



# **LABWORKS Enterprise LIMS**

## **Mobile Application Guide**

---

Last update: Feb 9, 2022

Contents

System Requirements ..... 3

Sign In ..... 4

Synchronization ..... 6

Home..... 7

Main Menu..... 8

Settings ..... 9

    General Settings ..... 10

    Authentication Settings ..... 11

    Connection Settings..... 14

    Synchronization Settings ..... 15

    Synchronization Status ..... 16

Create Sample ..... 17

Samples ..... 23

    Sample Filters..... 24

    Sample Search ..... 25

Sample Details ..... 26

Sample Analyses..... 27

Sample Images ..... 28

Sample Attachments ..... 29

Sample Location..... 30

Analysis Details ..... 31

Analysis Legend ..... 33

Sample Legend ..... 34

# System Requirements

LABWORKS Enterprise LIMS Mobile Application allows you to work with the LABWORKS Enterprise LIMS using a device on Android or iOS. The communication between the mobile application and server uses Web Services hosted on a Web Server.

Please make sure that system components follow these requirements:

- IIS Web Server version: 10.0 or above.
- LABWORKS Enterprise LIMS web installer version: 7.1.0.176.
- LABWORKS Enterprise LIMS desktop application version: 7.1.0.48.
- Mobile device (phone or tablet):
  - On Android of version: 6 or above. (Recommended version: 9)
  - On iOS of version: 12 or above
  - On Windows 10 (Created for Surface as a reference device)

The following information is required in order to access LABWORKS Enterprise LIMS:

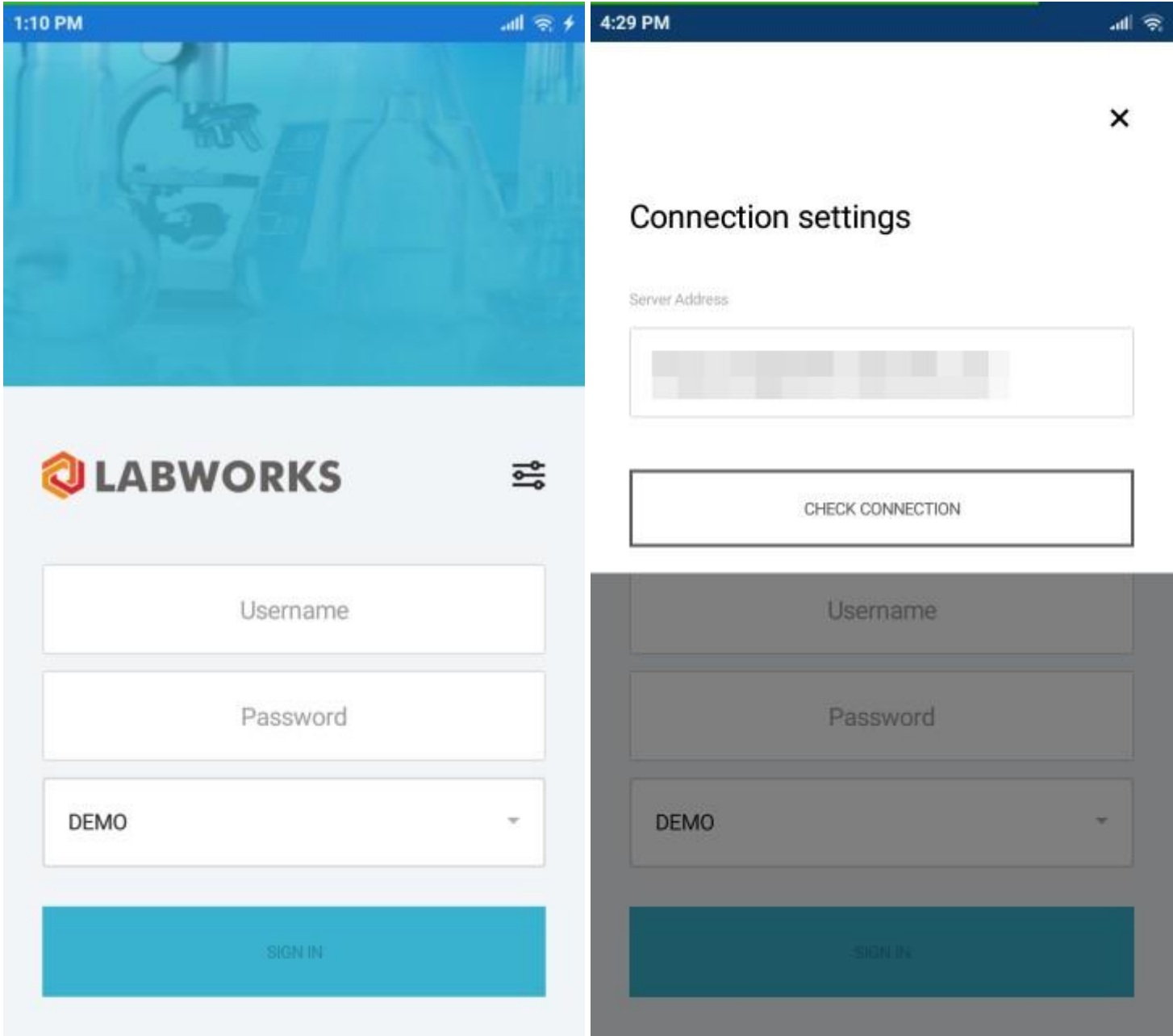
1. URL-address of the LABWORKS Enterprise LIMS server
2. Database name, when there is more than one database available.
3. Login/password combination of your profile in the selected database.

# Sign In

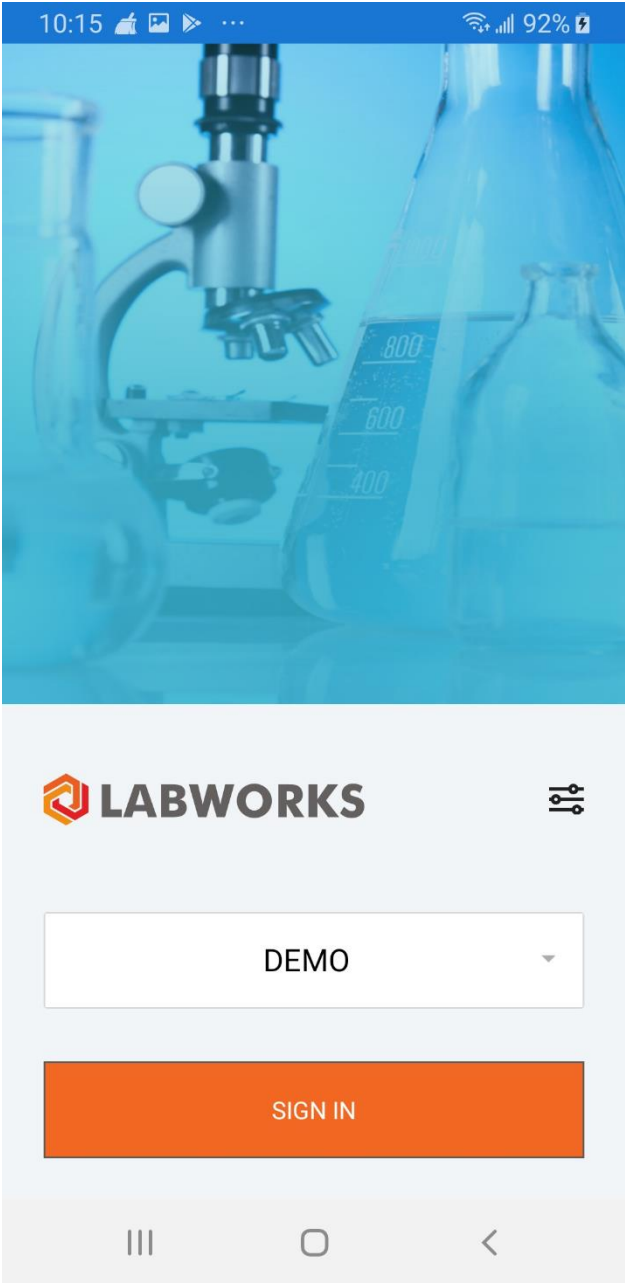
The landing screen of the mobile application is the **Sign In** screen.

You can access the connection settings by tapping the button on the right-hand side. Make sure that the Server Address is correct by tapping the "**Check Connection**" button.

Once you fill up the form and click the "**Sign In**" button, the system will validate provided credentials and navigate you to the [Synchronization](#) screen.



The Collection Application supports single sign-on (SSO) authentication based on the OAuth2.0 standard. This allows you to log in through third-party services. If SSO is defined for the selected database, the **Sign in** button redirects you to the external OAuth page. You will then be required to enter a PIN so you can secure the app when using it offline.



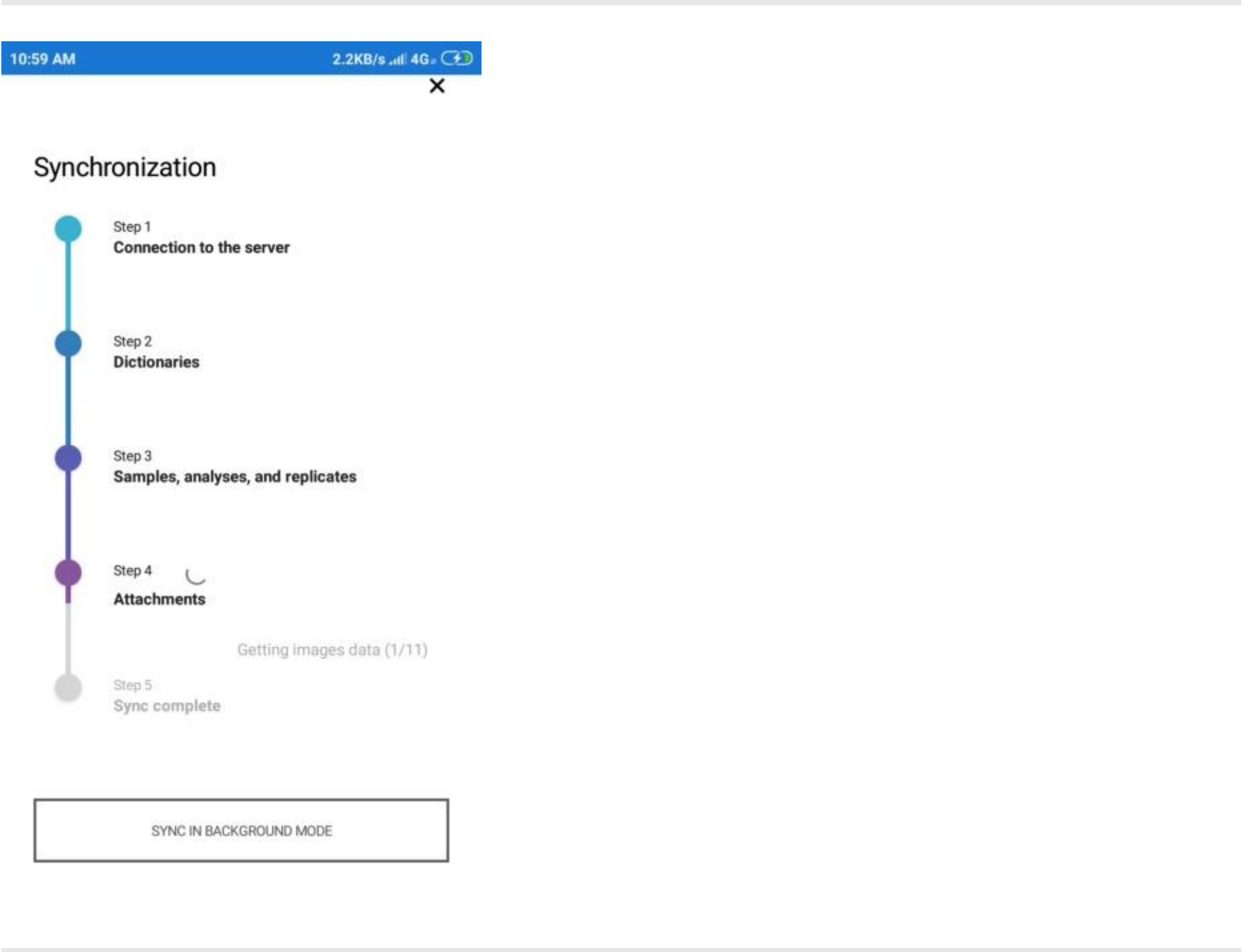
If a single database is available for the server, the system will automatically redirect you to the third-party service, bypassing the Collection Application authorization screen.

# Synchronization

The mobile application has a synchronization mechanism that can be configured on the [Synchronization Settings](#) screen.

The application will always start the synchronization upon the first sign in.

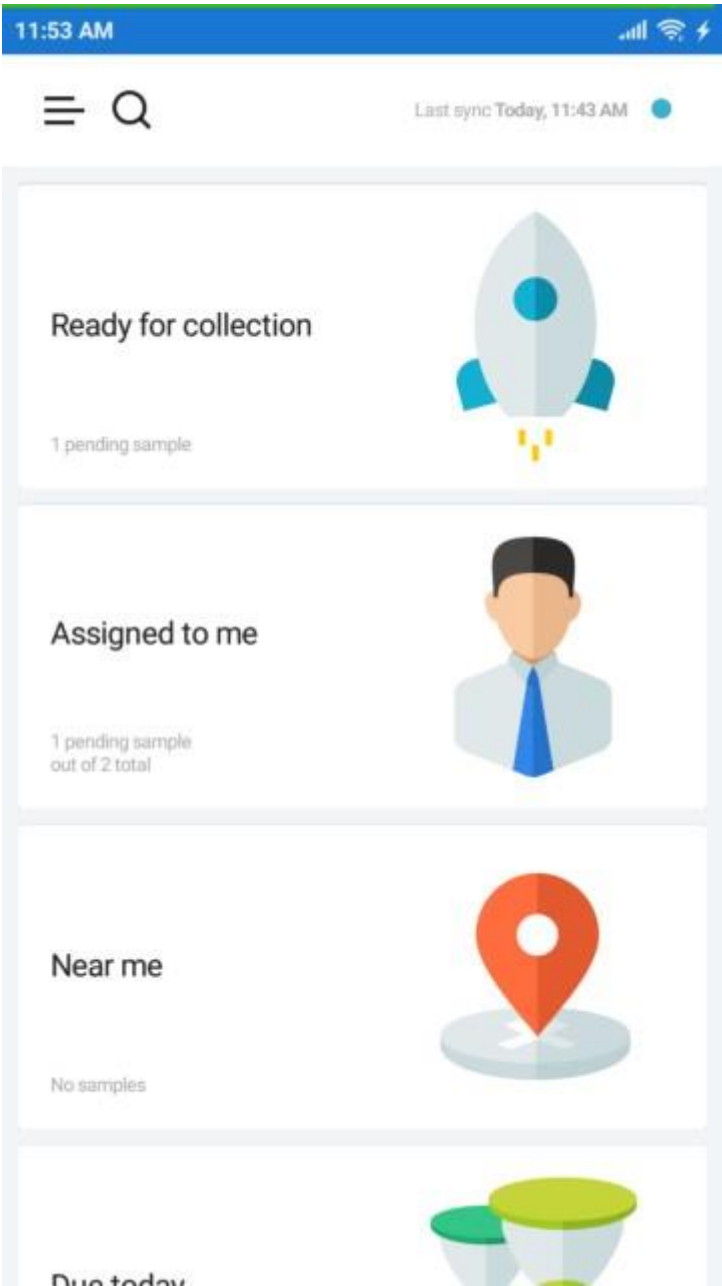
You can hide the synchronization progress by tapping the "**Sync in Background Mode**" button, or the "**Close**" button at the top.



# Home

The main screen of the mobile application is the **Home** screen.

The screen contains a set of pre-configured tiles that navigate to the [Samples](#) screen with corresponding filters applied.



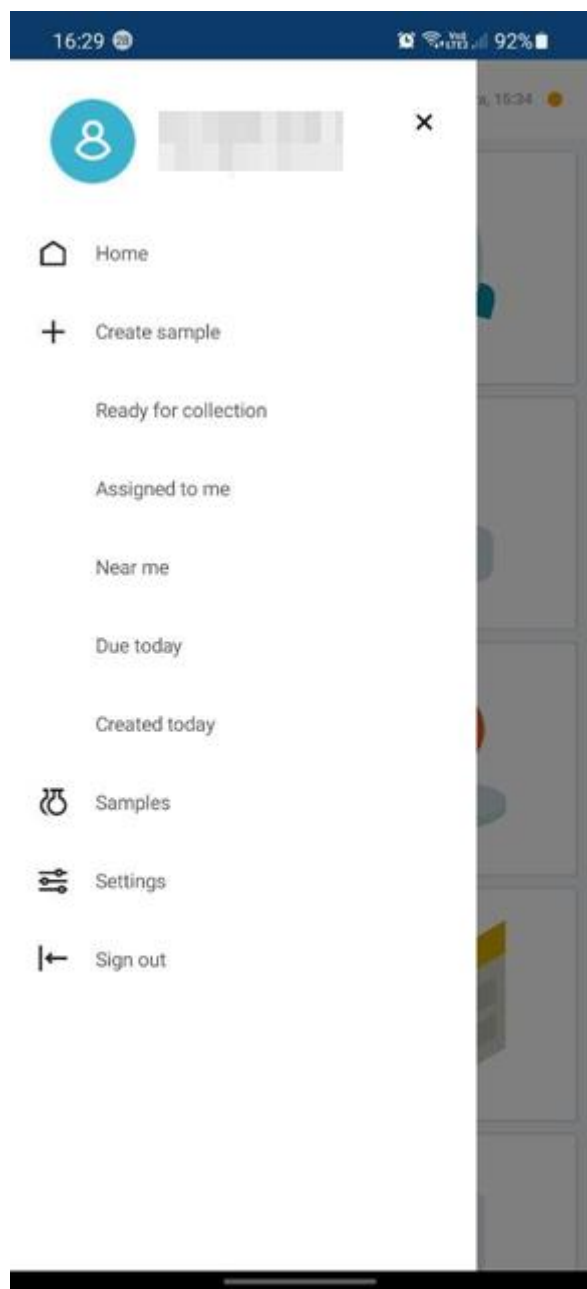
# Main Menu

The navigation through the application is performed through the **Main Menu** available by tapping the "**Menu**" button on the top-left of the screen.

