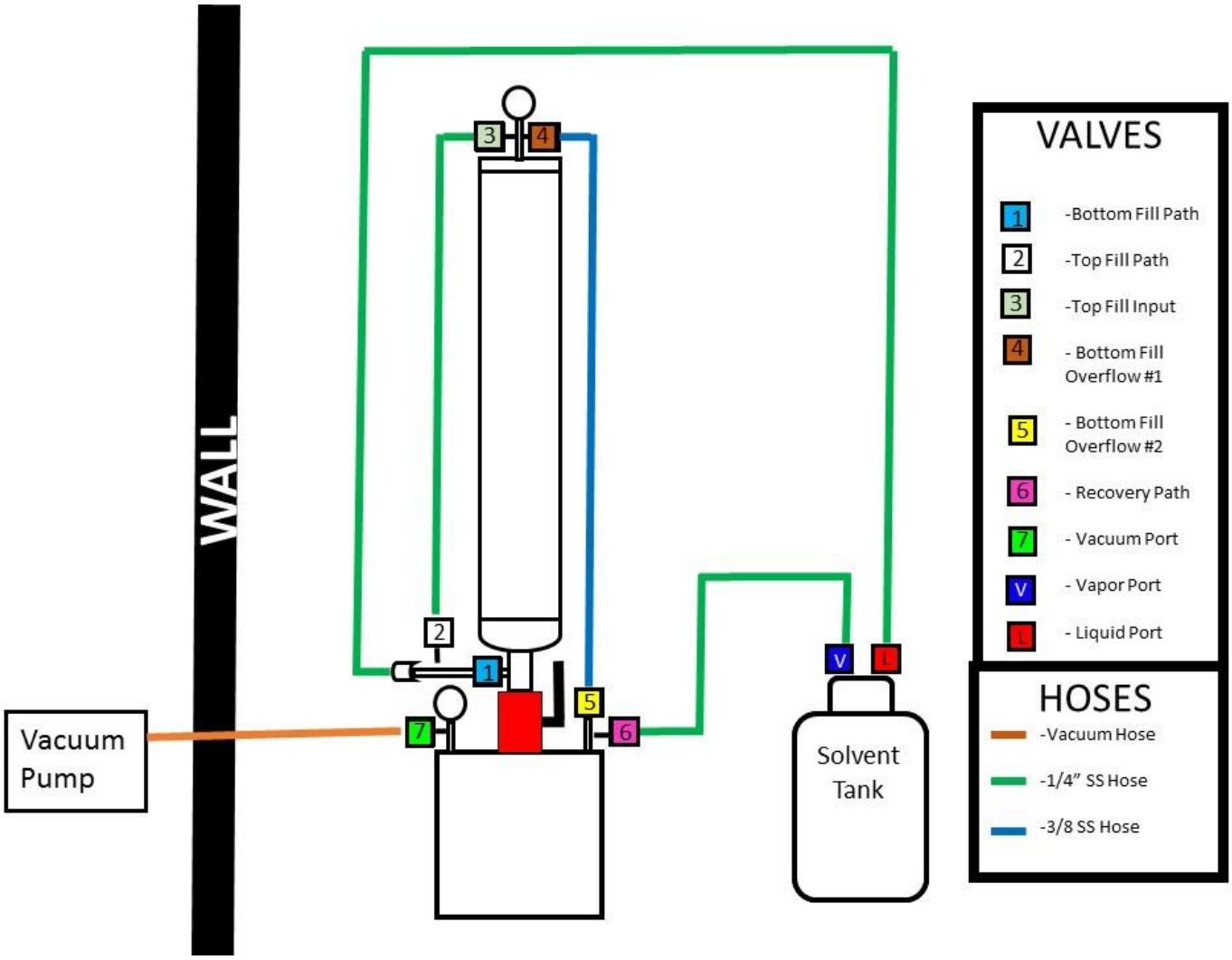
**- For 5lb unit, size is 2"

***- For 1lb unit, size is 6"
For 5lb unit, size is 12"

Controls and Components

a. Valve/Hose Layout

The valve layout and hose configuration is listed in the diagram below. Hoses diameters are listed below.



Start-up and Operation:

In this section, we will cover pre-run procedure and the operation of the MK-V system. It is important to have your tools on hand at all times (wrenches, scales, buckets). When setting up the unit, it is recommended to position all clamps with the same positioning, if possible. This ensures continuity if adjustments are needed during operation.

Always make sure your system is positioned on a level surface with adequate air flow. Butane is known to pool in cool areas, so it is important to ensure no areas of stagnant air flow exist in the workspace. If

operating indoors, it is important that your workspace meets the criteria for a Class I, Division 1 work environment. Please consult your local fire marshal to ensure workspace is in accordance to local laws/ordinances.

Before beginning the first run, it is important to heavily clean all gear. Oils and metal shavings from manufacturing, as well as warehouse and packing dust can potentially be on all equipment. Failure to do so can result in contaminated extracts.

Pre-Run Procedure/Testing

Pack material column with your chosen organic material, then assemble each column as pictured above. Always check that fasteners on rack are tightened before each use. Make sure all filter screens are in place and filter plates have a coffee or lab filter in place. *(Coffee filters are 20micron)*.

The MK-V is intended to be packed with dry material. **Wet or damp material can be run with proper pre-run processing and additional nitrogen purging. Care must be had to maintain subzero temperatures during this type of extraction*** System capacity is figured at 4.2 g/in3. *Capacity may vary depending on material/packing density*. It is recommended to give a firm pack; a loose fill of the column will allow solvent to pass over the material too easily.

