Centers for Disease Control and Prevention (CDC)

National Center for Environmental Health (NCEH)

Division of Laboratory Sciences (DLS)

NEWBORN SCREENING AND MOLECULAR BIOLOGY BRANCH (NSMBB)

NEWBORN SCREENING QUALITY ASSURANCE PROGRAM (NSQAP) PORTAL

UDOT PROFICIENCY TESTING PANEL USER GUIDE

March 2022

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1. UDOT Introduction

The UDOT proficiency testing challenge is a unique component of the Newborn Screening Quality Assurance Program (NSQAP) utilizing a panel of dried blood spot (DBS) specimens that enter the testing scheme in a manner similar to actual newborn screening specimens. For each specimen, participating laboratories must assay all analytes on their chosen test panel. This user guide describes to steps to enter UDOT results. Only abnormal analytes should be reported for the corresponding specimen number.

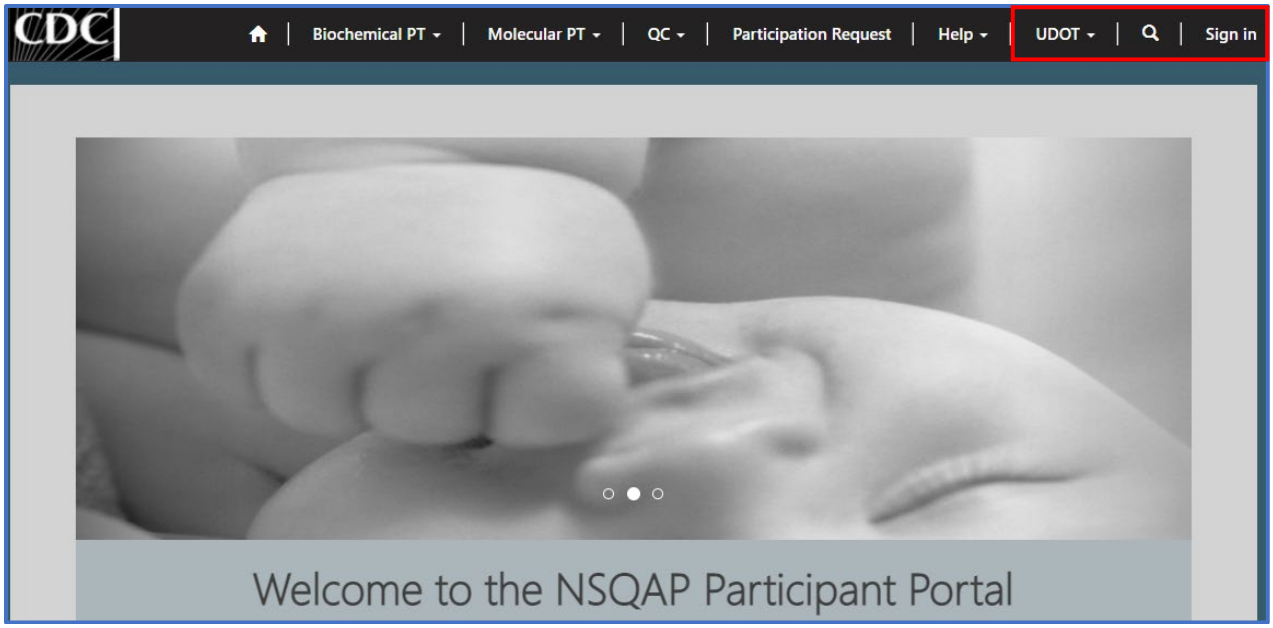
Laboratories are evaluated based on the analytes chosen for their test panel. An unacceptable result indicates a laboratory failed to identify an analyte as abnormal from their list of chosen analytes. A consensus of 80% (normal or abnormal) must be reached for a specimen to be evaluated.

UDOT results are also presented as Z-values, where the z-value is calculated by taking the difference between the laboratory result and the participants' overall mean, then dividing by the standard deviation observed for that specimen. Z-values are for information only and are not evaluated.

$$\text{Z-value} = \frac{\text{Participant Reported Value} - \text{Participant Overall Mean}}{\text{Overall Participant Standard Deviation}}$$

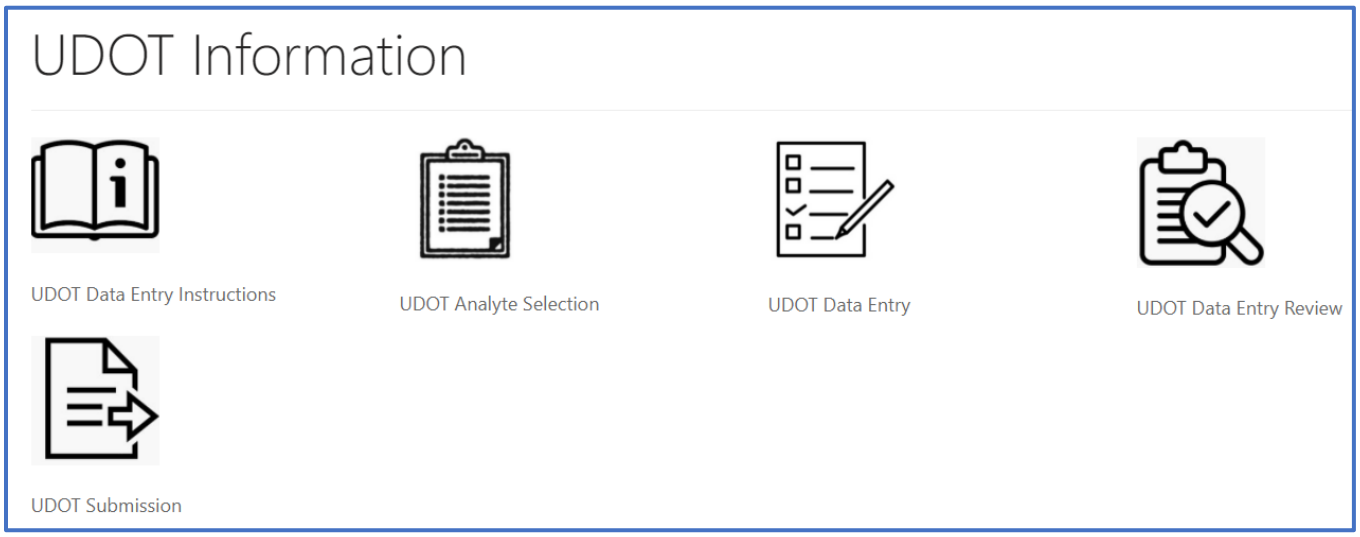
2. UDOT Program Navigation

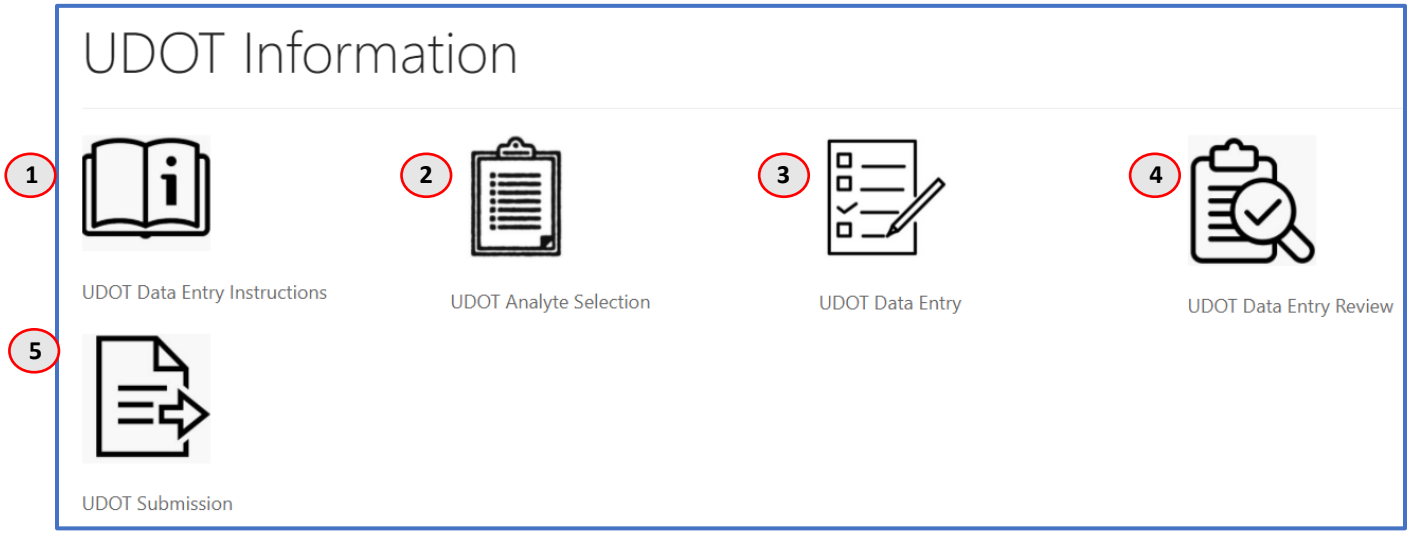
The UDOT Program section of the NSQAP Portal can be accessed by clicking **'UDOT'** from the menu bar. Remember to sign in first.



2.1 UDOT Information Page

1. Clicking the **'UDOT'** button at the top of the page on the toolbar will take you to the home page and resource for all UDOT PT related activities.