With the menu you can navigate to the [Samples](#) screen with preset filters, or without the filters applied.

The application settings are available under the "**Settings**" option along with the various information about the application.

To sign out from the application, tap the "**Sign out**" option.

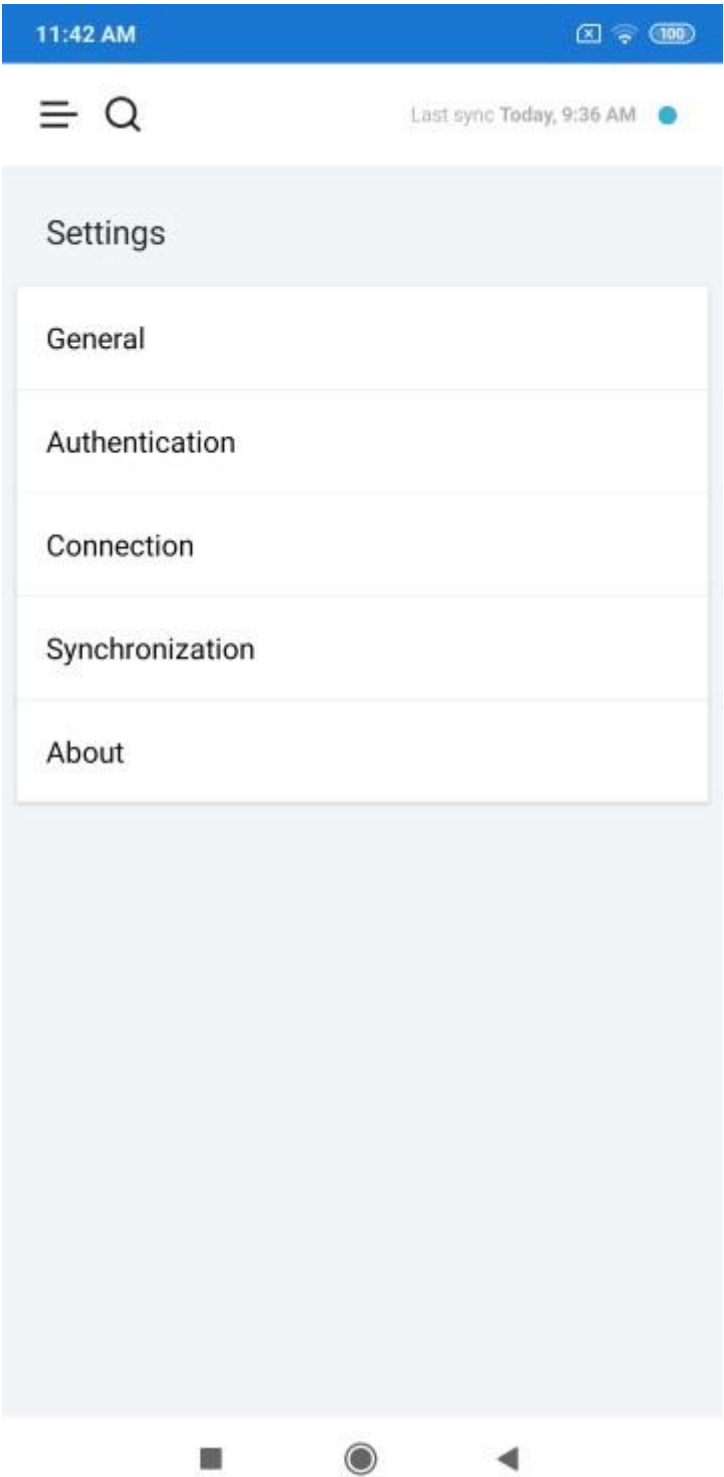




# Settings

On the **Settings** screen you can customize the way the application works.

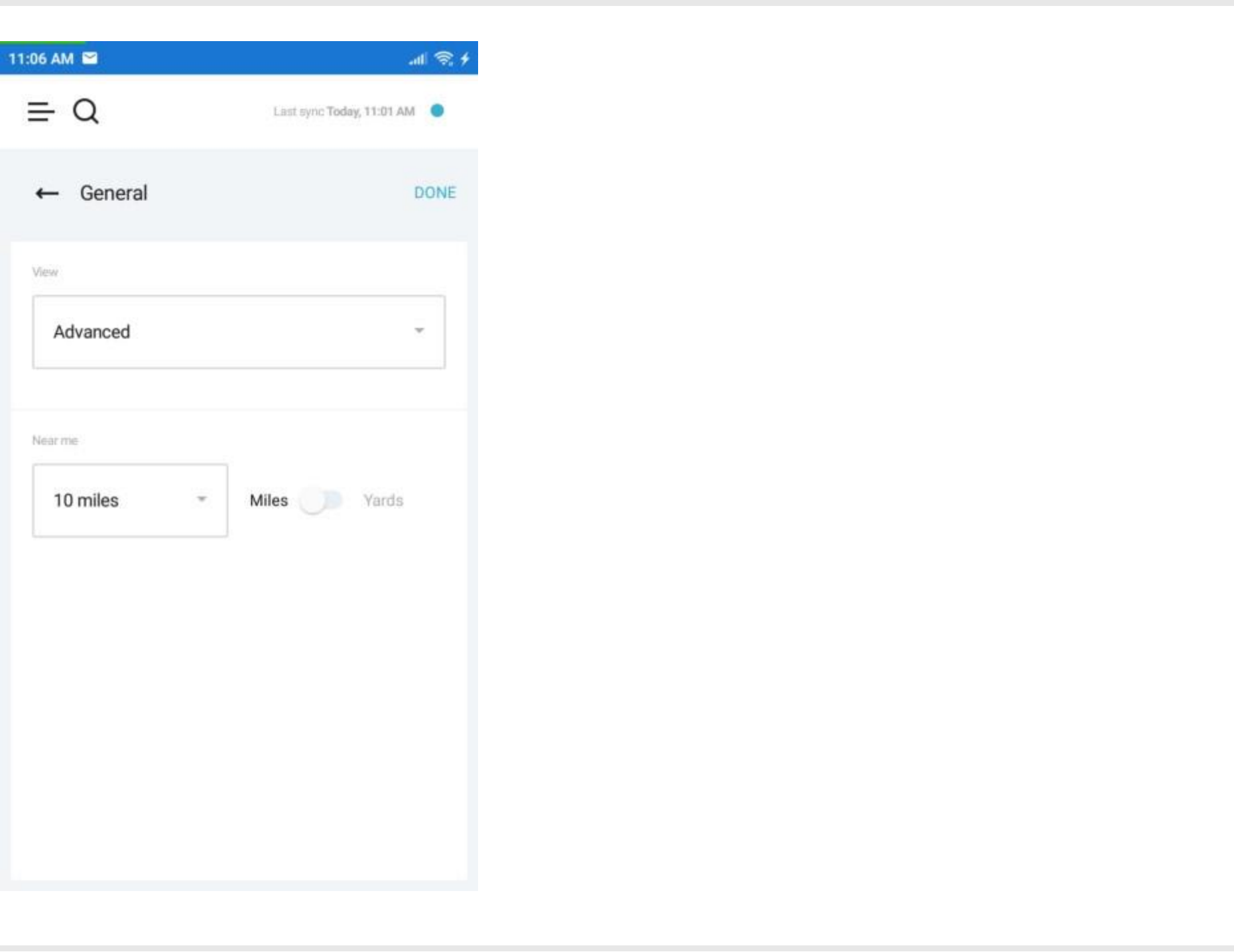
The authentication settings are protected with your account password/PIN.



# General Settings

General settings screen contains the **View** selection menu that determines the set of sample and analysis fields displayed in the mobile application, whether the sample creation is allowed, which locations and analyses are available for sample creation.

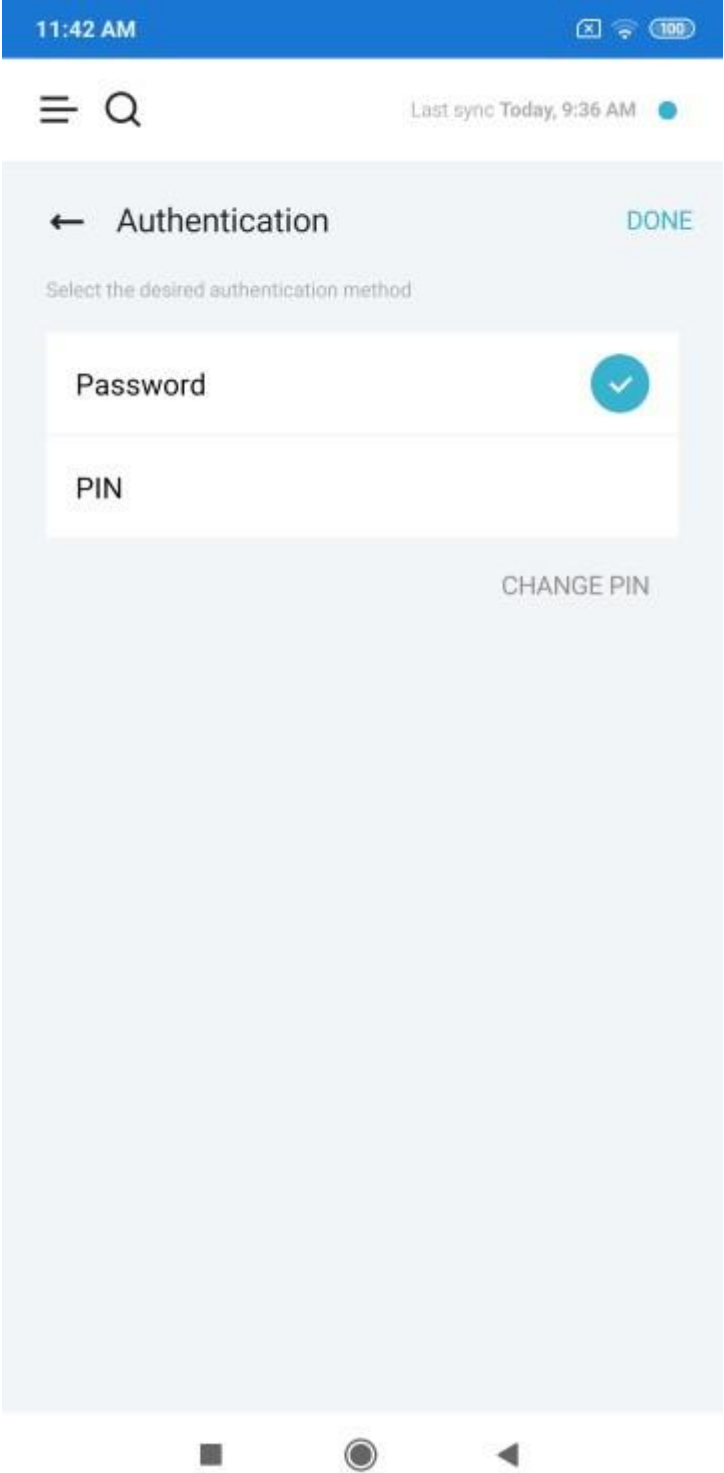
The **Near me** selection menu is used configure the maximum range between the mobile device and the sample location to appear in the list of samples when the "**Near me**" filter is applied.



# Authentication Settings

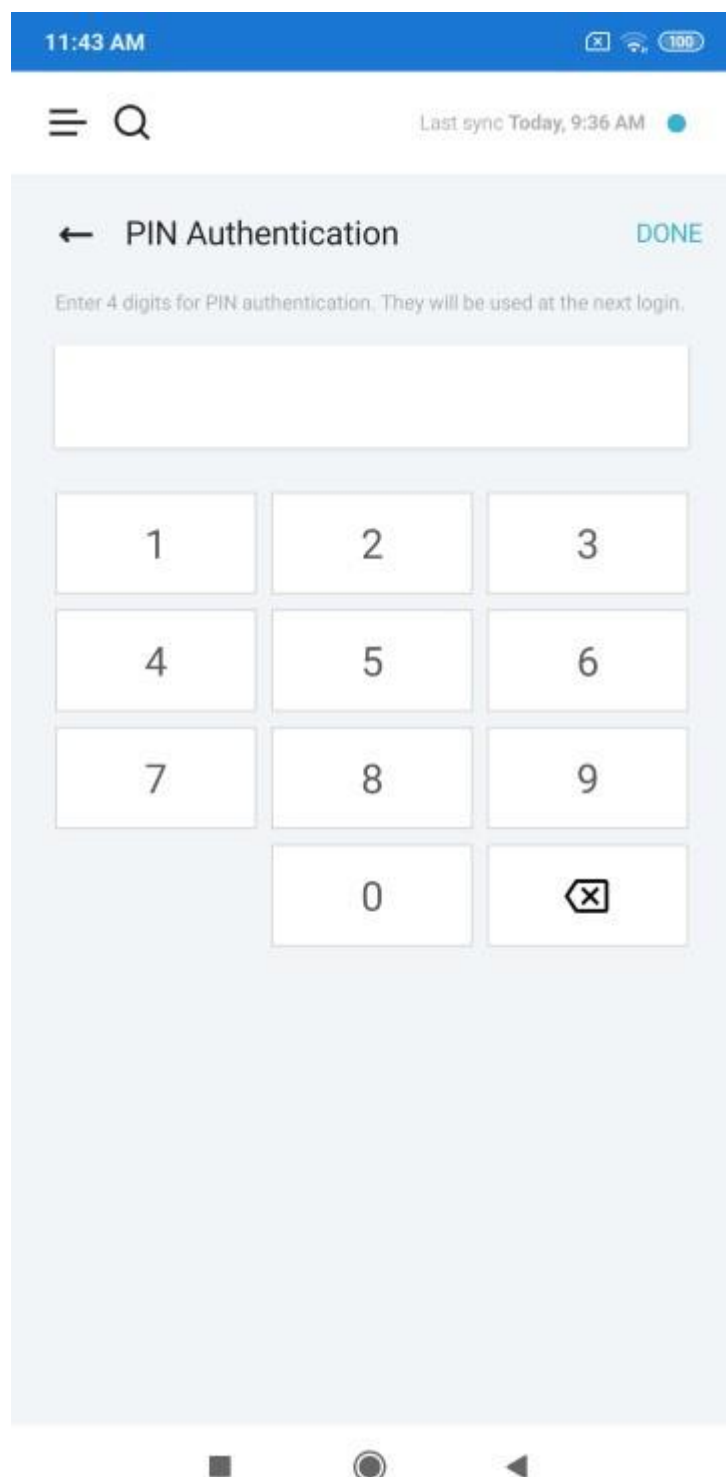
By default, you can sign into the system with a password. But on the **Authentication Settings** screen, you can change the default method to PIN.

Select the **"PIN"** option.



You will be navigated to the **PIN Authentication** screen with a dial pad for the PIN.

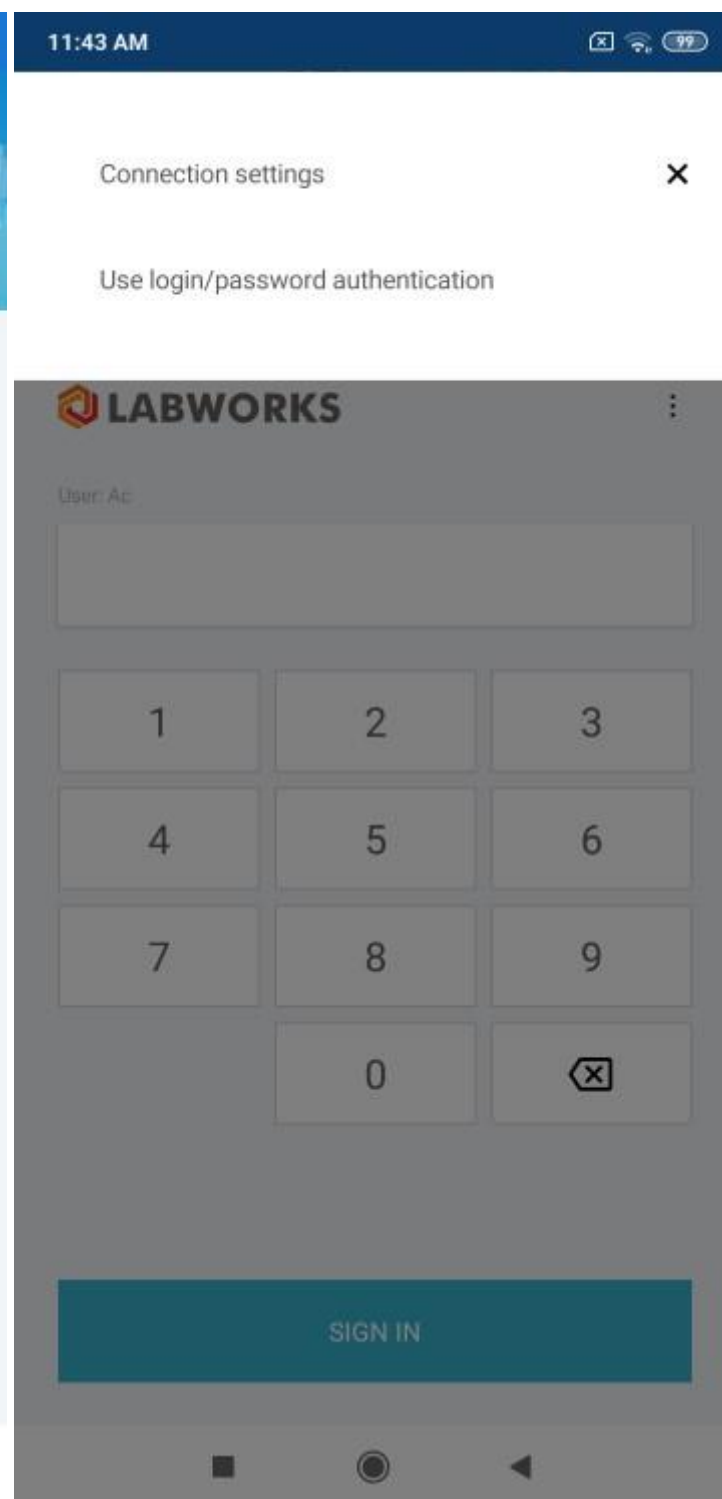
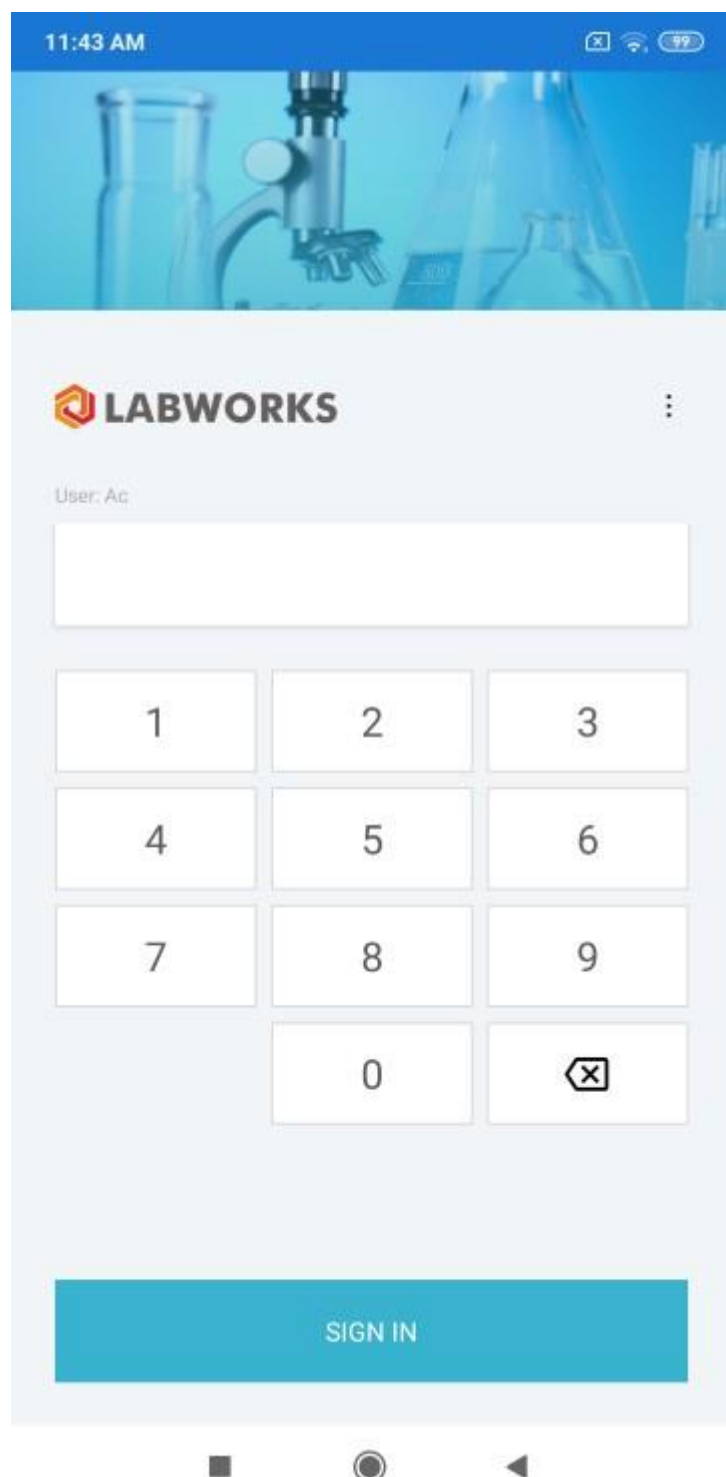
The PIN should contain 4 digits.



---

Once you entered the PIN and saved the setting by tapping the "**DONE**" button, the PIN becomes your default authentication method.

---



In case if you forgot your PIN, you can authenticate with the password by tapping the menu button on the top-right of the **Sign In** screen and selecting the "**Use login/password authentication**" option.

If OAuth authentication is enabled, you can only use PIN to sign in in offline mode. Online authentication must be performed on the third-party service.

# Connection Settings

You can change the address of the synchronization server under the connection settings.

4:58 PM

☰

🔍

Last sync Today, 4:38 PM

←

Connection

DONE

Server Address

Database

DEMO

CHECK CONNECTION

# Synchronization Settings

The synchronization with the server can be performed manually, automatically, or both.