After unit is fully packed and assembled, attach nitrogen cylinder to manifold and perform pre-run pressure testing.

Every time you assemble your MK-V system, it is vital that the system is pressure tested to **90 PSI with nitrogen gas**. This ensures all clamps/gasket and hose connections are sealed. Make sure all valves are in open position during testing. Allow pressure to sit for at least 10 minutes before releasing pressure and pulling system to a full vacuum.

Always check high pressure nuts and bolts for wear and tear before each use. It is recommended to have spares on hand to prevent down time. Failure to maintain clamps can result in unexpected clamp failure.

It is recommended to use two wrenches when tightening and loosening hoses. Failure to do so could result in the loosening of fittings. Use one wrench on hose and one on flare fitting.

When no loss in pressure is observed, release nitrogen pressure. Disconnect nitrogen cylinder from vacuum port and connect vacuum pump.**If you have a diaphragm pump, use this to pull nitrogen pressure out instead of releasing to open air. This prevents moisture from atmosphere from re-entering machine**** Allow unit to be pulled to a full vacuum, using the multiple pressure gauges to ensure full negative pressure is achieved. When completed, the vacuum pump can be put away until next use.

Before you begin adding solvent into the system, it is it is important to pre-weigh solvent in the LP tank to ensure the system is not overfilled. This also enables solvent to be re-weighed post extraction, ensuring all solvent has been recovered.

The solvent capacity of n-Butane of the MK-V is determined by the size of the collection base.

Solvent capacity at 80% fill*

6" x 12" – 5lbs **10" x 10" – 12 lbs.** **12" x 12" – 24 lbs.**

12" x 24" – 48 lbs.

Adding Solvent to the System

Connect LP tank to the solvent input manifold (*please refer to assembly diagram)* using the short ¼" SS line. It is recommended to connect the liquid valve (red handle) to the manifold. This port contains a dip-tube, so the cylinder must be upright to empty liquid solvent.

a) Bottom Flood Input:

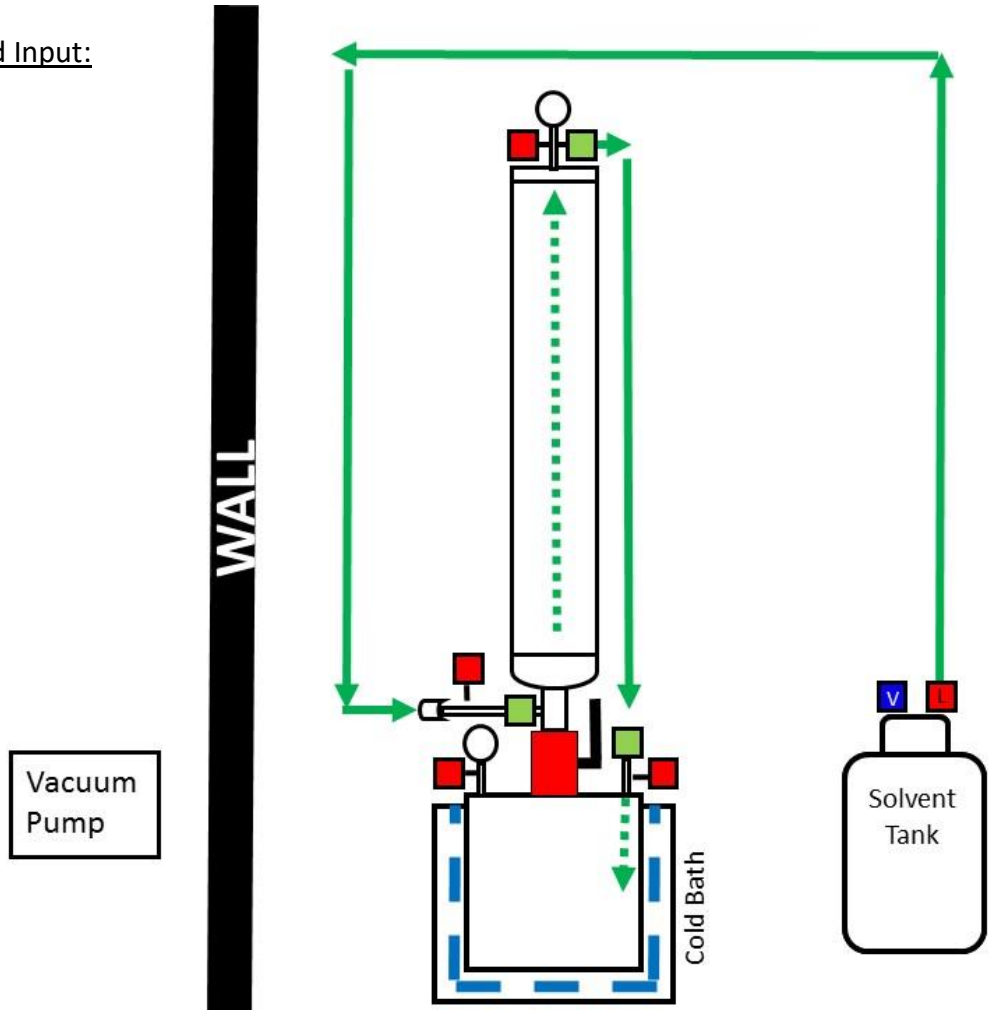


FIG. 5

The first pass of solvent is recommended to be done from the bottom flood input (both valve handles on manifold are in the horizontal position). This ensures that all material is exposed to solvent. The bottom flood overflow valves are open (as shown above). As solvent is entering column, place hand on the 3/8" overflow line. When solvent reaches the top of the material column, the overflow line will vibrate as liquid flows through. This indicates the entire material column is full of solvent; at this point, close off the overflow valve and allow a slight saturation of the material.

