|  |  |  |  |
| --- | --- | --- | --- |
| **CBG Alcohol/Solvent Recycler** | | | |
| **Purpose** | To provide working guidelines for the operation of the CBG alcohol/solvent recycler. | | |
| **Policy Statements** | This procedure applies to Histology Technical staff performing alcohol/solvent recycling | | |
| **Materials** | **Reagents** | | **Supplies** |
|  | Waste alcohol- not contaminated with xylene  Xylene | | Graduated cylinder  CBG alcohol/solvent recycler  Hydrometer |
| Special Safety Precautions | Wear eye protection, gloves and lab coat. If a spill occurs, use spill kit and contact Safety at extension 6-6712. | | |
| Records/Forms/  Required | CBG Solvent Log | | |
| **Quality Control** | **USING A HYDROMETER:** It is very important you check each batch of alcohol to ensure accurate use of your recycled product. The scale has both a Proof and Tralle's section. The Tralle side of the scale is where the percentage of the alcohol is read. Temperature is another important point when using a hydrometer. Most standard hydrometers are calibrated at 60°F to obtain an accurate reading. It is important to allow your recycled product to cool before checking your results. The alcohol collected from the recycler is slightly warm and should stand at room temperature overnight. (Included is a temperature correction chart for your hydrometer).  **Procedure:** Pour the cooled, recycled alcohol into a clear vessel taller than the hydrometer by a few inches. A 1000 mL graduated cylinder is suggested. There needs to be enough volume in the vessel to allow the hydrometer to float. Place the hydrometer into the solution, weighted end first. Allow the hydrometer to stop moving and read the scale at the fluid level on the Tralle side This figure is the percentage of alcohol you have to work with. You may dilute with distilled water to make lower percentage alcohol.  **Troubleshooting:** If upon dilution your alcohol clouds up or turns milky, this indicates the alcohol was contaminated with xylene and should be wasted.  **Xylene purity check:** Purity of recycled xylene should be checked after every batch recycled. Pour 10 mL of recycled xylene into a graduated cylinder. Add 5 mL of water to cylinder and shake. Let settle and check for the level of water in cylinder. If it is not 5 mL, the xylene is contaminated and should be wasted. | | |
| **Procedure** |  | | |
|  | **Step** | **Action** | |
| **Container Placement for Alcohol Recycling** | 1 | Replace the spigotted solvent container with the used alcohol to be recycled container. Pour through the fine mesh strainer then loosen lid. | |
|  | 2 | Replace the ethanol waste container on the right with the recycled alcohol container.  The container for recovered solvent may be removed or remain in place on the left.  Nothing will collect on the left during the alcohol cycle. | |
|  | 3 | When changing from solvent to alcohol, the recycler will prompt the user to flush the unit. Use only 95-100% alcohol for this process. This procedure ensures there is no cross contamination of the new reagent. Collect only alcohol FREE of xylene contamination. | |
| **Switching Solvent Program** | 1 | 1. Xylene to be recycled, Press Enter ~ Press Enter | |
|  | 2 | Press Enter to Begin, No for Options ~ Press No | |
|  | 3 | Select Option, Manual Drain ~ Press Next or No until Select Product is displayed | |
|  | 4 | Select Option, Select Product ~ Press Enter | |
|  | 5 | Select Product, Xylene ~ Press Next or No until alcohol appears | |
|  | 6 | Select Product, alcohol ~ Press Enter, at beep, Press Reset | |
| **Flushing**  **Unit** |  |  | |
|  | 1 | Alcohol to be Recycled, Press Enter ~ Press Enter | |
|  | 2 | Press Enter to Begin, No for Options ~ Press Enter | |
|  | 3 | Processing Solvent Change, Press Enter ~ Press Enter  Performing Flush Drain ~ Message appears for 3 seconds Enter When Waste Jug is in Place ~ Press Enter | |
|  | 4 | Make sure waste container is in place prior to pressing Enter. When the drain opens there may be a small amount of fluid left in the tank. Check the drain tubing and press Enter to close the drain when the flow stops. | |
| **References** | CBG Biotech Solvent Recycler Manual | | |

**Historical Record**

|  |  |  |  |
| --- | --- | --- | --- |
| Version | Revised by | Effective Date | Summary of Revisions |
| 1 |  |  | Initial version. |
| 2 | A. Dubbelde | 6/27/19 | Update format, add version. |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |