



Model # VWK-2 INSTRUCTION MANUAL

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IMPORTANT NOTE: BEFORE BEGINNING ANY WORK WITH THE VACUUM WASTE KIT, PLEASE READ THE ENTIRE MANUAL. FAILURE TO FOLLOW THE WARNINGS BELOW MAY RESULT IN DAMAGE TO THE INSTRUMENT OR INJURY TO PERSONNEL.

Safety Information and General Warnings

- 1) The VWK-2 requires connection to mains power. Incorrect usage or carelessness may result in electrocution. Do not operate when immersed or if cables are damaged. Do not operate if pump is wet or dripping.
- 2) Only trained scientific personnel who are familiar with laboratory instruments should use this product.
- 3) If liquids spill on any part of the instrument, shut the instrument off and wipe up the liquids before turning it on again.
- 4) Do not position the Vacuum Waste Kit where someone might trip over the cords or tubing.
- 5) The VWK-2 is not approved for clinical applications. ALA Scientific Instruments discourages any such use and accepts no liability for such use. **NO FILTERING IS PROVIDED TO CONTAIN PATHOGENS.**
- 6) Be sure to read this entire manual and familiarize yourself with this instrument before operating it.

Shipping contents

The VWK-2 shipment should include the following items:

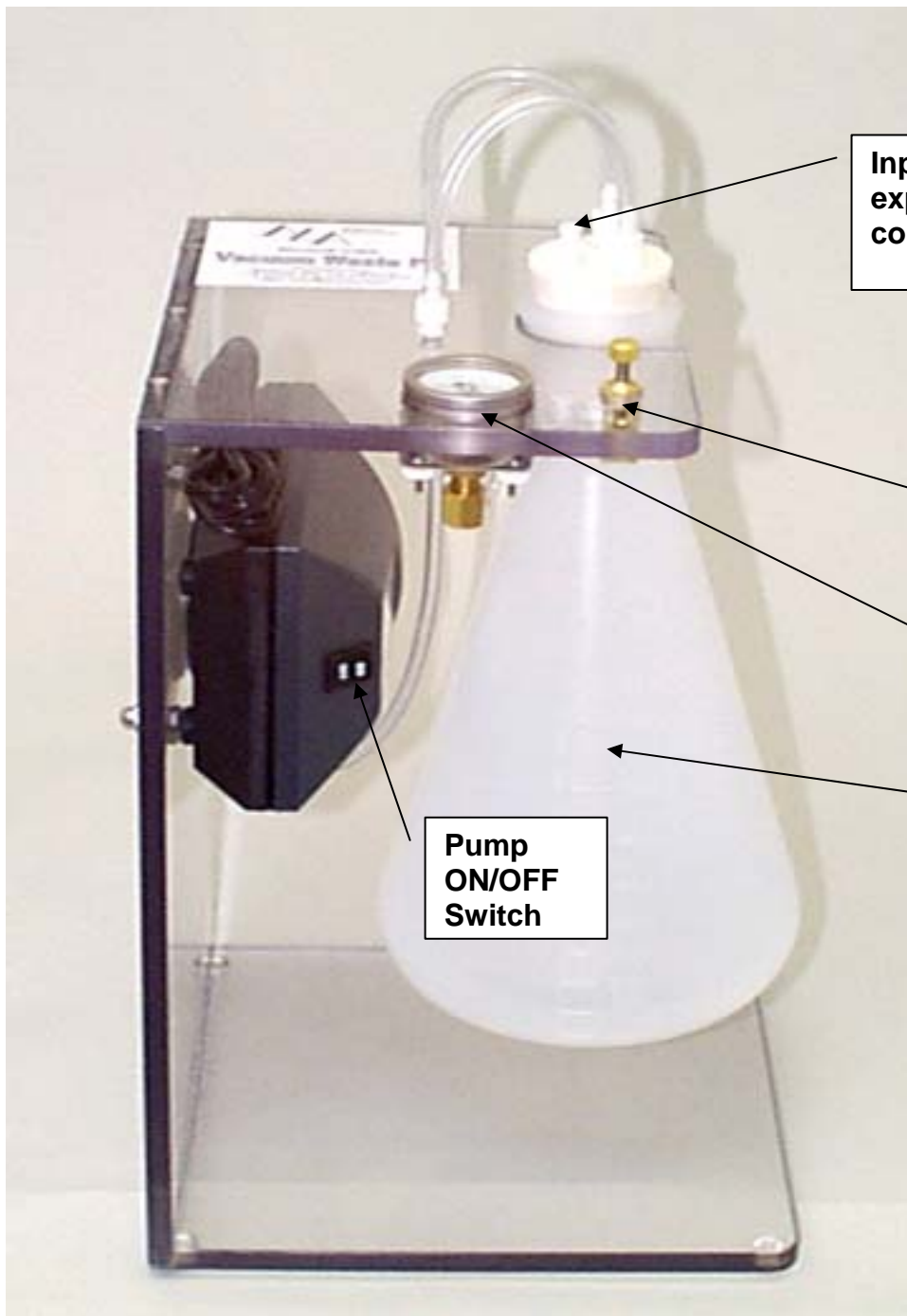
- a) Instruction manual (1)
- b) Stand with pump
- c) 2L polypropylene flask
- d) Misc. tubing and connectors

Please open the box and inspect contents immediately upon receipt. If any components appear damaged or missing, please contact ALA Scientific Instruments or your local distributor. Any claims for damage must be brought within three days of receipt.

Introduction

The vacuum waste kit VWK-2 is designed to assist in the removal of fluid from cell preparations. It can provide up to $-5''$ of mercury suction and trap nearly 2L of fluid. It serves as an ideal suction source for the ALA Levelock™ fluid level controller, and is generally ideal for all light duty suction jobs involving small cell chambers.

VWK-2 Image



Input to waste flask from experiment. Must have tube connected inside flask.

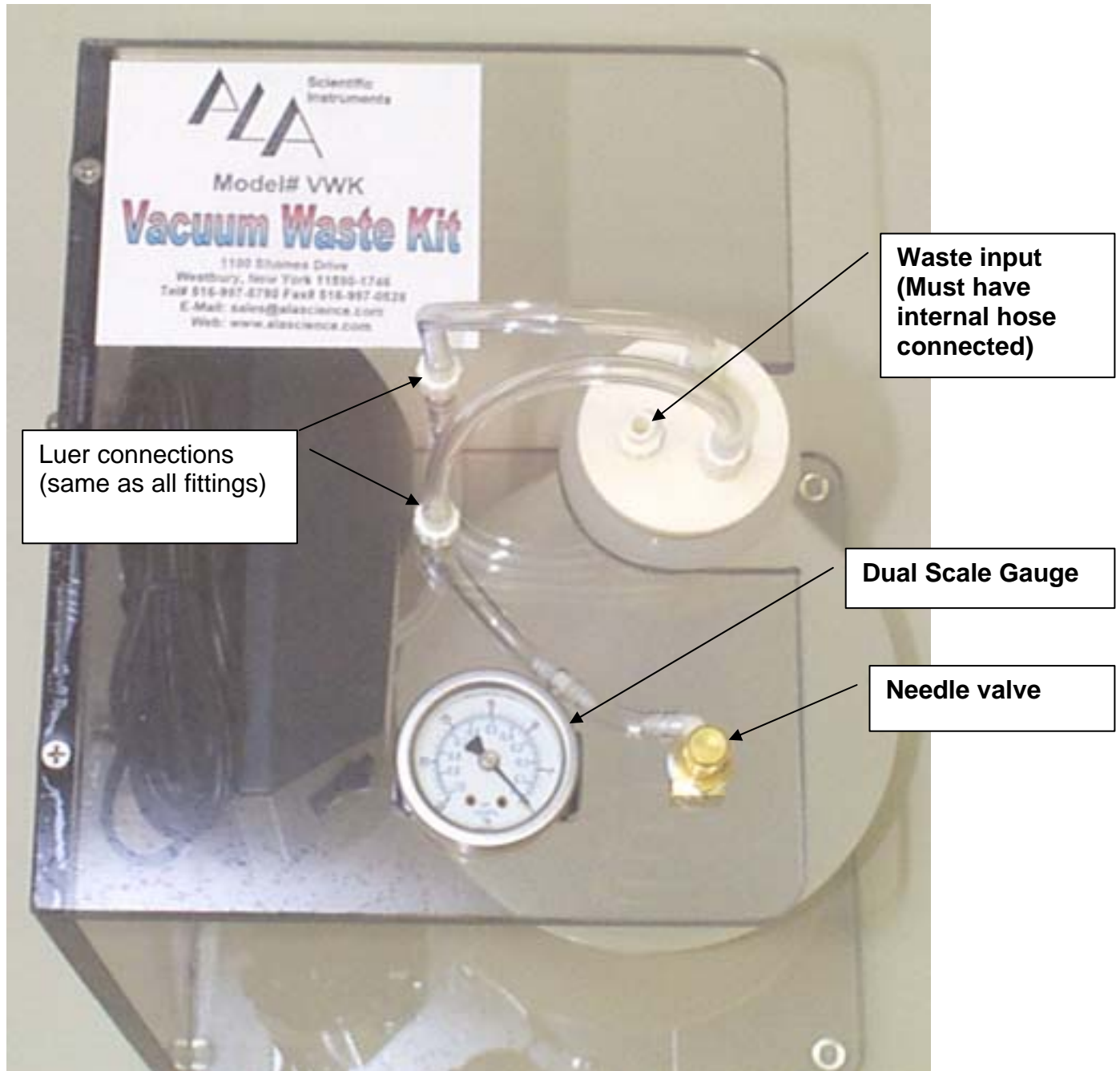
Needle Valve (For vacuum relief)

