Genetics Lab Fungal Specimen DNA Sample Labeling Protocol

This protocol describes the steps for making labels for fungal genetic samples to be stored in 1.5mL Eppendorf tubes. This protocol and the DBG_DNA_Sample label template are designed for genetic material sampled from specimens accessioned in the Sam Mitchel Herbarium of Fungi (DBG). If you are sampling specimens from another collection or institution, please use this protocol along with the ExternalCollections_DNA_Sample label template and include the collectionCode if it is not part of the catalogNumber.

Step 1: Preparing sample data

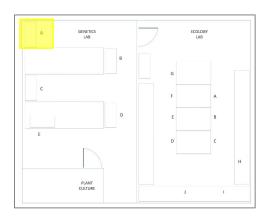
The scientist(s) preparing samples for DNA extraction should first create and save a list of the specimens that are to be sampled. This list must be either an Excel spreadsheet or a CSV. Two values are required for each sample: **catalogNumber** and the **scientificName**.

| 1 | A | В |
|----|---------------|--------------------|
| 1 | catalogNumber | scientificName |
| 2 | DBG-F-030613 | Xylaria polymorpha |
| 3 | DBG-F-031313 | Marasmius oreades |
| 4 | DBG-F-031318 | Tulostoma |
| 5 | DBG-F-031322 | Cyathus olla |
| 6 | DBG-F-031324 | Clitocybe |
| 7 | DBG-F-031332 | Psathyrella |
| 8 | DBG-F-031333 | Phallus hadriani |
| 9 | DBG-F-031362 | Pluteus |
| 10 | DBG-F-031358 | Geopyxis deceptive |

Step 2: Setting up the printer

Once the list of specimens to be samples has been saved, the printer can be set up for labels to be printed.

The printer is located in the Genetics Lab at Work Space A.







Press the yellow center latch toward the front of the machine and pull forward to fully open the printer.

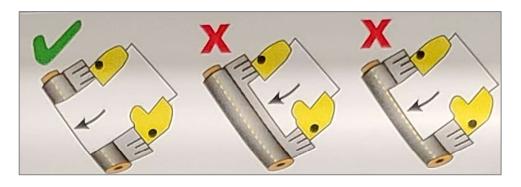


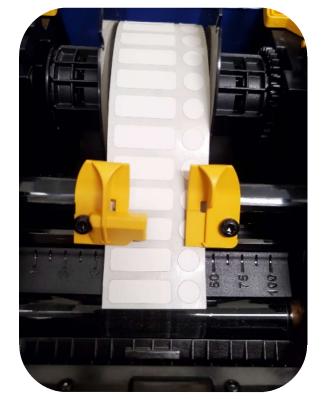


Place the roll of labels into the printer. The roll is designed to only fit into the printer the correct way. Pull the labels over the shiny black roller and wind the reel to retract any excess slack. Labels can be found above the PCR Workstation in the box labeled 1.5 mL eppie tubes.

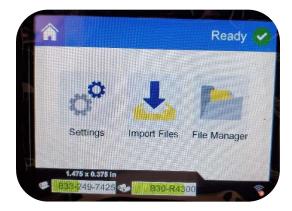


Pull the labels over the shiny black roller and close the 2 yellow alignment guides so the arrows are aligned with he edges of the label sheet.





Close the front ribbon door and press down gently until the yellow latch clicks. The screen will display an error if the labels are not loaded properly. If there is an error, reopen and adjust the placement of the edge of the labels and the yellow alignment guides. Once successful, close the top lid.



Step 3: Creating and printing the labels

Using the Pinky laptop, open the Brady Workstation application.



Connect the printer to the laptop using the light grey USB cord connected to the back of the printer



Click the green Print Partner Button

| | Brady Workstation | _ & × |
|------------------------------------|--|-------------------|
| Â | | ⊶ భ ?. |
| RECENT FILES | My Apps O Updates available. Bedrive and Download > | * Manage My Apps |
| DBG_DNA_Sample MICH_melanoleuca | | X manage mj rippe |
| View More > | Custom Designer Pifet Partner | |
| | Tools | |
| | Batch Print Label Settings Harage Here Printers | |
| | | |
| | | |
| FIND MORE BRADY WORKSTATION APPS | | |
| 📜 Brady App Store 🗲 | | |
| | | |
| | | |

- On the left side panel, select **Open**
- For File Type, select Template Files
- Double Click DBG_DNA_Sample

| <u>0-</u> | | 🛃 Print Partner 📃 🗧 | e × |
|-----------------|----------------|---------------------------|-----|
| BACK TO Home | Open | | |
| Open | | File Type: Template Files | |
| Print | Browse | Seach | |
| Help About | S Recent Files | <u> </u> | |
| | Categories | DBG_DNA_Sample | |
| | | P | ۲ |
| | | | |
| | | Эр р | en. |

The label template should now be shown on the screen. Click the Advanced Import button to bring in the specimen data.

| DBG_DNA_Sample X File Solution Print Casick Actions Objected Lateling Extras | ?. |
|---|---|
| 1 DBG-F-000000 1 ↓ | |
| TEMPLATE VIEW ERRORS DATA SOURCES Label Label part: 833-249-7425 Width: 1.475 in Length: 0.375 in | Properties Image: Comparison of |

Select Spreadsheet from the menus that appears in the bottom right. Browse to the location of your spreadsheet file and select to import.

| ☑ ■ Print Partner | | _ 6 × |
|--|------------------------------------|--------------------------------|
| DBG_DNA_Sample × | | ?. |
| File Print Qualek Actions Dipboard Labeling Latras | | |
| | Label: 1 | |
| 1 DBG-F-000000 1 ↓ | | |
| TEMPLATE VIEW ERRORS DATA SOURCES ADVANCED IMPORT | _ | |
| | Import from: | |
| | Spreadsheet CSV, TXT, XLS, XLSX | Microsoft Access MDB, ACCDB |
| | Database OLE DB, SQL Server | Saved Scheme BWAI, LMD |

The Advanced Import panel will appear at the bottom of the page, showing the data from your spreadsheet file. Select Next to sort or filter the data. Sort by catalogNumber or by scientificName, depending on how your specimens are organized. Then select Finish.

| <u></u> | | | | | | 🛃 Print | Partner | | | | | | | - 8 | × |
|------------------|---------------------|--------------|--------------------|-----------------|----------|---------|---------|---------|------------|---------|----------|----------|----------|----------|----|
| | NA_Sample × | | | | | | | | | | | | | | ?. |
| File Print Q | uick Actions Clipbo | pard Labelin | | | | | | | | | | | | | |
| | _ | _ | | | _ | | | | 1 2 | | Label: 1 | | , | | ÷ |
| 1 | ۲. ۲ | DBG | -F-00000 | 00 | <u> </u> | | DBG-F | | | | | | | | |
| | | | | | | | | | | | | | | | Ŧ |
| TEMPLATE | VIEW | ERRORS | DATA SOURCES | ADVANCED IMPORT | | | | | | | | | | | |
| Data Source | | | | | | | | | | | | | | | |
| | | | scientificNa Colum | nn1 Column2 | Column3 | Column4 | Column5 | Column6 | Column7 | Column8 | Column9 | Column10 | Column11 | Column12 | |
| | DBG | DBG-F-030613 | | | | | | | | | | | | <u></u> | |
| Filter & Sort | | DBG-F-031313 | | | | | | | | | | | | T | |
| | DBG | DBG-F-031318 | | | | | | | | | | | | | |
| | DBG | DBG-F-031322 | Cyathus olla | | | | | | | | | | | (| 9 |
| | DBG | DBG-F-031324 | | | | | | | | | | | | | |
| Format | - | 500 C 034333 | · · · · | | | | | | | | | | | | |
| Check for update | es Reset | | | | | | | | | | | | Previous | Finish | |

Click and drag the navy-blue column header for catalogNumber to template Data Matrix Code. Select Yes when the dialog box prompts "This object already has content" Repeat for the other Data Matrix Code. The catalogNumber (DBG-F-000000) should be replaced with your imported values on the side and top components of the label. Repeat for the scientificName in the space at the bottom of the side label.

| 0- | | | | | 🛃 Prir | nt Partner | | | | | | | - | đх | |
|------|-----------------|-------------------|---|----------------|----------|------------|-------------|---------|------------|---------|----------|----------|----------------|-----------------|---|
| â | DBG_DN/ | A_Sample* × | | | | | | | | | | | | ?. | |
| File | Print Qui | ick Actions Clip | Doard Labeling Extras | | | | | | | | | | | | |
| | | _ | | | | | | | 3 4 5 | Labe | l: 1 💽 | ,9 — | | ÷ | 1 |
| | | | DBG-F-030613 | - | | DBG- | -030613 | | | | | | | Î | |
| | TEMPLATE | VIEW | EFERE DATA SOURCES ADVAN | | | | | J | | | | | | | |
| | Data Source | Drag desired colu | | | | | | | | | | Browse | Combine Fields | 11 | |
| 1 | | - | | olumn2 Column3 | Column4 | Column5 | Column6 | Column7 | Column8 | Column9 | Column10 | Column11 | Column12 | | |
| | | DBG | DBG-F-030613 Xylaria polymc | oranne coranno | continue | columns | Conditinito | column | continuito | columns | Column | Column | | | |
| | Filter & Sort | DBG | DBG-F-031313 Marasmius ore | | | | | | | | | | | | |
| ΙT | Filler & SOIL | DBG | DBG-F-031318 Tulostoma | | | | | | | | | | | | |
| | | DBG | DBG-F-031322 Cyathus olla | | | | | | | | | | | (| |
| | | DBG | DBG-F-031324 Clitocybe | | | | | | | | | | l | 117 | |
| • | Format | | | | | | | | | | | | | | |
| Ch | eck for updates | | es when this label file is opened es when this label file is printed | | | | | | | | | | Previous | | |

- Select the Print icon.
- In the Print module, check the box in the bottom right corner to check for errors before printing.
- Select Advanced Settings

| • | 🛃 Print Partner | - 5 × |
|---------------------------|--|--|
| BACK TO DBG_DNA_Sample | Print | |
| Open | ➡ Print Settings | |
| Print | R/de- | |
| | Printer: | |
| Help | i3300 [USB002] | |
| About | Label Part: | 000 7491110 🗱 📖 |
| | B33-249-7425 1.475" x0.375" Die-Cut Utile | 606-F-2(122) |
| | Installed supply 🚺 🚯 | |
| | Supply Save: 👔 | |
| | □ On ● Off | |
| | | C057+451333 E |
| | Labels to Print: Range: 1 - 29 | 000 7 431702 |
| | Everything Television Control of the All labels in your file | |
| | Print Copies: Total Labels: 29 | |
| | rim copies, total takes, 29 | COLOF-411220 MER INFORM |
| | Example: 1,1,2,2,3,3 | 000 / 431337 🔐 📖 |
| | | 000 / 201044 ISS (BB) |
| | | |
| | | Description - |
| | | COG-F-41382 ME LEE LEE LEE LEE LEE LEE LEE LEE LEE |
| | | 266 F 411300 1982 1993 |
| | | * Background color does not print |
| | Advanced Settings | Check for errors before printing 📅 PRINT |

IMPORTANT! In the Advanced Settings dialog box, be sure that the Cutting Options is set to End of Job Select Save Settings

| <u>~</u> | | 🛃 Print F | Partner | _ @ | × |
|---------------------------|---|-------------------------------------|---|--|----|
| BACK TO DBG_DNA_Sample | Print | | | | |
| Open | 🕏 Print Settings | | | ,e | |
| Print | Printer: | | 000-F-00015 | | |
| | i3300 [USB002] | | 000-401013 | | |
| Help About | Label Part: | | D066-F-121210 | | |
| | B33-249-7425 1.475"x0.375" Die-Cut 🗆 White | Advanced Settings | x | | |
| | | i3300 [USB002] | | | |
| | Supply Saver: 👔 | Where To Print Print To Printer | Printer Position Adjustment () Shift Horizontal: ABC | | |
| | On Off | Print To File Browse | ○ Left ● Right by 0 	 in $(+ ABC \rightarrow)$ | | |
| | Labels to Print: Range: 1 - 29 | Page Layout | Shift Vertical: | | |
| | All labels in your file | O Mirror Image | | | |
| | Print Copies: Total Labels: 29 | | Cutting Options O End of Label O End of Job | _ | |
| | Sorted | | Never | - | |
| | Example: 1,1,2,2,3,3 | | Cancel Save Settings | | |
| | | | E00-F-021304 | | |
| | | | 1000-F-011000 | | |
| | | | 200 F 431345 | | |
| | | | C60-P-051500 | Ļ | |
| | | | | * Background color does not print | |
| | Advanced Settings | | | Check for errors before printing | ųΤ |
| 🗄 🔎 Type here to | search O 🖾 🤇 |) 🖬 🔒 🖪 🥥 🚾 💻 | | 🚱 🧢 71°F Partly sunny 스 📼 네 🖉 9247 AM 12/2/2021 | • |

Select Print from the bottom right corner and the labels will quickly be produced. If a large number of labels is being printed, be prepared to assist the lengthy strip of paper so as to not cause a jam.

Step 4: Adhering Labels to 1.5 mL Eppendorf tubes

Adhere the labels as shown here





The CODE brand scanner labeled Genetics Lab can be used to scan Data Matrix Codes.