b) Top Flood Input:

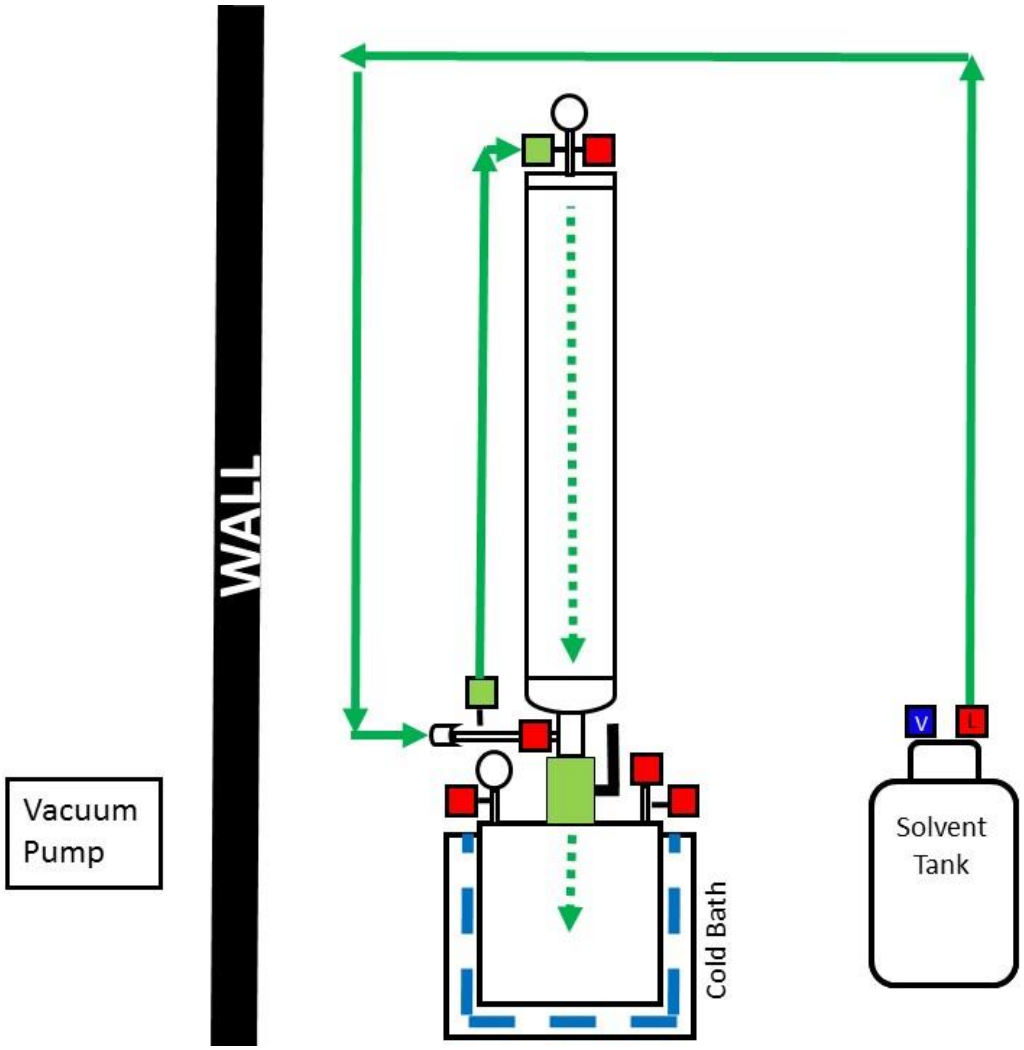


FIG. 6

After the bottom fill overflow valve has been closed, switch the solvent input manifold to the top flood position(valve handles both in vertical positioning) then open the inline ball valve. Extract bearing solvent will flow from the material column to the collection base. Leave the ball valve open until solvent flow ends.

To aid solvent movement to the collection base, it is recommended to submerge base in a dry ice/glycol bath. This helps minimize pressures and aids in preventing vapor locks.

Ice can be used instead of dry ice, however efficiency will be significantly reduced. Higher pressures will be present when using ice, slowing movement of solvent*

Recovery:

Recovery is the distillation of the solvent in the collection chamber. By distilling, the impurities in the gas will be left behind (in this case, extract) as the gas moves to the LP tank.

In order to efficiently recover without damaging the extract, a few factors must be acknowledged.

First, we need to note the boiling point of the solvent. This must be noted as the LP tank must be chilled below this temperature. It is recommended to get the LP tank as cold as possible, as lower temperatures will ensure gas is instantly liquefied. Colder temperatures allow faster recoveries.

Second, the compounds being extracted must be acknowledged. It is important that the distillation temperature does not exceed the boiling point of the lowest boiling compound in the extract. In order to achieve a full extract, it is important that none of the extracted compounds are evaporated during distillation.
Please refer to page 5 for information on boiling points in relation to vacuum level*

a. Passive Recovery

Passive recovery depends 100% on pressure differences created by manipulating temperature of the collection base and LP tank. Being that pressures are directly related to temperatures, we can raise and lower pressures with heat and cold temperature baths. As temperatures increase, so do pressures, vice versa.

As stated in the Manipulating Thermals section, recovery is simply the distillation of the solvent used. Please refer back to this section for information on suggested temperatures for recovery.