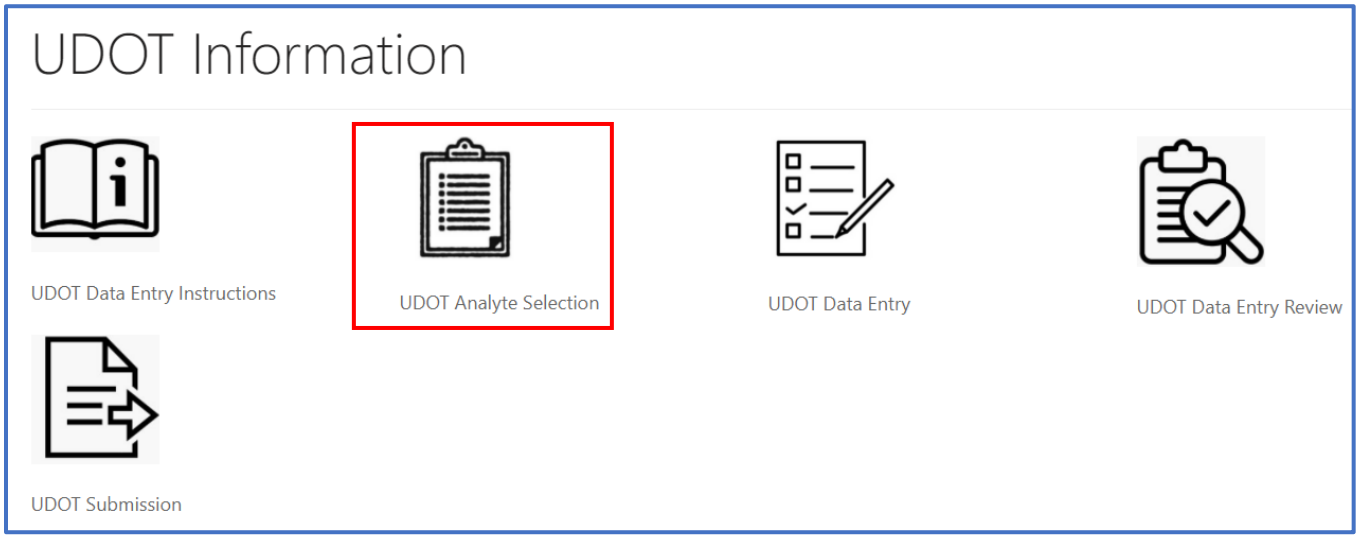




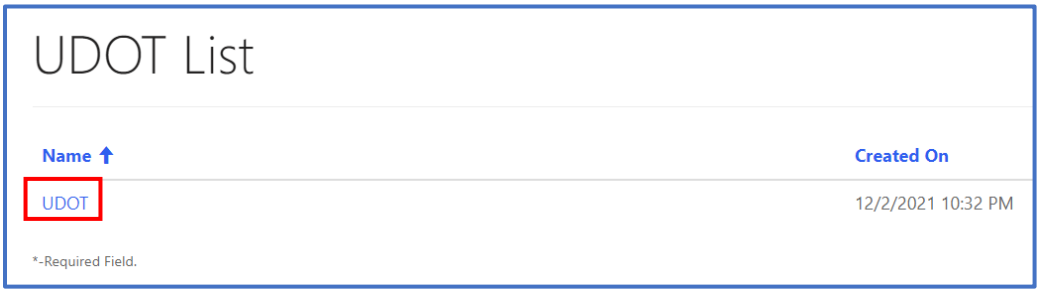
1. **UDOT Data Entry Instructions** – Downloadable instructions for completing UDOT PT data entry in the NSQAP Portal.
2. **UDOT Analyte Selection** – Page for setting up the portal for UDOT PT data entry.
3. **UDOT Data Entry** – Page for entering UDOT PT program data.
4. **UDOT Data Entry Review** – Page for reviewing UDOT PT program data.
5. **UDOT Submission** – Page for submitting UDOT PT program data.

2.2 UDOT Analyte Selection

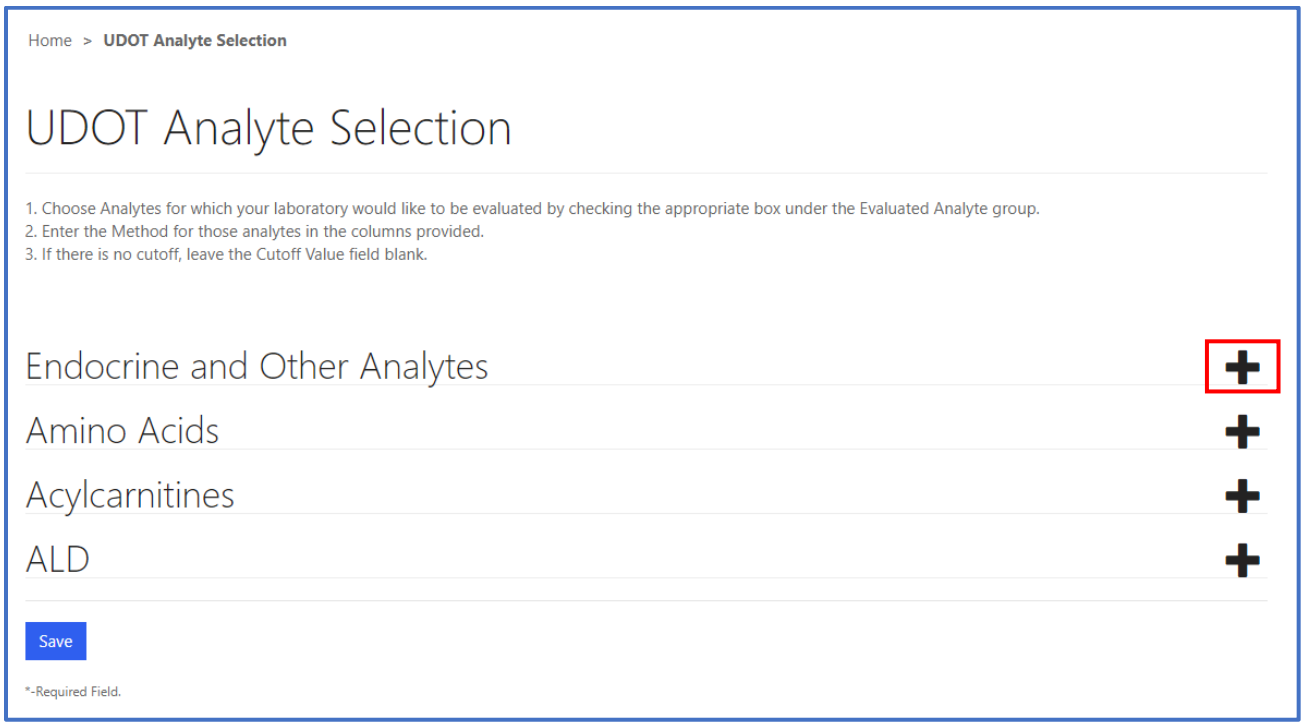
1. Click on the **'UDOT Analyte Selection'** button in the **'UDOT Information'** page.



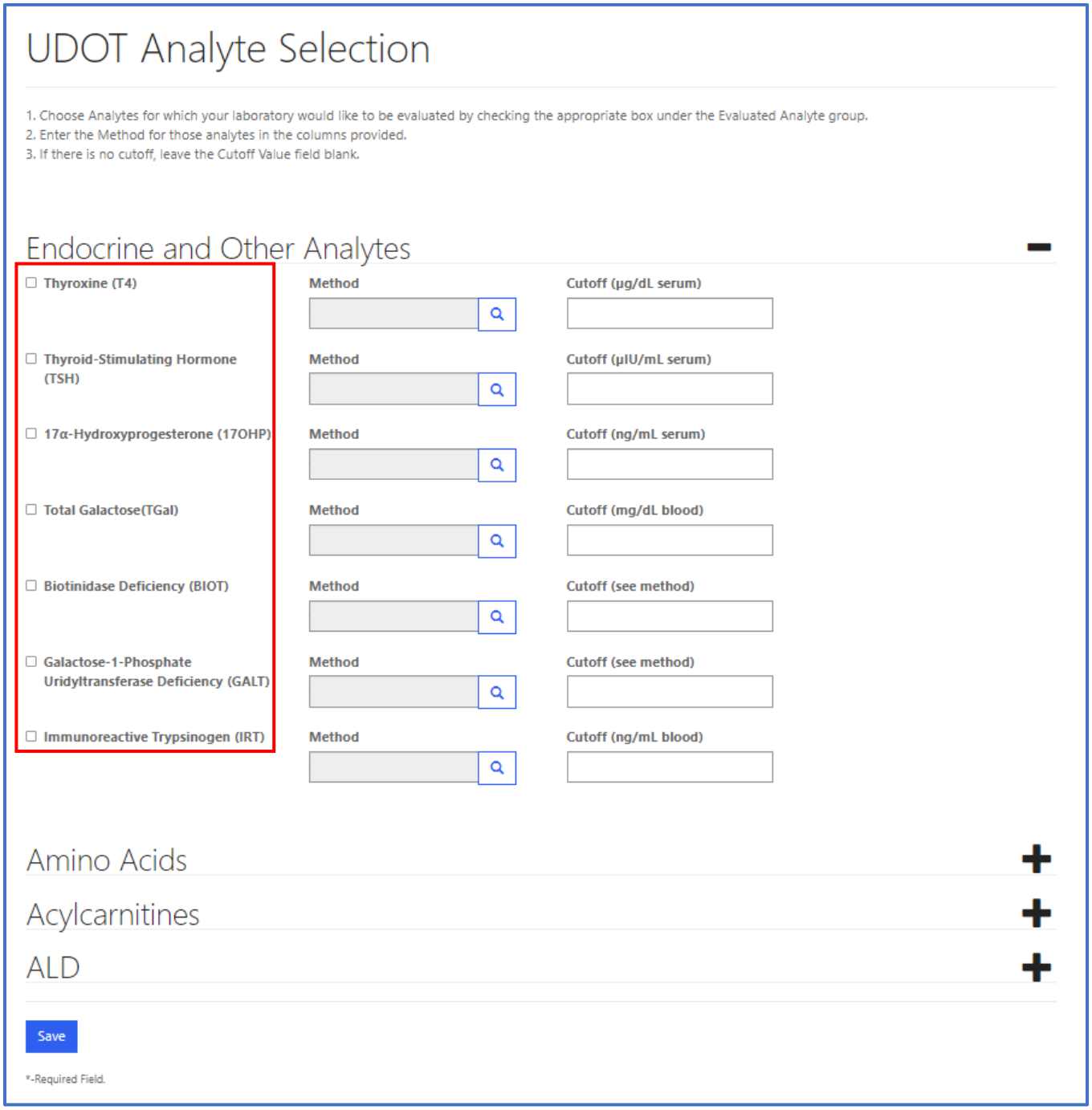
2. Click the **'UDOT'** program hyperlink to begin analyte selection.



3. Use the large **'+'** buttons on the right side of the grid to expand analytes under each category.

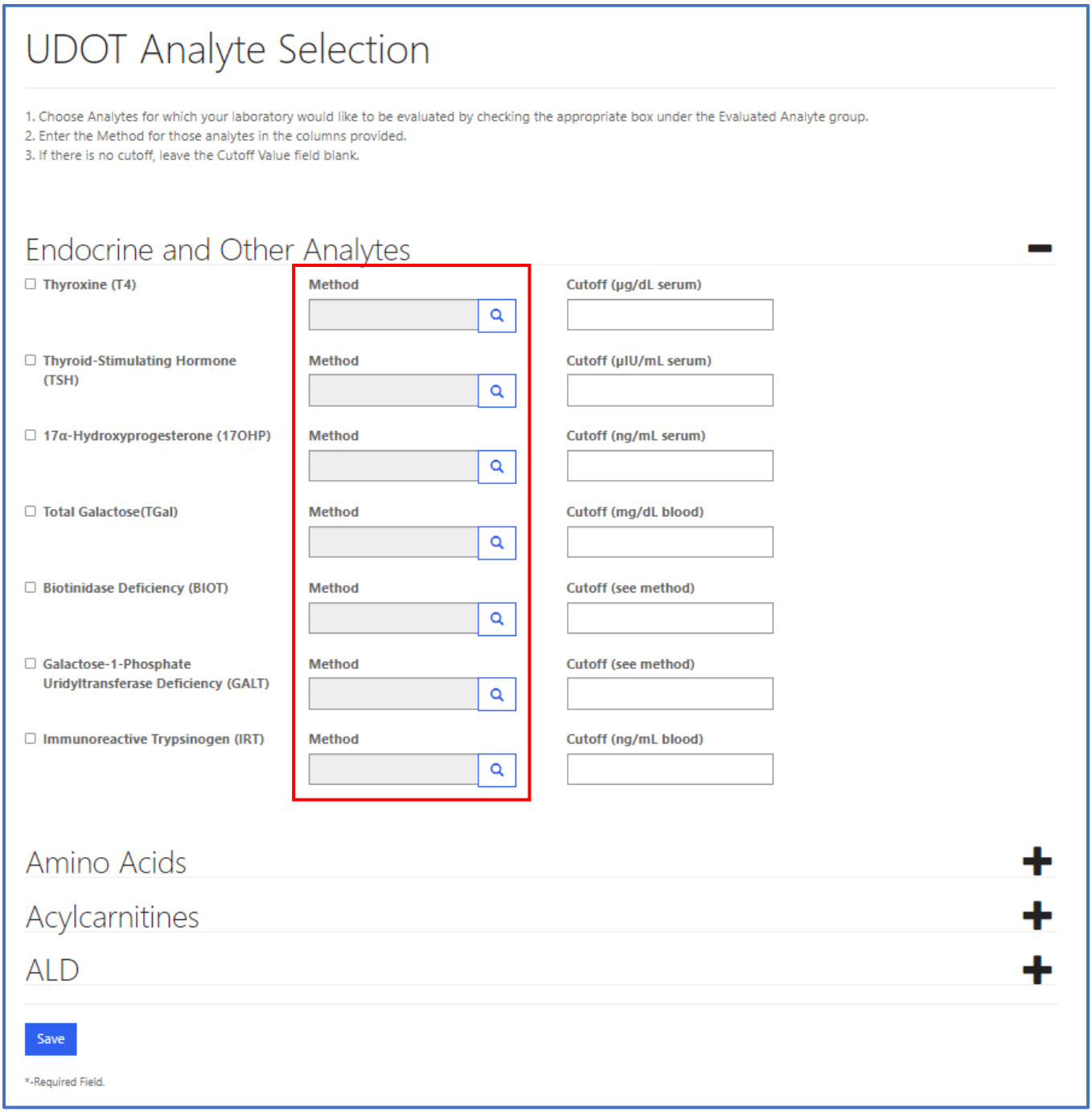


4. Once expanded, the Analyte and Method Selection page will appear for all reportable analytes within the UDOT program. Select the analytes for which data will be reported. Click the check box next to the analyte(s). Repeat the same steps for all categories (Endocrine and Other Analytes, Amino Acids, Acylcarnitines, ALD).

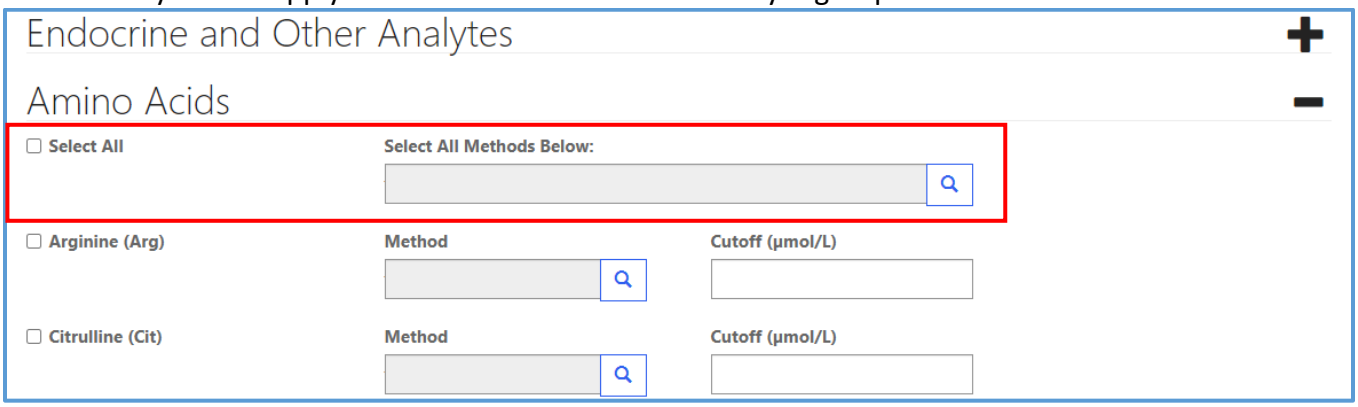


Note: Method will be required once an analyte is selected by checking the box to the left of the analyte. A red asterisk (*) will appear next to the Method after its corresponding analyte is selected.

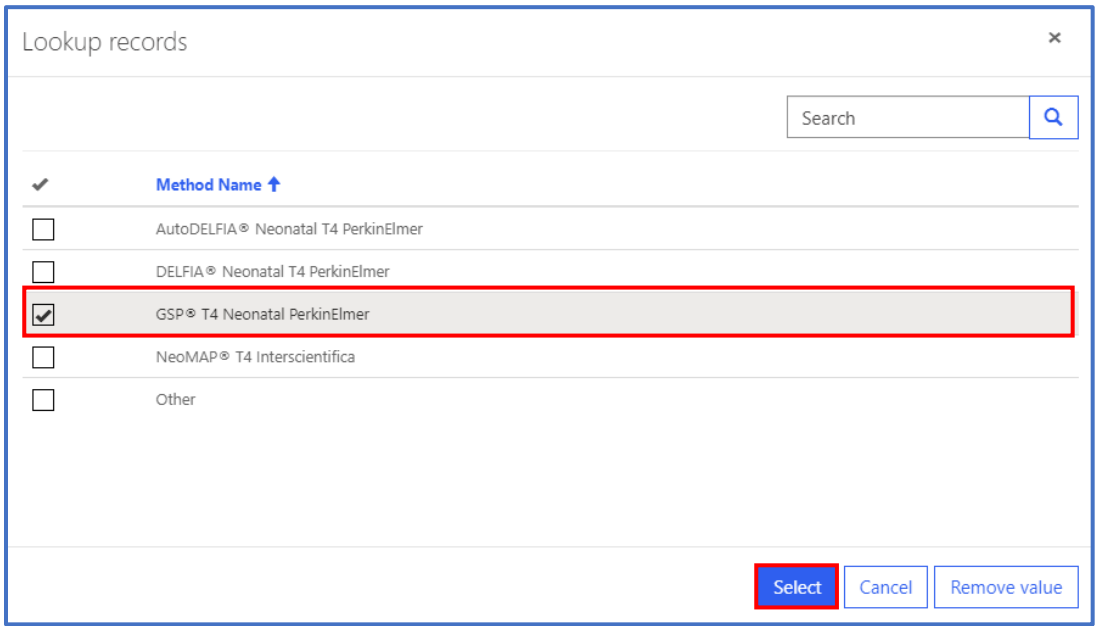
5. Select the method to be used for each analyte tested. Click the **'Magnifying Glass'** icon on the **'Method'** field for that specific analyte.



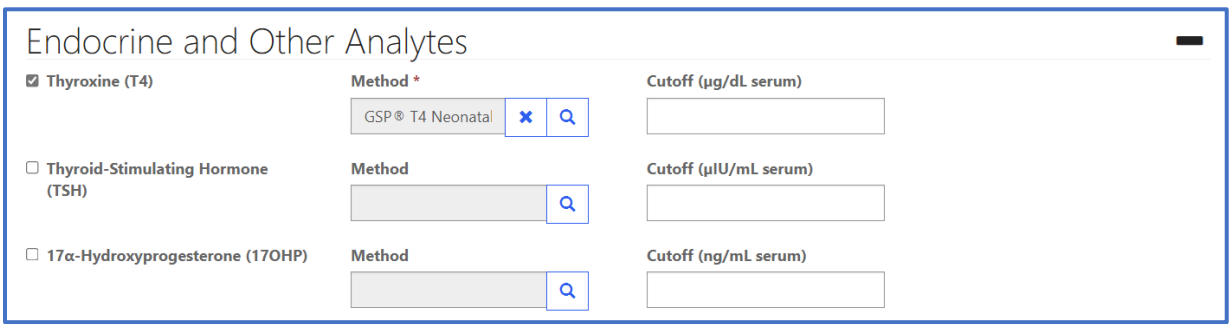
Note: For Amino Acids and Acylcarnitines, the **'Select All'** button will automatically check all analytes and apply the selected method to the analyte group.



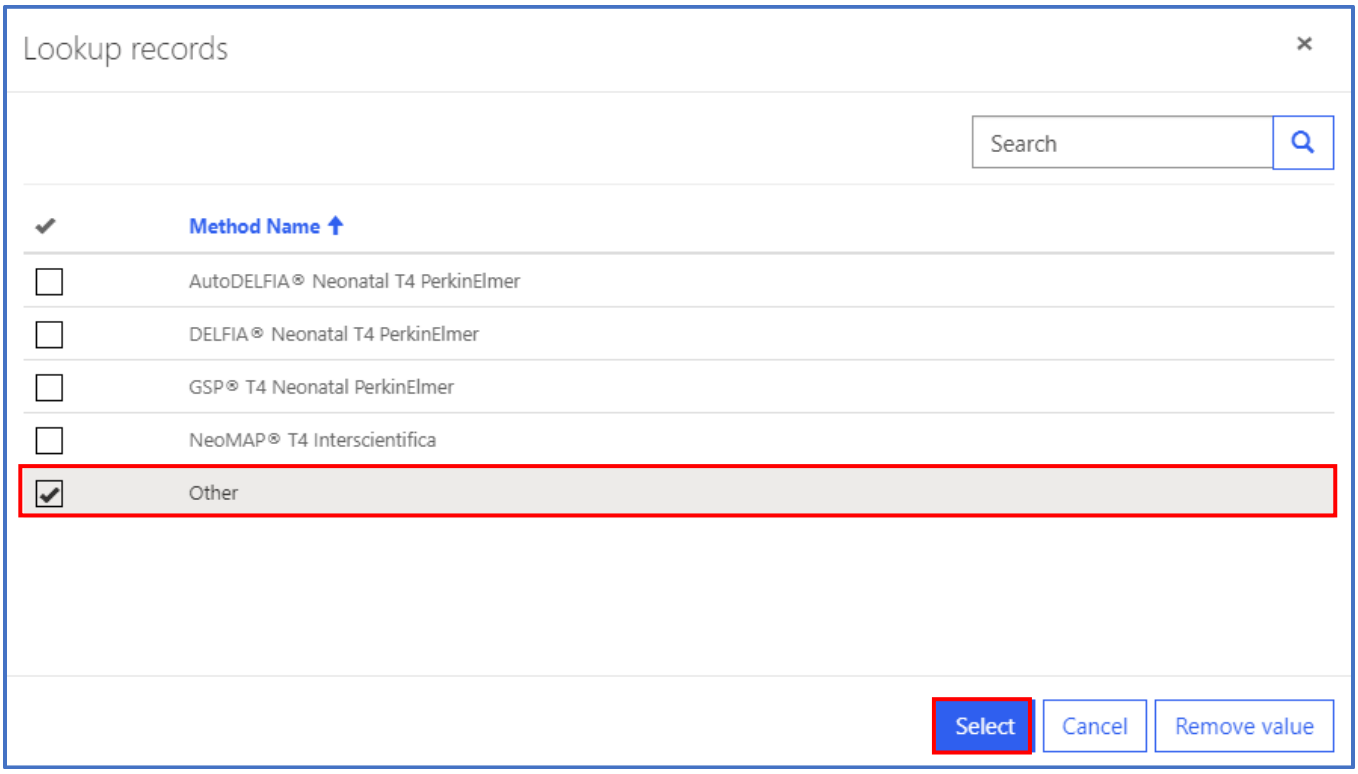
6. A new window will appear listing all methods for the analyte. To select a method, click on the method, and the row will highlight with a check mark on the left side. Click the **'Select'** button at the bottom of the window to select the method for the analyte.



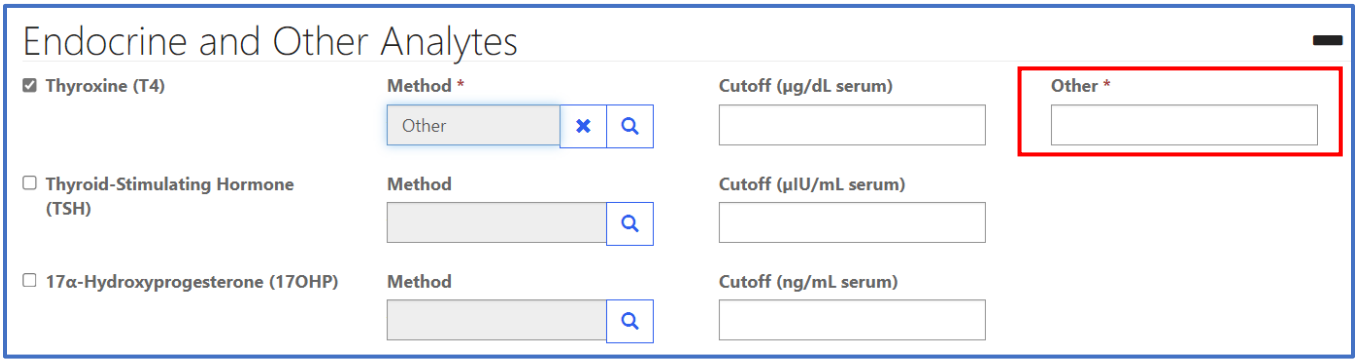
7. If a method has been selected for an individual analyte, it will appear in the **'Method'** field for the selected analyte only.



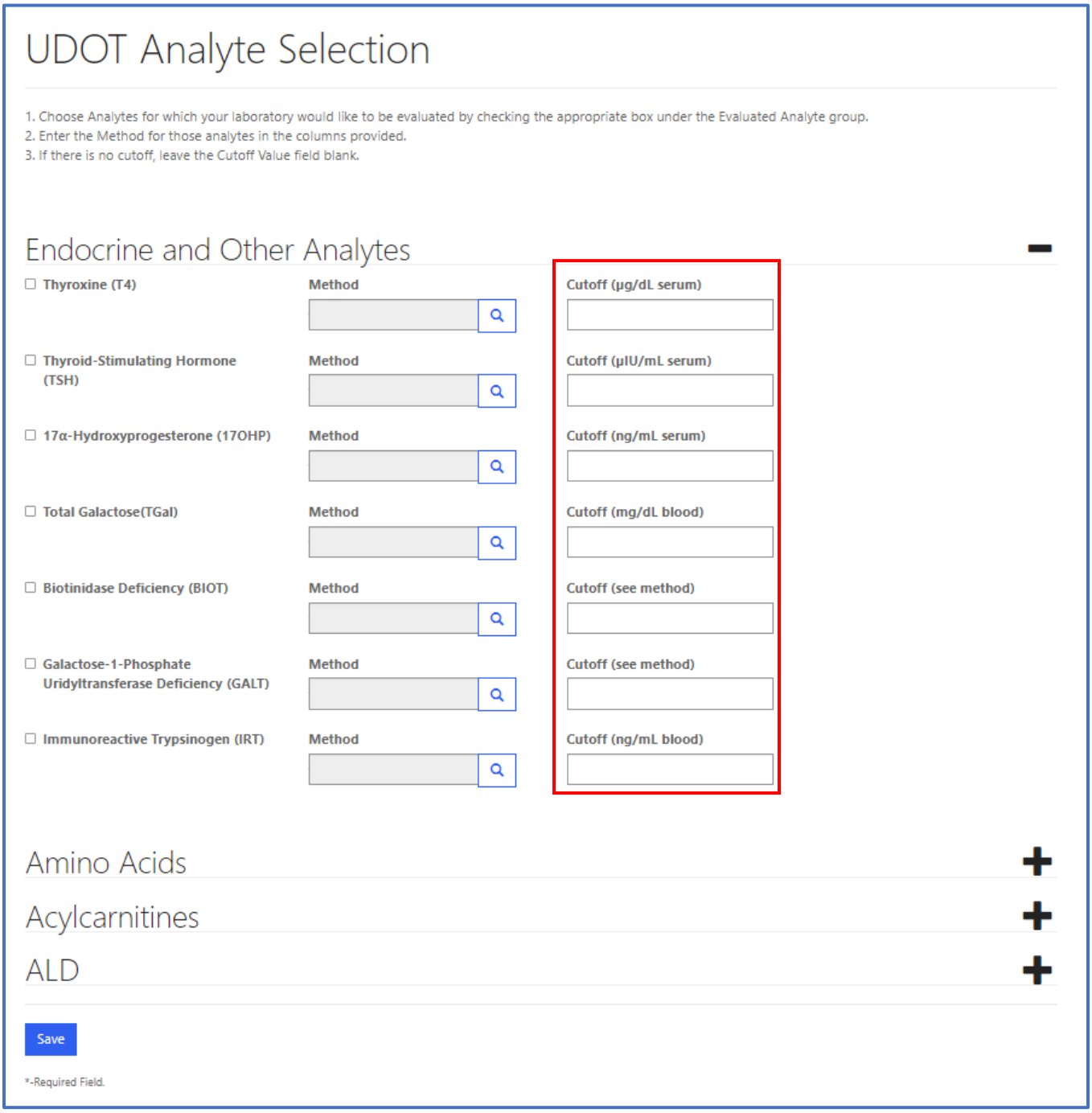
8. If the method for testing is not shown in the provided list, click the **'Other'** option, then the **'Select'** button.



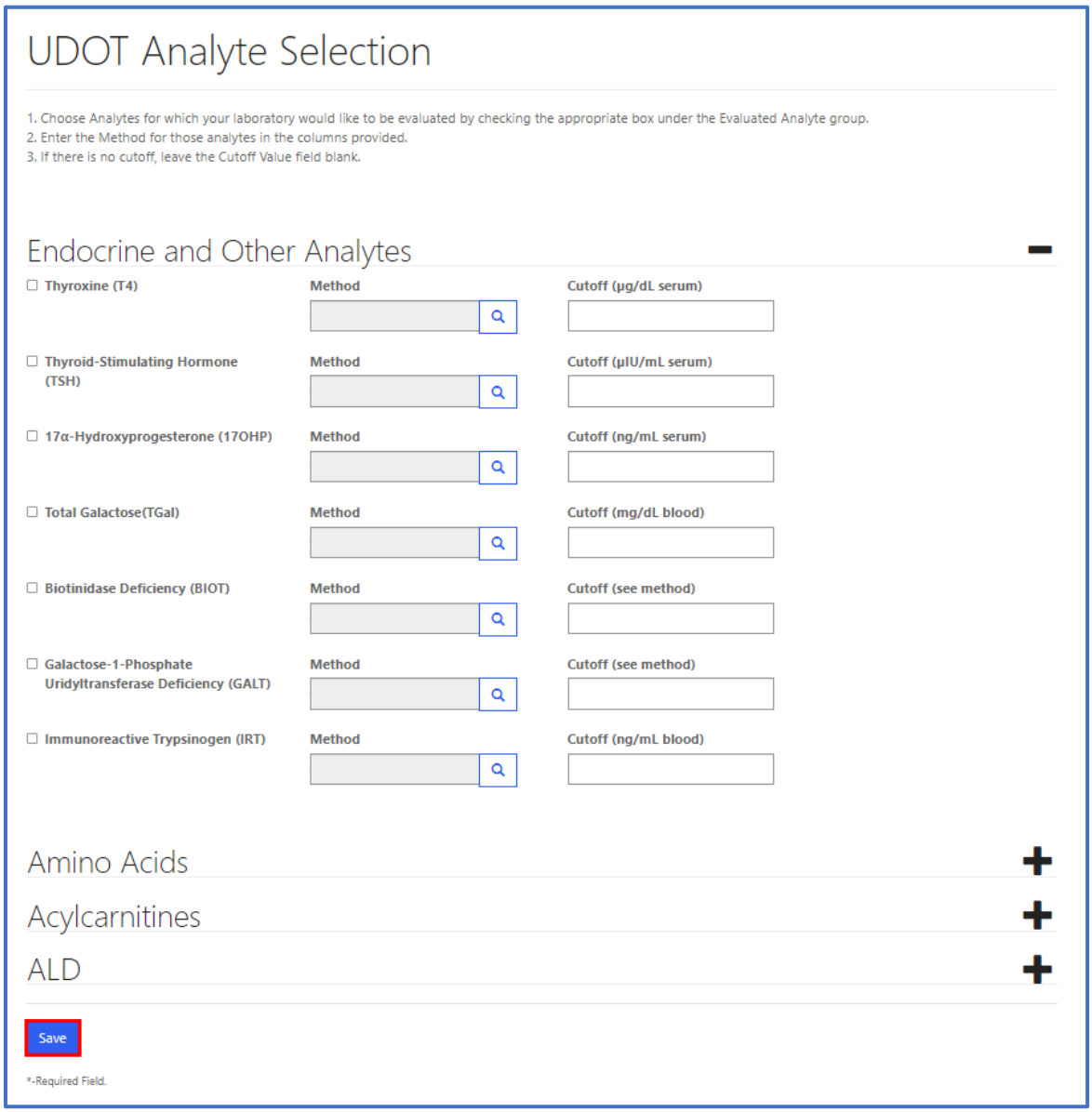
9. If **'Other'** method is selected, type the name of the **'Other'** Method in the field.



10. Enter the cutoff value for each analyte in the **'Cutoff'** field.



11. Complete program setup for data entry by clicking the **'Save'** button at the bottom of the setup page.

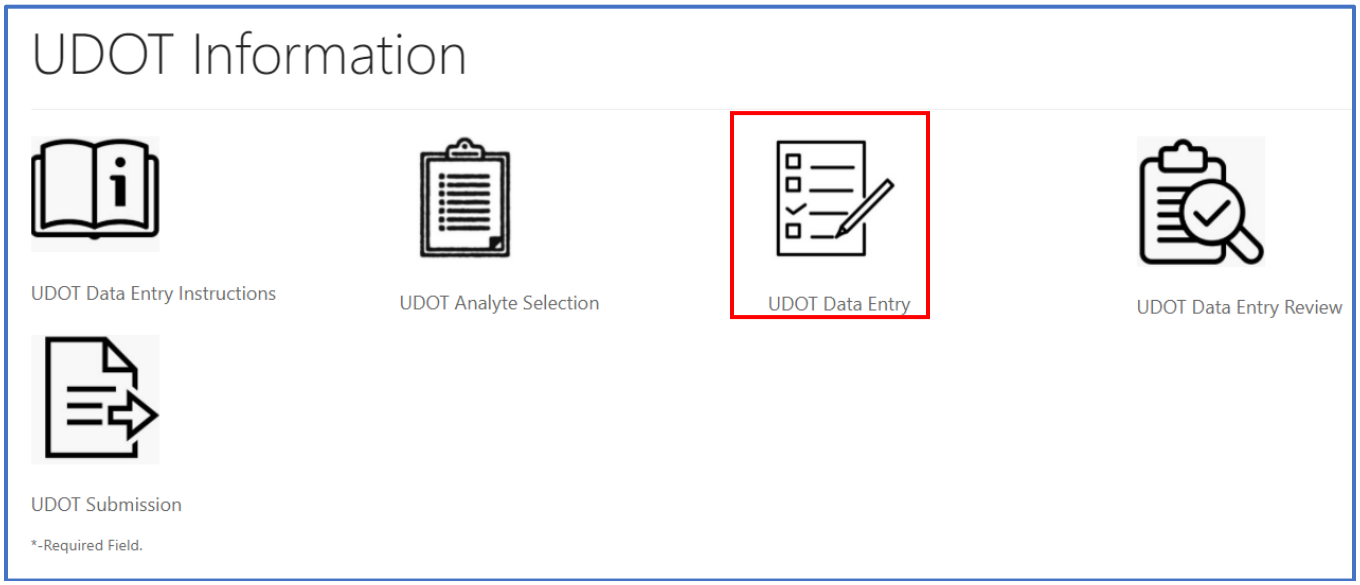


Note: If the **'Save'** button is not selected, data will not be retained.

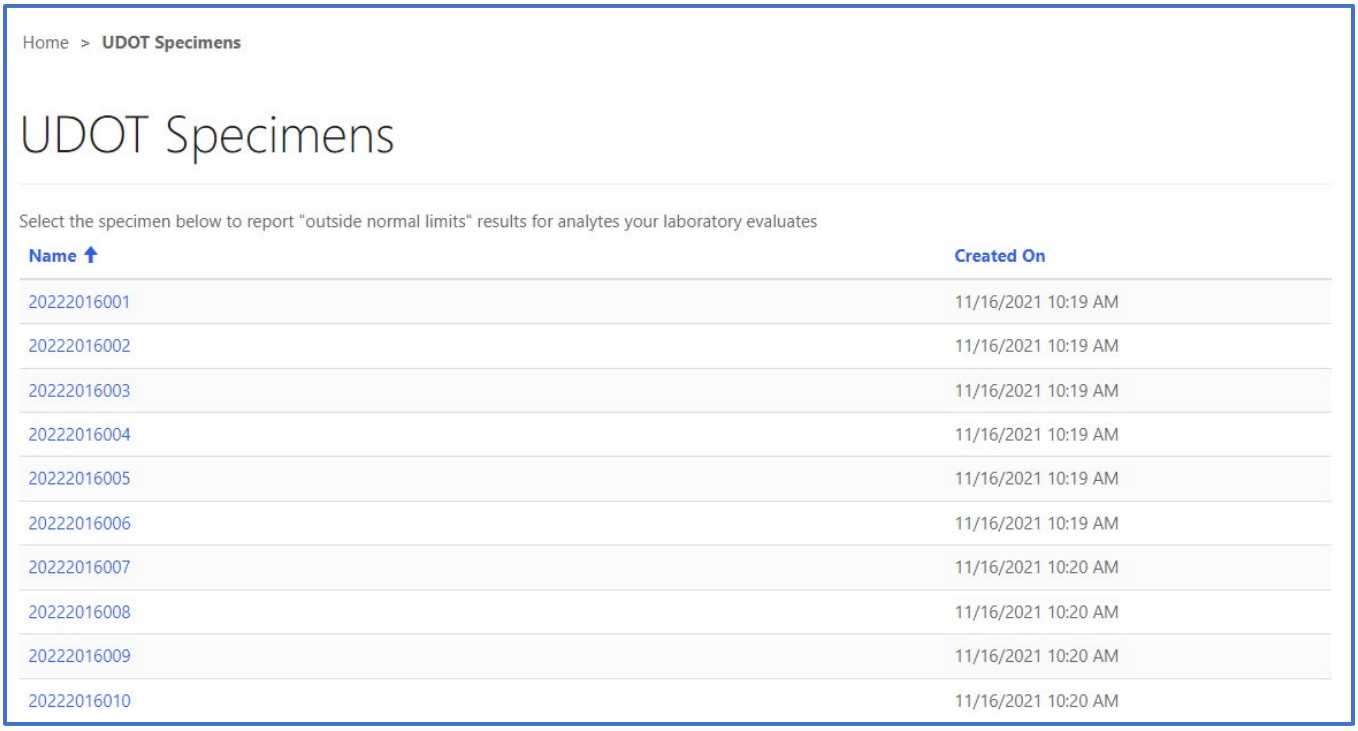
3. UDOT Data Entry for Abnormal Analytes

3.1 UDOT Data Entry

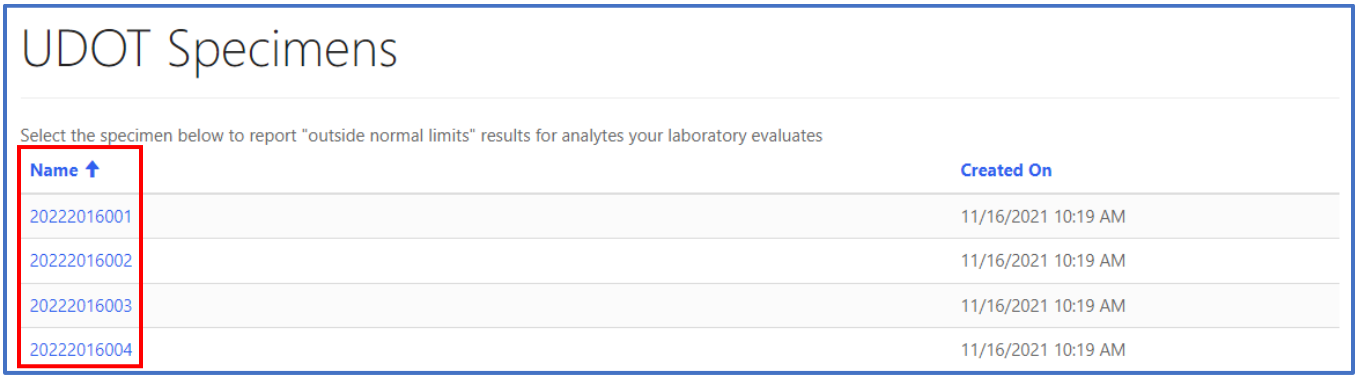
1. To enter data for the UDOT program, click the **'UDOT'** button at the top of the page on the toolbar and click the **'UDOT Data Entry'** option. Only report analytes that are outside of normal limits. More than one analyte may be reported for a specimen.



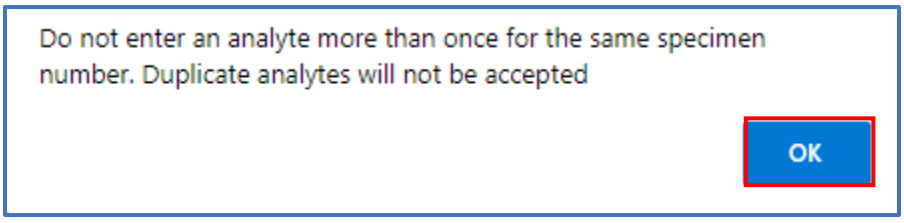
2. The specimen list page will appear.



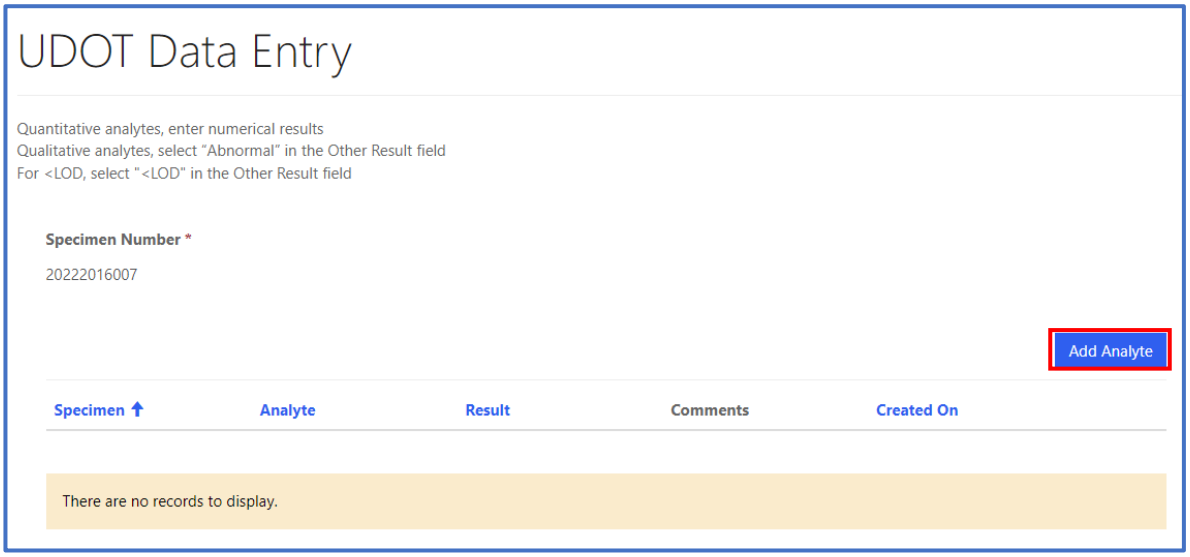
3. To navigate to the specimen data entry page, click the **'Specimen Number'** hyperlink.



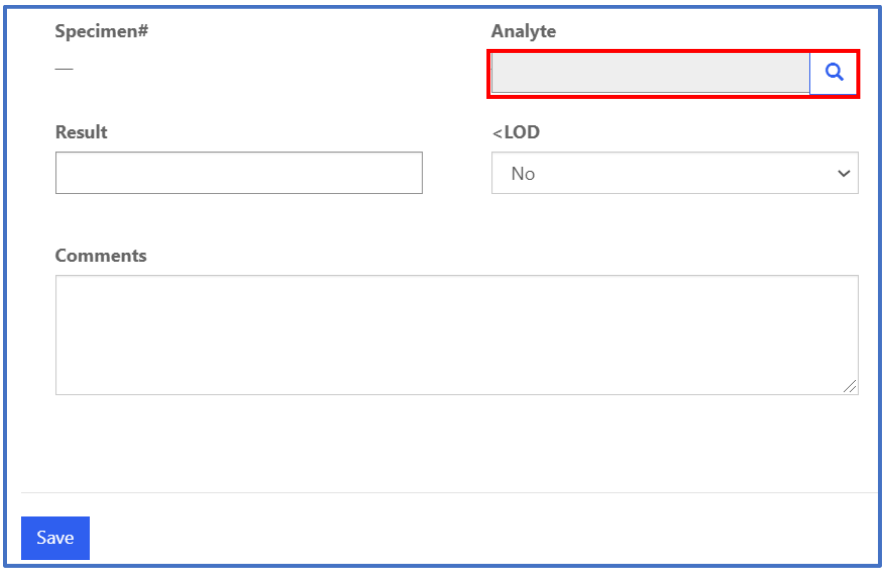
4. A pop-up will appear, click OK. Do not enter an analyte more than once for the same specimen number. Duplicate analytes will not be accepted.



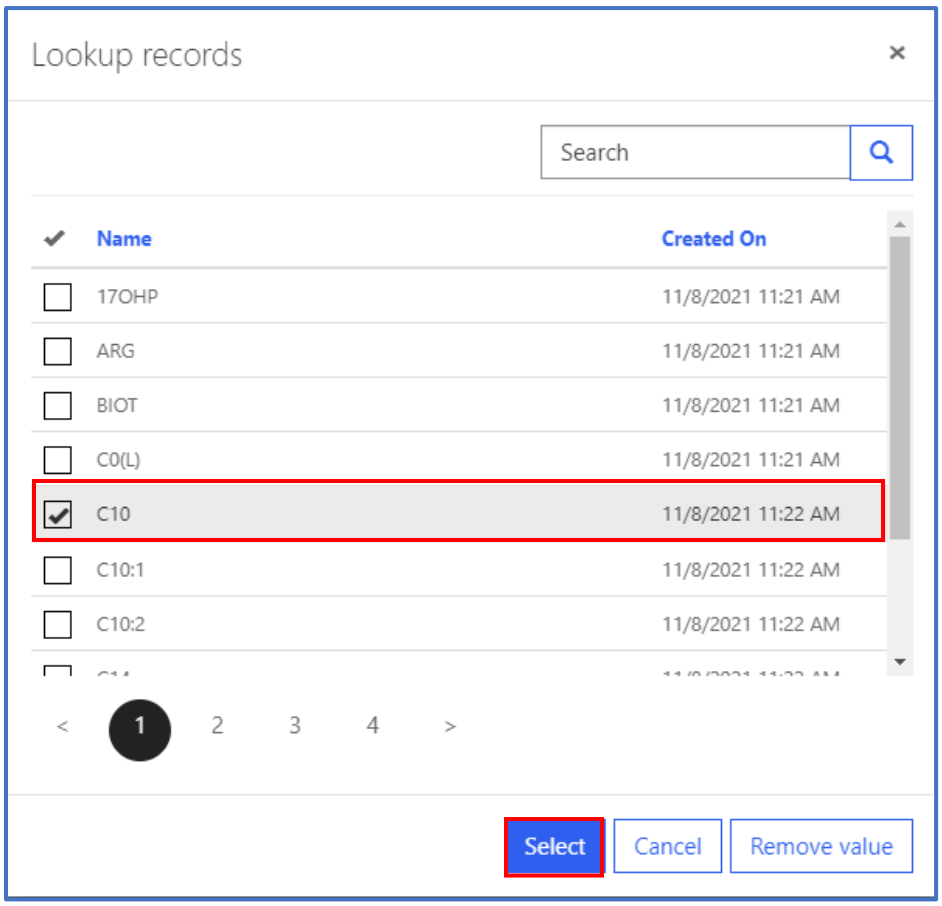
5. Add analytes to each specimen by clicking the **'Add Analyte'** button.



6. A new window will appear to select an analyte. Search for analyte by clicking on the magnifying glass.

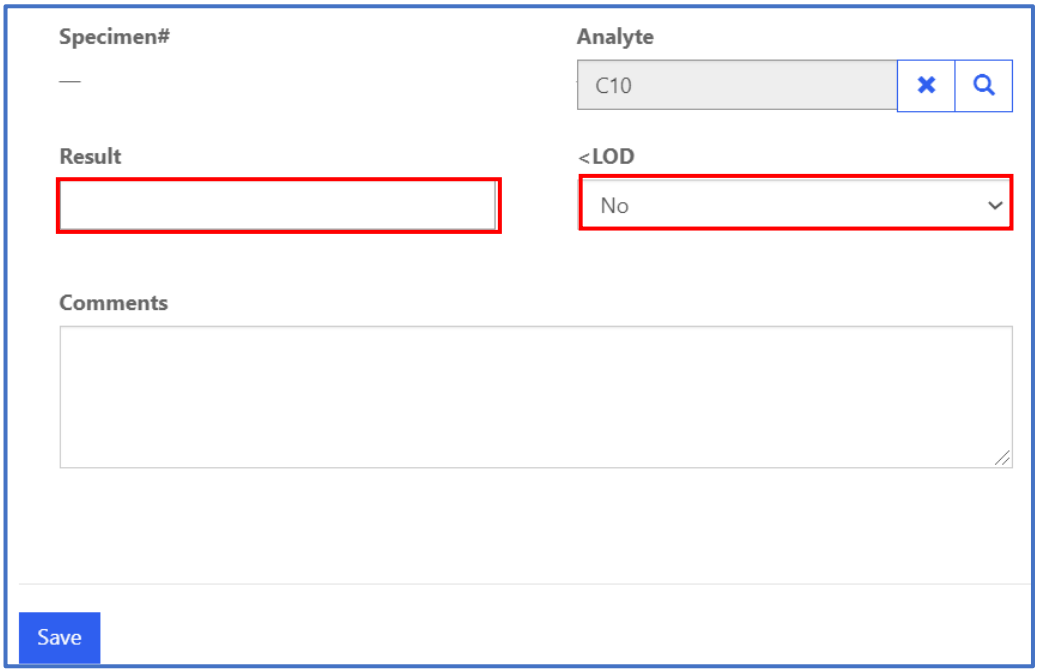


7. Click on the analyte and the row will highlight with a check mark on the left side. Click the **'Select'** button at the bottom of the window to select the analyte. To search for an analyte, click on the spyglass icon and type in the first few characters of the analyte name. Click the spyglass again to find and select the analyte

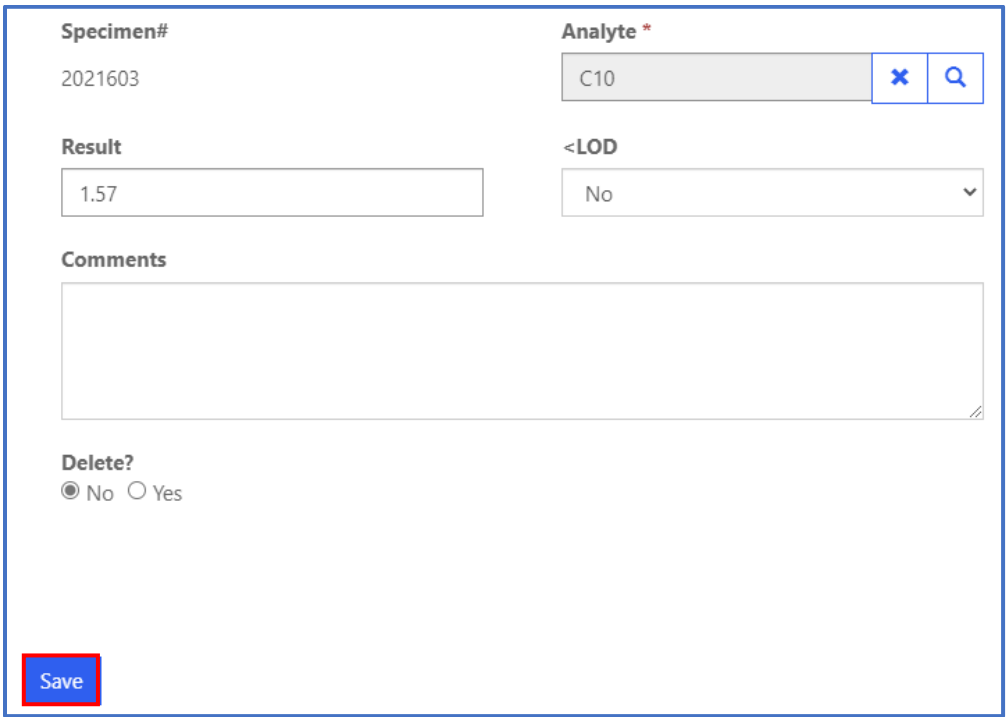


8. The selected analyte will now populate in the **'Analyte'** field. Enter either a quantitative result into the **'Result'** field or use the drop-down field to choose **'<LOD'**. <LOD refers to less than the limit of detection of the assay.

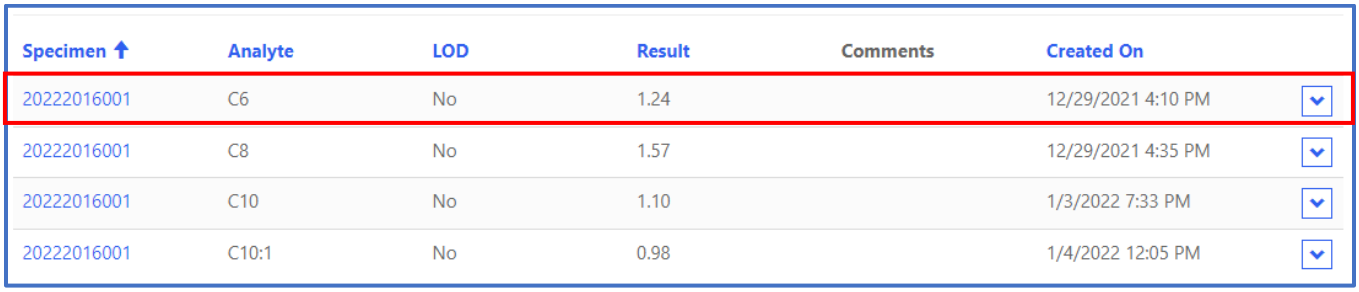
   Note: For qualitative analytes, simply choosing the analyte for the specimen indicates it is abnormal. Comments can be added to the "Comments" box to further describe the qualitative result.



9. Click the **'Save'** button at the bottom of the page to save results.

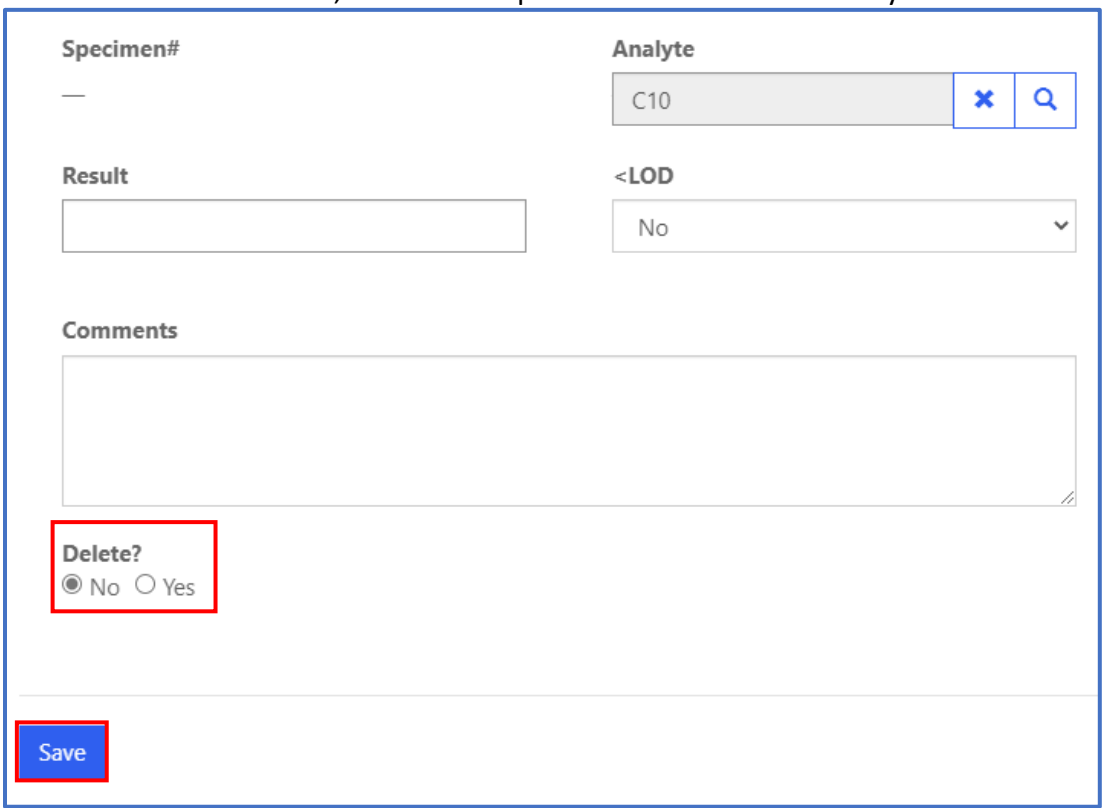


10. When the analyte has been saved, the specimen list page will update with the analyte record and when it was last saved.



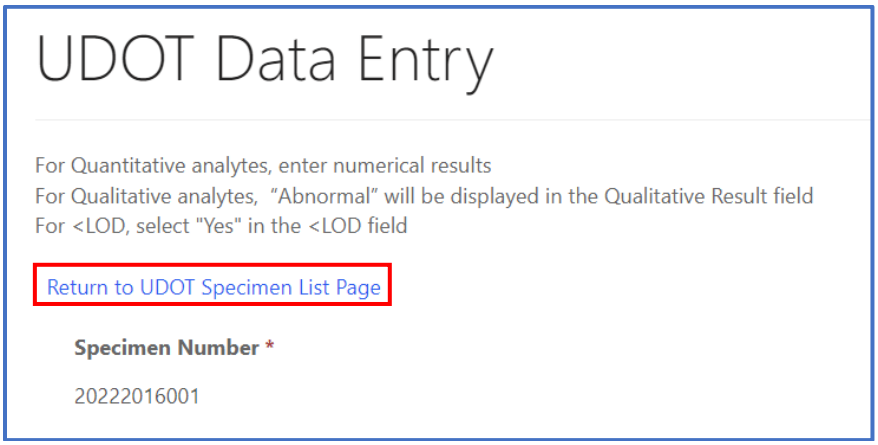
Specimen	Analyte	LOD	Result	Comments	Created On
20222016001	C6	No	1.24		12/29/2021 4:10 PM
20222016001	C8	No	1.57		12/29/2021 4:35 PM
20222016001	C10	No	1.10		1/3/2022 7:33 PM
20222016001	C10:1	No	0.98		1/4/2022 12:05 PM

11. To edit or delete a record, click on the specimen number of the analyte to edit.



Note: Once **'Yes'** is selected for the Delete Option and the **'Save'** button is clicked, the analyte will be permanently deleted from the specimen number.

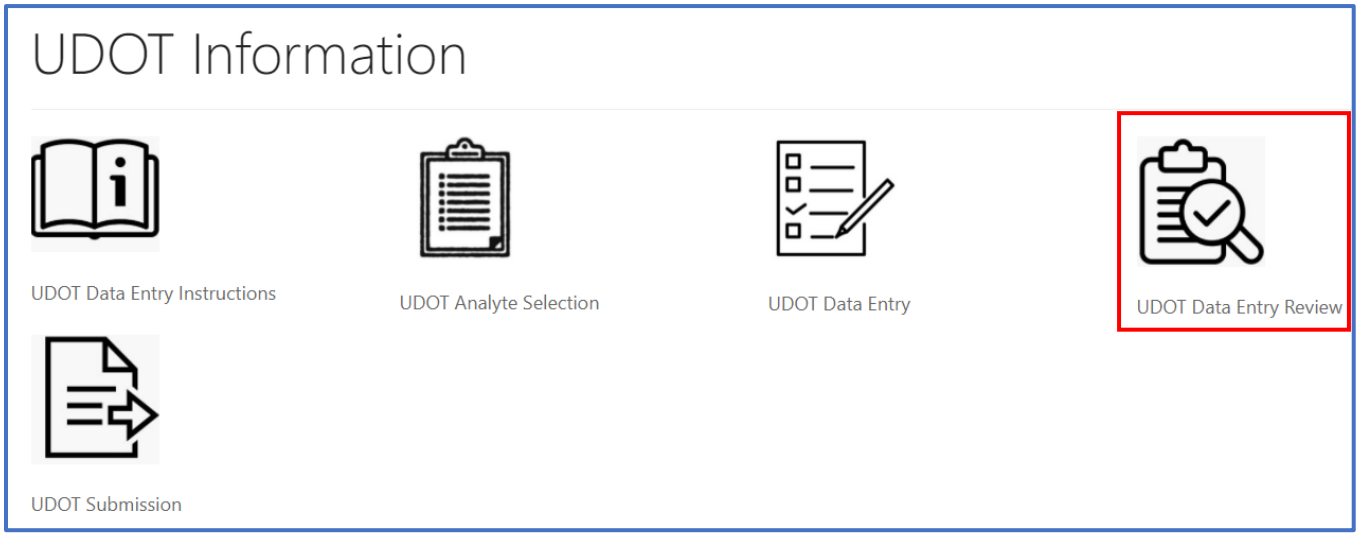
12. To return to the UDOT Specimen List Page to add/edit analytes for other specimens, click on the **'Return to UDOT Specimen List Page'** hyperlink above **'Specimen Number'**.



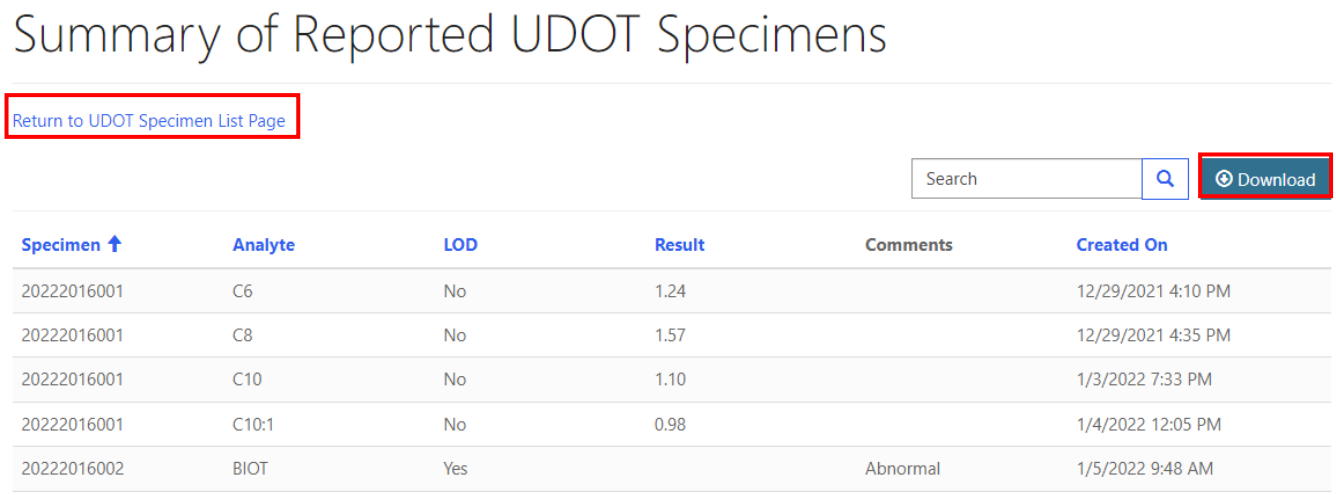
4. UDOT Data Entry Review and Submission

4.1 Data Entry Review

1. Click the **'UDOT'** button at the top of the page on the toolbar and click the **'UDOT Data Entry Review'** option.



2. The **'Summary of Reported UDOT Specimens'** will appear in an un-editable table. The summary can be downloaded to a MS Excel spreadsheet by clicking the **'Download'** button.

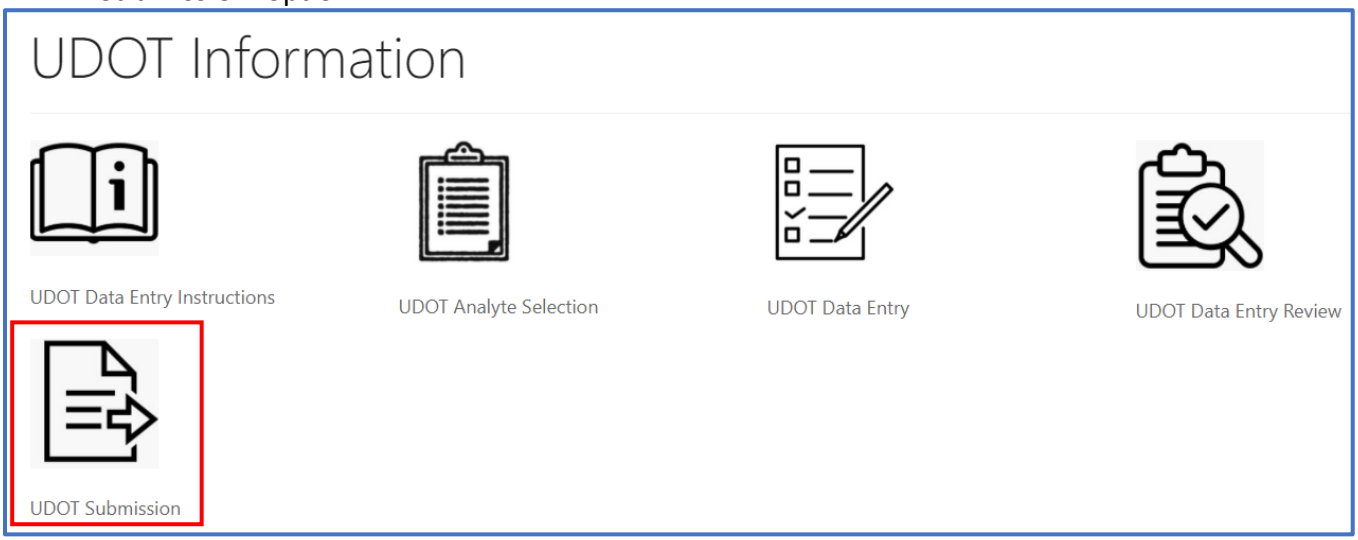


Specimen	Analyte	LOD	Result	Comments	Created On
20222016001	C6	No	1.24		12/29/2021 4:10 PM
20222016001	C8	No	1.57		12/29/2021 4:35 PM
20222016001	C10	No	1.10		1/3/2022 7:33 PM
20222016001	C10:1	No	0.98		1/4/2022 12:05 PM
20222016002	BIOT	Yes		Abnormal	1/5/2022 9:48 AM

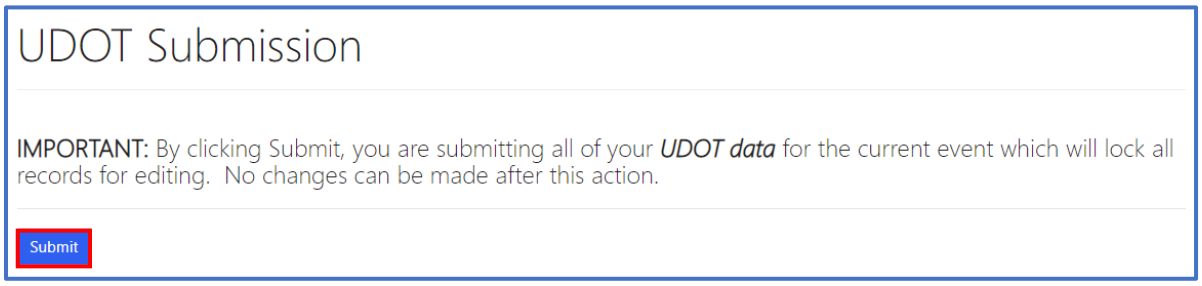
Note: Click on the **'Return to UDOT Specimen List Page'** hyperlink to return to the UDOT Data Entry page to make changes.

4.2 Data Submission

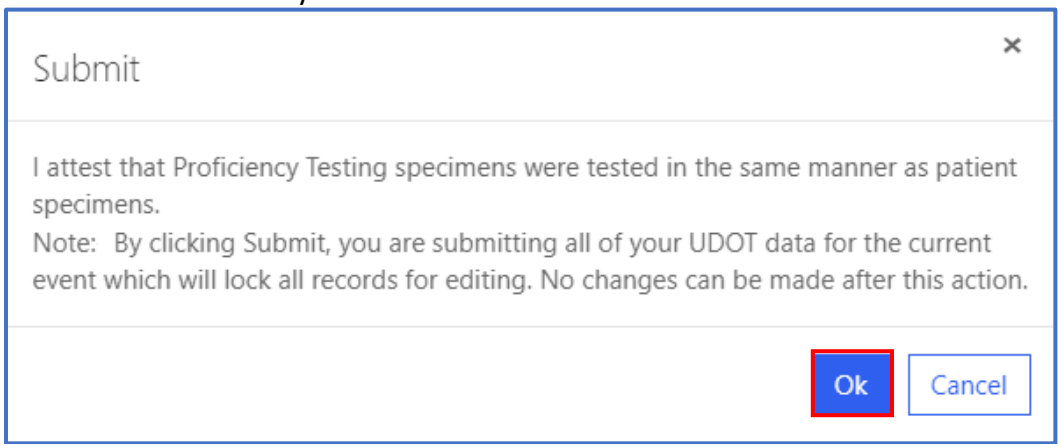
1. Click on the **'UDOT'** button at the top of the page on the toolbar and click on the **'UDOT Submission'** option.



2. To submit data for the program, click on the **'Submit'** button at the bottom of the page.



3. Click the **'Ok'** button on the submission prompt. To capture the attestation statement, take a screenshot and save it for your records.



4. The user will receive an email from NSQAPDMT stating that the UDOT results have been submitted and they are no longer able to edit or submit additional UDOT results for the event.

   Note: After submission, the **UDOT Specimens** page will show 'There are no records to display.'