Toxin Screening Website User Guide

by Aaron Graham

1) Ensure that you are running Windows

In order to successfully use the Toxin Screening Database, you must be running a Windows Operating System. The printer that we use to print the barcodes only works with Windows, so we can only run the database on a Windows OS.

2) Install WAMP Server

A.   Download and Install

Go to **http://www.wampserver.com/en/** and download the 64 bit version. Run the installer and follow the steps to completion.

B.   Common Error: Missing Linkage File

If the installation fails due to a missing file named "MSVCR110.dll", please follow the following steps:

1.   Go to "C:\wamp64" and run the application entitled "unins000"
2.   Go to "**https://www.dll-files.com/msvcr110.dll.html**"

3.   Download the latest version of "MSVCR110.dll" for a 64-bit system
4.   Place this file into "C:\Windows\System32"
5.   Go back to the website and download the latest version of "MSVCR110.dll" for a 32-bit system
6.   Place this file into "C:\Windows\SysWOW64"
7.   Re-download and re-install WAMP64

3) Install Git and Clone Database Code

1. Go to "**https://git-scm.com/downloads**" and click to download for Windows
2. Run the installer and follow steps to completion
3. Open command prompt and go to "C:\wamp64\www"
4. Run the following command:
   *git clone -b Windows "**https://github.com/aarong4743/ToxinScreeningWebsite.git**"*

4) Configure the Server Connection

1. Go to "C:\wamp64\www\ToxinScreeningWebsite\app"
2. Open the file entitled "connection.php"
3. Ensure that the "mysqli_connect" function is set up as follows:
   $con = mysqli_connect("localhost", "root", "", "toxin_screening");

4) Check Configurations with PhpMyAdmin

A. Check phpmyadmin config file

1. Go to "C:\wamp64\apps\phpmyadmin4.6.4" and open the file entitled "config.inc.php"
2. Ensure that there is a setting named "AllowNoPassword" that is set equal to true

B. Check phpmyadmin and user configurations

1. Open a browser and go to "localhost/phpmyadmin"

2. Login with a username of "root" and no password
3. Click on "User Accounts"
4. Ensure that there is an account with:
    a. User name of "root"
    b. Host name of "localhost"
    c. Password set to "No"
    d. Global Privileges set to "All Privileges"
    e. Grant set to "Yes"
5. If not, update accordingly

5) Set Up Table for Database

1. Log into PhpMyAdmin
2, On the left hand side, click "New"
3. Please name the table "toxin_screening" and click "Create" when finished
4. Open up a command line go to "C:\wamp64\bin\mysql\mysql5.7.14\bin"
5. Run the following command:

mysql -u root toxin_screening < "C:\wamp64\www\ToxinScreeningWebsite\app\toxin_screening_2016_02_22.sql"

6. Drop individual "dummy entires" when ready

6) Check Functionality of Database

1. Open Google Chrome and go to "localhost/ToxinScreeningWebsite/app"
2. Click "Plate Entry"
3. Click "New Plate"
4. Submit with 1 chemical

5. Enter an arbitrary chemical name and select "Run 1". Click "Submit"
6. Ensure that you see a message that says "Successful Plate Creation".
7. Make sure that two barcodes appear. One for tail and one for full.

7) Setup Printer Driver

1. Go to "**https://www.zebra.com/ap/en/support-downloads/desktop/tlp-2824-plus.html**"

2. Download and install Zebra Setup Utilities for your version of Windows. Please use the defaults for each step, but make sure to address the following:
   a. During the installation, please set the barcode label size as 1.4 inches wide by 0.3 inches tall
   b. During the installation, please set the darkness to a value of 30
3. You should now be able to see the Zebra Printer in the list of installed printers

8) Setup Physical Printer

1. Plug in printer to wall and make sure paper is loaded
2. Plug in printer to computer using USB-USB connection
3. Ensure printer is turned on from side
4. Push blue button on top to activate printer, and make sure that a green light hovers around the button. Blank labels will come out to help the printer align itself.
5. The printer is now ready for use!

9) Configure Web Printer Settings

1. Open Google Chrome and go to "localhost/ToxinScreeningWebsite/app"
2. Follow the previously explained steps to create a new plate entry. When done, click on the "Print All" button, and a print preview page will appear.
3. Set the destination is the Zebra Printer
4. Set the layout to be Portrait
5. In the More Settings section, set the Paper size to be the one you created when installing the Zebra printer
6. Set the Margins to be "none"
7. Do not worry about blank labels showing up because they will not print out! You should be all set to print now!

10) TroubleShoot: Labels are Misaligned

1. Go to "C:\wamp64\www\ToxinScreeningWebsite\app"
2. Open the file "printpage.php"
3. Navigate to the function "makemultpage"
4. Adjust the percentages for the "left" and "top values"
   a. The id "first" refers to the first barcode
   b. The id "bar" refers to every other barcode

If the labels are aligned in the print preview but misaligned when physically printed out, it is probably because the paper is crooked inside the printer itself!

11) Setup the Scanner

1. Plug in the scanner to the USB port of the computer

2. To check the functionality of the scanner, go to "localhost/ToxinScreeningWebsite/app" and click on "Plate Entry".
3. With the cursor blinking in the "ID Number" box, scan a barcode printed from the database, and ensure that the database was able to find it.

12) TroubleShoot: Barcodes not Scanning

1. Go to "C:\wamp64\www\ToxinScreeningWebsite\app"
2. Open the file "printpage.php"
3. Navigate to the code below the function "printAll", and look for a commented out line that says:

    echo $plateIDStr

4. Uncomment this line
5. Enter new plates and continue to the execution of "printpage.php". You should now see links underneath each barcode.
6. Copy one of the links and paste into a browser
7. In the address bar, change "style=68" to "style=197"
8. If the barcode appears cut off, this is why it is not scanning.
9. Decrease the width value in the address bar until the barcode fully shows up. Remember this value
10. Please pursue one of the two options:

    A. Decrease the Width
      1. In "printpage.php", navigate to the line that sets the $p2 variable.
      2. Decrease the width value to the value you found earlier.

B. Decrease the number of digits in plate id

1. In "printpage.php", navigate to the line that sets the $plateIDStr variable, underneath the printAll function.
2. Set the last digit of the plateIDStr number to a number smaller than 8. This will decrease the number of digits in the plate ID, and thus lower the width of the barcode.