Before beginning recovery, make sure all valves are closed, except recovery valve (fig. 9). Place extractor in warm water bath (~ 105 F). Make sure water is able to reach the underside of the collection base. The heat will cause pressures to increase, changing phase of the solvent. Solvent drops any oils extracted as it converts into vapor form. As pressure builds, solvent vapor will travel through the lines back into the LP, unless met with opposing force.

To prevent opposing pressure during recovery, the LP tank is to be completely submerged in a dry ice slurry**. The negative temperatures around the tank will cause vapors to convert back into liquid, eliminating pressure. If temperatures are low enough, the liquid solvent will pull a vacuum against itself. This will create fast, efficient recovery.

Dry ice can be substituted with ice and water, however negative pressures in the LP cannot be achieved with this method

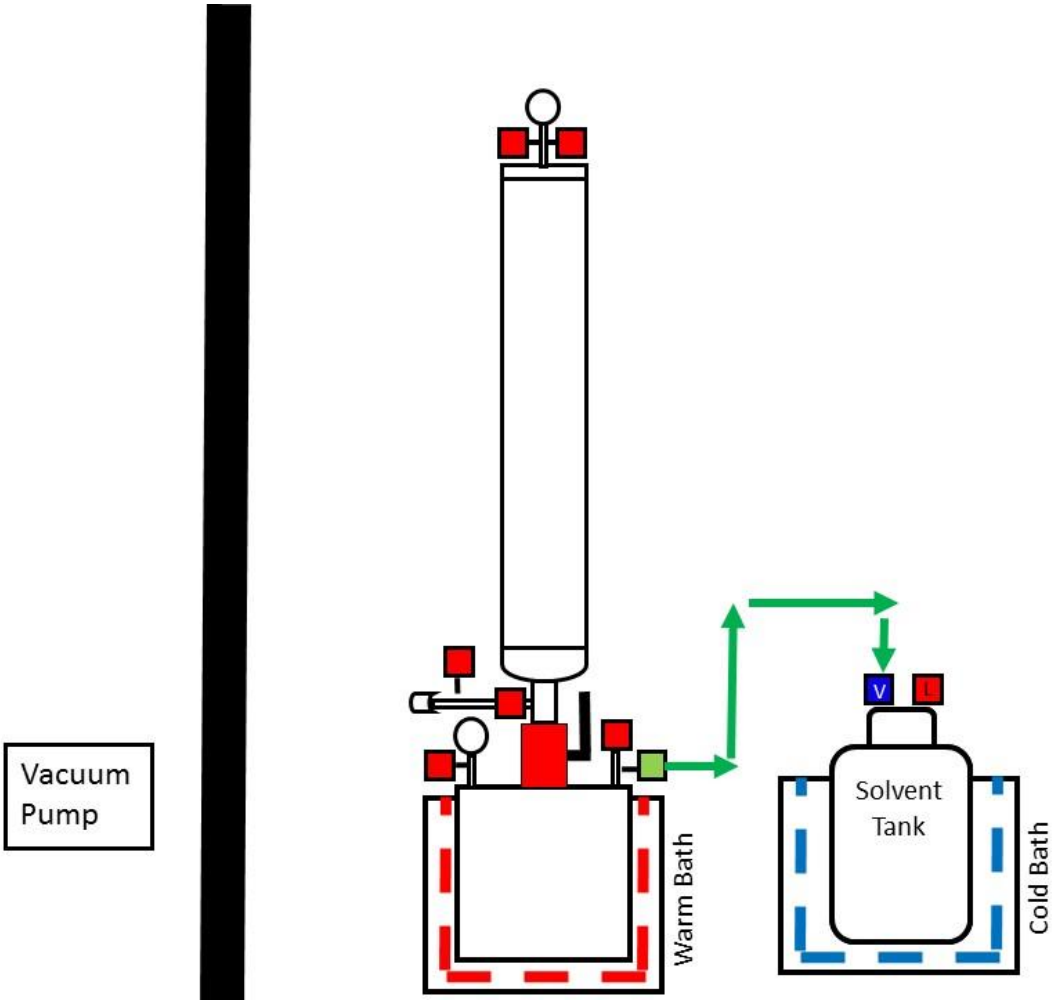


FIG. 9

a) Efficient Recovery methods

In order to maintain efficient recovery with a passive system, consistent temperatures on both ends is required. It is important that the majority of each vessel is covered. Make sure the undersides of each vessel is also exposed. This will ensure the entire vessel is covered without completely submerging.

To maintain the warm side, the use of a submersion heater is recommended. A set point is chosen and a submerged heating coil keeps water at the set point, while circulating the water within the bucket. This keeps even temperature across the bath. The collection base is chilled by the evaporation of the solvent, so heat within the water bath easily dissipates. Without the use of some type of heater, efficient recovery temperatures will be difficult to maintain.

If not using a heater, keep note of the baths current temperature. To preserve the full range of the extracted compounds, it is not recommended to start at a significantly higher temperature than the target recovery temp. Warm water will have to be replaced mid run, possibly multiple times.

For chilling, a dry ice and glycol (or alcohol) slurry is the most efficient. This method keeps the LP temperature well below the boiling point of the butane, ensuring no pressure will be present. When temperatures reach deep into the negative, the solvent will pull a vacuum on itself, aiding the incoming pressure to the tank.

It is important to remember that there will be a significant amount of heat transfer from the incoming vapor as it enters the tank. As with the heat side, cold temperatures must be somewhat maintained. It is important that the LP tank is completely covered up to the valves. Vapor will be entering the head of the tank, so this area will be experiencing most of the heating. Replace dry ice as it evaporates during recovery.

Ice can be used instead of dry ice, however, this will increase recovery times. Without going into negative temperatures, pressures will not be able to be reduced to vacuum. This will cause a slight amount of opposing pressure in the LP, slowing recovery times.

b. Active Recovery

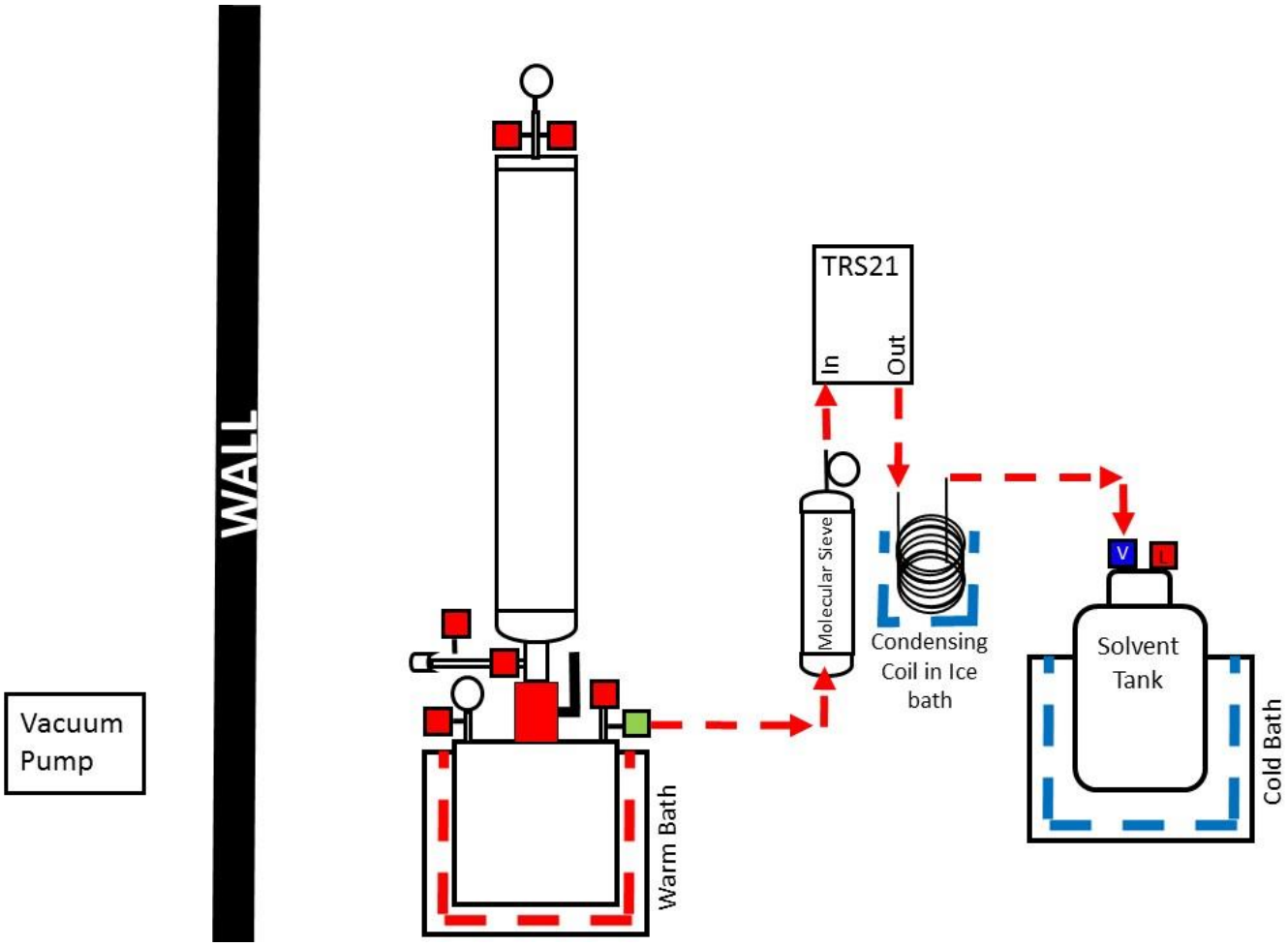


FIG. 10

The MK-V with active setup is pictured in the diagram above. This consists of a molecular sieve, recovery pump, and condensing coil.

First, let's start with the molecular sieve. This tripod mounted column features various filter media, and desiccant beads. These beads absorb moisture from solvent vapors during recovery. It is important that the moisture absorption of these beads is monitored, and they are regularly refreshed. (Bake beads in oven @300F until blue indicating beads restore to original color). It is also crucial that the filter media be in place on both sides of the column. This will contain dust from the desiccant beads from transferring into pump and LP tank.

A heat jacket can be installed on the molecular sieve to prevent condensing of solvent inside the sieve. This can also be used to increase incoming pressure of the TRS-21.

The TRS-21 recovery pump is used during recovery to add a mechanical assistance to passive solvent recovery. This is used to help regulate pressures and speed up recovery.

The final stage of the active recovery system is a condensing coil. This ensures solvent vapors are efficiently condensed and chilled, reducing pressures into the LP tank.

Once you are ready to recover, close all valves except for the recovery port and LP vapor port. Heat collection base to start evaporation and turn on recovery pump. The best way to maintain control while operating an active system is to use passive tech. If coil and LP temperatures are significantly lower than solvent boiling point, solvent will maintain liquid state and pull a vacuum on itself. If temperatures will not allow this negative pressure, the pump will always be fighting this opposing pressure.