Vacuum pressure gauge

Flask

Pump ON/OFF Switch

VWK-2 Top View



NOTE ON CONNECTIONS: Only tighten luer connectors finger tight, never over-tighten or use tools!!! (Seal damage can occur)

Installation of the VWK-2

Positioning of components:

The ideal location for the VWK is on the floor near the work area. Tubes and lines should be kept as short as possible. Place the stand so that labels and gauges are easy to read. Always run the system upright. Be sure that you can see the storage flask so that you will see it filling up. Make access to the flask easy so that you will not be discouraged from emptying on account of difficult access.

Connecting the tubing and electrical cords:

The VWK comes all set up from the factory. There is only one input at the top of the rubber plug. The waste tube from your preparation will connect here (See Figure A). The other two ports on the plug are for the vacuum output (connection to pump) and the bleed and pressure gauge. The most important thing is that the connection from your prep (waste fluid line) be connected to the one port on the plug that has a tube connected to it inside the flask. It is very important the waste enter the flask through this tube. Without a tube, the entering fluid can aerosolize and be aspirated by the pump causing contamination of the pump and possibly spreading disease. The other two ports for the pump and the gauge do not need, and should never have a tube attached inside the flask.

Run the power cord in the shortest possible route to the outlet. Avoid putting it in a location where it can get pinched or chaffed. If the plug is polarized (one blade is larger than the other) observe proper insertion into the outlet. Since the pump has a plastic housing, no ground is provided.

Instructions for use during Experiments

Using the VWK in an experiment is very simple. Switch on the power of the pump and let it reach final pressure. This may take 2-5min. Be sure all connections are tight (tubing etc.) and begin the experiment. Keep an eye on the flask to be sure it does not fill. Also, observe that the pump does not draw any liquid by checking to be sure that no liquid is dripping from it. Should you observe dripping or water spraying from the pump, un-plug the unit immediately and seek service.

When the flask needs changing, remove it only after the pump is shut off. When replacing the flask, be sure to press the plug in hard to form a good seal.

The gauge will read the vacuum pressure in the flask. If you need to reduce the amount of suction to your system, you can do so by opening the needle valve a little bit. Simply turn it counter-clockwise to allow some air to enter the flask. You will observe the gauge pressure decreasing. Allow several minutes for the system to stabilize after an adjustment.

In sensitive recordings there is the possibility of electrical noise. Since the pump runs on AC power 50-60 Hz noise or a harmonic is possible. If this should occur, try to re-position the VWK farther from the recording area. Should the waste line act as an antenna conducting noise to the recording site a drip chamber or filter can be utilized in the fluid pathway to break the fluid circuit.

Maintenance and Troubleshooting

The VWK-2 is a very simple device and does not need any maintenance other than the normal course of keeping it clean (wipe off dust and dirt with damp cloth) and emptying the waste flask when necessary. (You may want to bleach the waste flask from time to time, but do not add bleach and then use it in the system with the pump on. This can damage the pump.

If you have any problems with the VWK-2, please contact ALA Scientific Instruments (if bought within North America) or your local distributor.

Contact ALA Scientific Instruments by phone or email at the number or address below:

Email: support@alascience.com

Phone: (516) 997-5780

Fax: (516) 997-0528

Warranty

ALA Scientific Instruments agrees to warranty this product for a period of one year from the date of delivery against any and all manufacturer's defects in material and/or workmanship. Remedy will consist of repair or replacement at ALA's discretion. Please report any problems promptly so as not to jeopardize warranty coverage. ALA Scientific Instruments does not assume any liability based on the use of this product, whether correct or incorrect, except as specified under law. Warranty rights may vary from state to state, country to country.

ALA Scientific Instruments will not warranty any of the plastic connectors or tubing.

If the product does need repair, it must be returned to the factory freight prepaid (freight sent collect will be refused) and in clean condition. If returned parts have been in contact with any liquid substance, documentation of substances used must be provided to ALA. Ask ALA for a Hazardous Materials Disclosure Form before returning.

This product is intended for use in biological experiments only. **THIS EQUIPMENT IS NOT INTENDED NOR APPROVED FOR CLINICAL USE.**