Check temperatures in water bath. Target recovery temperature is ~100 F. Recovery progress can be monitored by sight windows and by solvent tank weight (prior to starting recovery, tare the solvent tank on a scale and monitor incoming solvent weight. Solvent should have been pre-weighed prior to starting extraction). It is recommended to recover into a vacuum. This ensures that solvent vapors do not enter the work space when opening the collection base.

Always perform regular tests and maintenance on TRS-21 recovery pump. It is highly recommended to set up a schedule of cleanings and rebuilds to ensure proper functionality.

During this recovery, it is important to monitor temperatures of the coil bath and the LP. Add more dry ice as needed to maintain temperature. Failure to do so will result in longer recovery times and increased pressure in solvent tank.

Re-circulating Solvent:

This step is optional, and only recommended for those who feel they need to run more solvent than the collection base can hold. If recirculation is not needed for your run, please skip to the next section

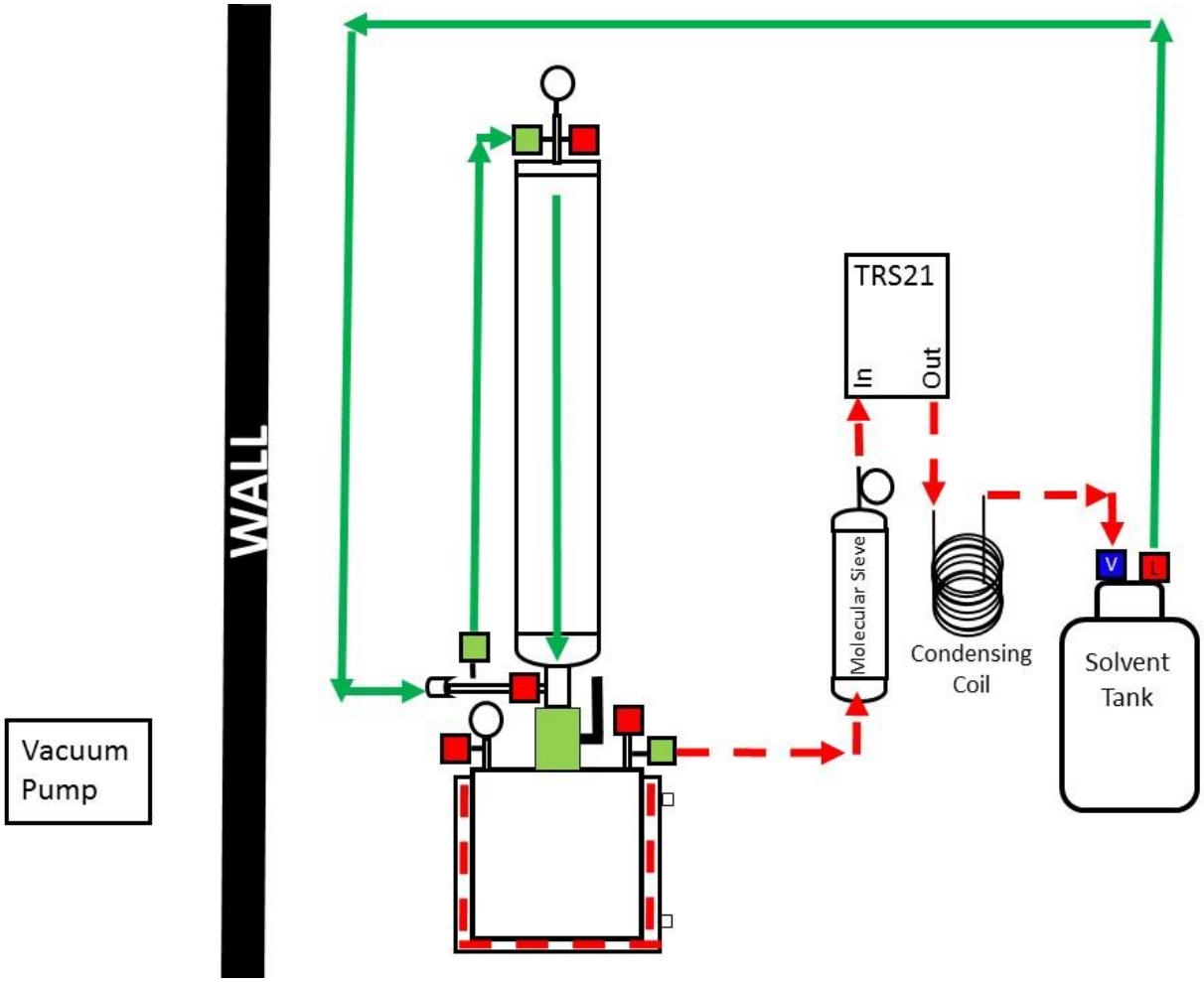


FIG. 7

The MK-V active system is capable of recirculating solvent through the material column after the initial dump has been collected in the base. Before solvent can be recirculated, a partial recovery must occur. (Please refer to the recovery section on page 13 for information on recovery).

After a partial recovery (approx. 1/3 of recovery up to 1/2), the recirculation can start. Open the top solvent input as shown above, then open the liquid line on the LP tank. The incoming mechanical pressure will force the liquid to be siphoned back through the material column. Once flow has started, open the inline ball valve and allow solvent to recirculate for the desired amount of time. The use of an inline sight glass will aid in determining when material is fully stripped.

Once the recirculation is finished, close the inline ball valve and the liquid line on the LP tank. Close remaining solvent input valves. Finish recovery

Post Run Procedure:

Once recovery has finished, close recovery and LP valves, then shut down warm water circulation. It is recommended to allow recovery to happen until collection chamber hits negative pressure, ensuring that all gas has recovered.

Before the chamber can be opened, positive/negative pressure must be relieved. Open the vacuum valve to equalize pressure in collection chamber. Drain the jacket of warm water by removing supply hose from the input barb and allowing liquid to drain to the reservoir via the return hose. Once water is drained, the bottom platter of the collection chamber is ready to be removed. Carefully loosen each side of the clamp before removing.

DO NOT LEAVE LIQUID SOLVENT IN COLLECTION CHAMBER. FAILURE TO FULLY RECOVER WILL EXPOSE ATMOSPHERE TO FLAMMABLE GAS.

Removing the Extract:

After removing the collection base from the system, it is time to remove the extract. It is important that the utensil used to remove the extract is chemically compatible with the solvent used. A PTFE scraper is recommended. If using a metal scraper, avoid using excessive pressure and scratch the base.

Being that the base and extract should still be warm, the consistency should still be semi runny. Run the scraper in a circular motion from the outsides to the middle; the extract should pool in the center of the base. Scoop the extract out from center.

Always check chemical compatibility before using solvents to clean gaskets. Incompatible solvents will deteriorate gaskets and compromise seal. It is recommended to replace gaskets after heavy use.

Cleaning and Gear Maintenance:

Once the extraction process is completed, it is important to break down and clean the gear. This will prevent contamination of future runs, as well as keep gaskets fresh. We recommend cleaning the gear with d-limonene, however isopropyl alcohol can be used. It is important to wipe gaskets clean rather than soak them in solvent. If using alcohol to clean gaskets, it is important to wipe them dry to prevent the gaskets from breaking down.

In between uses, it is recommended to keep lines connected and under vacuum. This prevents moisture and dust from getting into the system.

It is also recommended to empty the SS LP tank into a sealed IDOT approved storage container. Tanks with a clamp and gasket are not recommended for long term storage.

Troubleshooting:

- *The LP won't fill when transferring gas from supply tank*
    - Is this the first fill? Was a vacuum pulled on the tank after draining the nitrogen?
        - If no, drain whatever has been filled, pull a full vacuum, and start again.
    - Is the LP tank in an ice bath? Is it covered to the top?
        - If no, cover LP tank fully in ice. Dry ice is preferred.
    - Is the supply tank flipped upside down?
        - If no, flip supply tank. Butane supply tanks have no diptubes, so the tank must be inverted to empty liquid solvent.
    - Are you filling to the blue vapor valve?
        - Filling to the blue vapor port is preferred for transferring solvent
    - Is the supply tank chilled?
        - If the supply tank is colder than 30 F, the butane will have no pressure and will not want to move. Warm the supply tank for transfer

- *The solvent won't go into the closed loop*
    - Is the unit under vacuum?
        - If no, pull a vacuum
    - Which valve is the LP draining from?
        - If red, tank must be upright
        - If blue, tank must be inverted. No diptube on blue side
    - Is the Closed loop being chilled?
        - If no, the closed loop collection base must be chilled to reduce pressure. If the collection base is at equal or higher pressure than the LP tank, solvent will not move.
        - If yes, has the gas been chilled? Make sure the entire collection base is covered in the bath or slurry. If gas is chilled below 30F, pressure will be eliminated, and some assistance will be needed
    - Are valves functioning?
        - Open the machine to see if the ball is moving. Check to see if the tank is actually

- *My recovery is going really slow/stopped*
    - What valve are you recovering to?
        - If blue, is the tank fully submerged in ice/dry ice slurry? It is very important to cool the head of the tank up to the valve stem.
        - If red, are you using dry ice? If recovering to the liquid line, the pressures in the LP must be in the negative. This is only possible with dry ice.

- What is the current temp of the warm bath? What is pressure in the collection pot?
  - It is important to maintain pressures of 90 – 105 F during recovery. The lower the temperature, the less pressure is built inside the collection pot. If water has cooled, change water with freshly warmed water. If the pressure is near 0, check to see if base is warm
- Is the bottom of the collection pot being exposed to the water bath?
  - If no, put something under the collection pot to elevate from the bottom of the bath
- Is recovery completed?
  - Whether recovery is finished or not is indicated by the weight of the solvent recovered first, then by checking collection pot pressure. If pressure is at 0 or in the negative and the collection pot is warm, it is likely recovery is done.

- *My yield was really dark*
  - Was the equipment cleaned prior to use?
    - Machine oils and other contaminates can darken oils
  - Was the solvent distilled?
    - Mystery oils can also darken oil
  - Is the material fresh?
    - As material ages, oxidization occurs, which will change color. Fresher material tends to be lighter in yield.

- *My yield was low*
  - Was the column packed tightly and evenly?
    - An uneven or loose pack can lead to channeling. Pack tighter to ensure all material sees solvent
  - Was enough solvent used?
    - We recommend 3-5 lbs of solvent per lb of material. The use of a ball valve to stall solvent in material momentarily can help ensure a full saturation occurs.
  - Was all solvent dropped and recovered?
    - If the column was not cleared before recovery, oil bearing solvents can be trapped in the column. This can affect recovery.

- *Solvent drops from column after recovery*
  - Was the collection base chilled?
    - If a vapor lock occurs, solvent can be trapped in the column. Make sure pressures is base are reduced to prevent vapor locking.
  - Are you using a dewaxing column?
    - If a dry ice column is used and ball valve is not closed before recovery, solvent will recover to the column then vapor lock itself out.

BUILDING VISION AND VARIETY

Service and Technical Support:

Email:
support@bestvaluevacs.com
Claims:
claims@bestvaluevacs.com
Technical Support:
nickd@bestvaluevacs.com, joshm@bestvaluevacs.com
Office:
331-281-0154
Hours:
Monday-Friday 9:00 am -5:00 pm CST
Address:
Best Value Vacs
1251 Frontenac Road
Unit 150
Naperville, IL 60563

If you are not satisfied with your product, you can return your purchase under the policy stated below for up to **30 days** from the date of your delivery.
Shipping and insurance charges are not refundable.
Simply email our customer support team at claims@bestvaluevacs.com or Call **(331) 281-0154** (M-F 9-5 CST).

Returns:

There is a **30-day return policy** from when the carrier has confirmed delivery to residence to when a return request has been submitted.

Return policies do not transfer to patrons who are not the purchasing customer unless the items were noted as a gift at checkout. The same applies to warranty cases.

- Items must be returned in original packaging.
- Items must be returned unused, in undamaged condition, and free of any signs of usage: such as botanical material, resins, cleaning agents, stickers, decals, etc.
- Items showing signs of damage, usage, opened packaging, or wear and tear will result in a **25% restocking fee. NO EXCEPTIONS**.
- There is an **automatic 15% restocking fee** on all items unused and in original packaging unless the items are exchanged for something of equal or lesser value. **NO STORE CREDIT WILL BE GIVEN**.
- It is recommended to insure your item against any shipping damage by the carrier. When the delivery date of your return has been confirmed by the carrier, it may take up to 24-72 hours to process the order, inspect the item, and test the item (depending on reason for the return). Once the item has been processed, a refund will be issued for the original purchase price of the item. **(Note: a 15% or 25% charge may be applied if the item has been determined as used or damaged).**
- Shipping charges will not be refunded, unless items prove to be defective upon arrival, in which case carrier is responsible for initial shipping charge.

(Note: it may take several additional business days for your Credit Card to show the refund on your account. All payments made using E-checks may take 3-15 business days to be refunded.)

Paramount Financial Returns:

If a customer has purchased an item using the Paramount Financial financing option and wishes to return it, the cost will be refunded by Best Value Vacs; however, Best Value Vacs is**NOT** obligated to pay any accrued interest or fees owed by the customer through Paramount Financial.

Exchanges:

There is a **30-day exchange period** from when the carrier has confirmed delivery to residence to when a exchange request has been submitted.

- Items must be unused and in brand new condition. You may only exchange for an item of equal or lesser value. **NO STORE CREDIT WILL BE GIVEN**.
- The customer is responsible for all exchange shipping charges, unless the exchange results in a defective or damaged item, in which case the customer is responsible for initial shipping charge.
- All exchanges/ returns will be tested once shipped back to our facility to verify any recorded defects. If defective item is found fully functional, the customer will be responsible for exchange and replacement shipping charges.

It is recommended that you take photos before sending out any exchanges even if they are brand new. This is for your protection so that you are not held liable for any damage that may occur when shipping an item back. When sending photos, please include the name of the representative with whom you spoke with.

Damaged Shipments:

If an item or packaging is damaged upon arrival, please take photos of damage and email us with in 24hrs for a claim will be filed and replacement to be shipped. When sending photos, please include the name of the representative with whom you spoke with.<

Without photos, replacements/refunds will **NOT** be issued.

If no claim is filed with in 24hrs, NO ACTION WILL BE TAKEN.

Missing Parts:

There is a **72- hour grace period** from when the carrier has confirmed the delivery to residence to report any missing items. Please inspect shipments thoroughly. After initial claim, any further claims will not be honored.

If you do not report missing items within 72hrs, NO ACTION WILL BE TAKEN. NO EXCEPTIONS.

Additional Disclaimers:

- All replacement, defective, and exchange shipments will be shipped under the carrier of our choice.
- Expedited shipping will be provided upon request at customer's expense (customer will pay the difference between ground shipping and whichever expedited shipping option is requested).
- **Note:** Damaged/Missing Parts replacement shipments will be shipped with the original shipping option that was paid for initially.
- **Clearance Items:** Clearance section items do not qualify for refunds, warranties, or replacements. **PLEASE READ DESCRIPTION IN ITEMS WHEN PURCHASING.**

Warranty:

90-Day Satisfaction Guarantee

Best Value Vacs guarantees all items to be as specified in their Product Descriptions. If, for any reason, you are not satisfied with your purchase, you may return your items within **90 days** from the date of purchase. Damaged, used, or unsellable items with open packaging may be assessed with a restocking fee. Duties, Taxes, Shipping, and Handling charges are **non-refundable**.

Standard 30-Day Limited Warranty

Best Value Vacs warrants that ALL items will be exempt from defects in materials and workmanship for a period of **30 days** from the date of purchase. This warranty does not pertain to damage yielded by misuse or mishandling, chemical contamination, excessive force, repairs or replacements from outside sources, improper set-up, use of equipment beyond its issued specifications, or physical damage due to negligence, a lack of maintenance, or normal wear and tear.

Standard 1-Year Limited Warranty

Best Value Vacs warrants that qualified items will be exempt from defects in materials and workmanship for a period of **one year** from the date of purchase. This warranty does not pertain to damage yielded by misuse or mishandling, chemical contamination, excessive force, repairs or replacements from outside sources, improper set-up, use of equipment beyond its issued specifications, or physical damage due to negligence, a lack of maintenance, or normal wear and tear.

Qualified Items for the Standard 1-Year Limited Warranty:

• All stainless steel components from Extractors

• All stainless steel components from CO2 Extractors