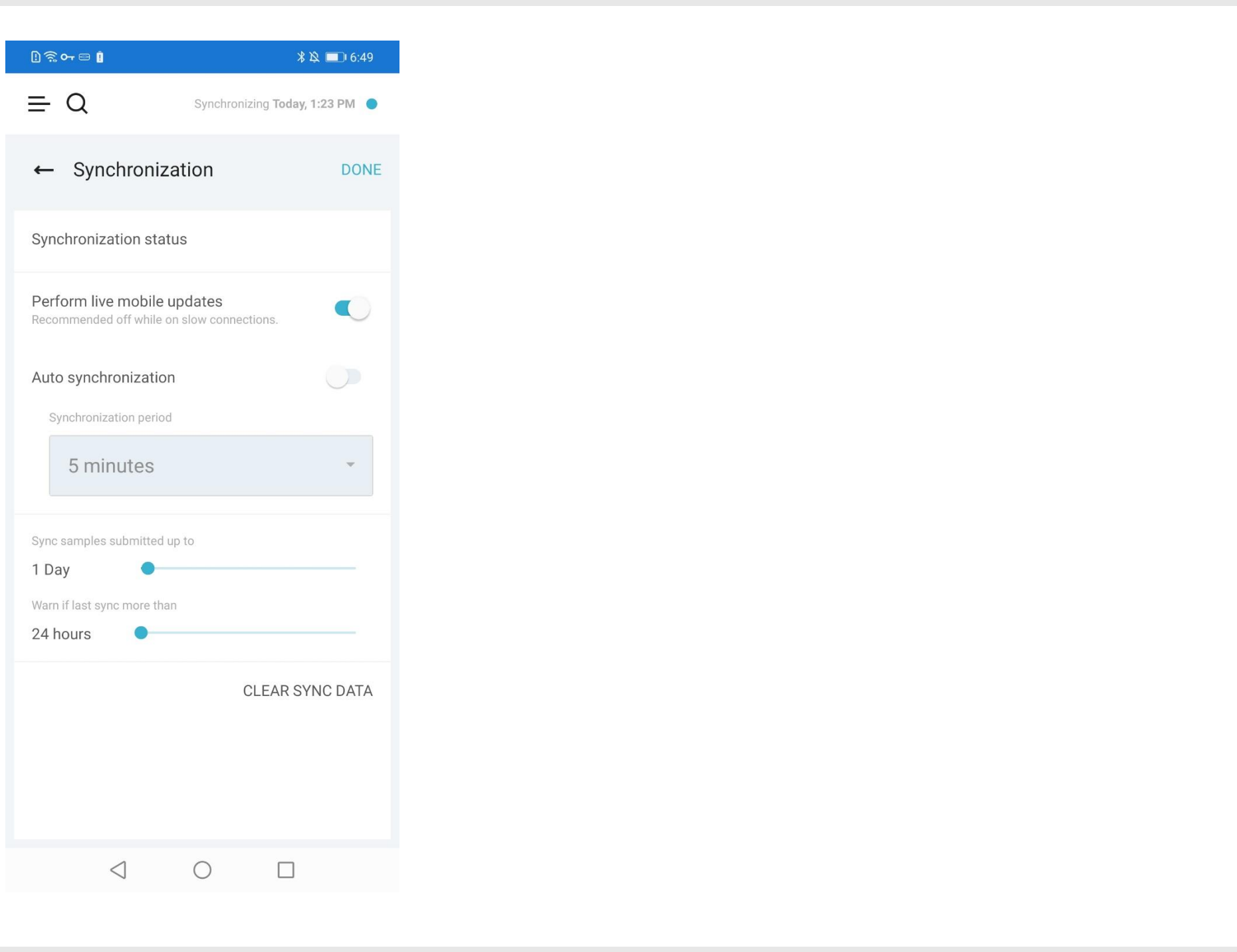
If the “**Perform live mobile updates**” setting is On, then the application will send the data to the server immediately when the user makes a change and taps Done. If it is Off, then when a user makes a change and taps Done, the changes will be saved only to the mobile database and there will be no server requests until auto-sync is triggered or the user forces the application to sync manually.

When “**Auto synchronization**” setting is enabled, the application will perform the synchronization automatically with intervals specified in the “**Synchronization period**” field.

You can limit the synchronization by specifying the maximum age of the samples with the slider “**Sync samples submitted up to**”.

The slider “**Warn if last sync more than**” sets the period after the last synchronization, when the synchronization indicator displayed in the top of every screen turns orange.

You can also clear the application data by tapping the “**Clear sync data**” button.



# Synchronization Status

The **Synchronization Status** screen can be accessed either through the corresponding button in the settings, or by tapping the synchronization indicator on the top of every screen.

You can see the progress of the synchronization progress here or enforce the synchronization by tapping the "**Sync**" button.





# Create Sample

You can create a sample ad-hoc using the Collection Application. The ability to create samples is determined by the **"View"** field option in the [application settings](#).

The **Create sample** main menu item launches a special wizard for sample creation. Only one sample can be logged at a time.

The creation process consists of 4 steps.

The first step is to select a location code. The set of displayed location codes is determined by the **"View"** field option.

16:27 28

Vod LTE2

92%

Step 1

Step 2

Step 3

Step 4

X Location code

001_AP	(Pond A Influent San Joaquin Marsh)
001_G	(Pond A Influent San Joaquin Marsh)
001_SED	(Pond A Influent San Joaquin Marsh (Sediment))
002	(Pond Effluent - Pump Station San Joaquin Marsh)
002_G	(Pond Effluent - Pump Station San Joaquin Marsh)
002_SED	(Pond Effluent - Pump Station San Joaquin Marsh (Sediment))
10	(Inf from Toscana/Park Place)
101	(Tustin Ranch Road)
102	(Roosevelt E/Q Yale)
103	(Sawleaf and Poplar)
103RPT-D	(Hydrant 117 on Sawleaf (103 Downstream))
103RPT-O	(Sawleaf and Poplar (REPEAT))
103RPT-U	(Hydrant 149 on Almond (103 Upstream))

NEXT

The second step is to specify the sample details. The set of displayed sample properties is determined by the **"View"** field.

16:26 29

Step 1Step 2Step 3Step 4

← Sample fields

Department

CUSTOMER SERVICE

Submitted date

22.04.202116:26

Collected date

22.04.202116:26

A test

Agency

B test

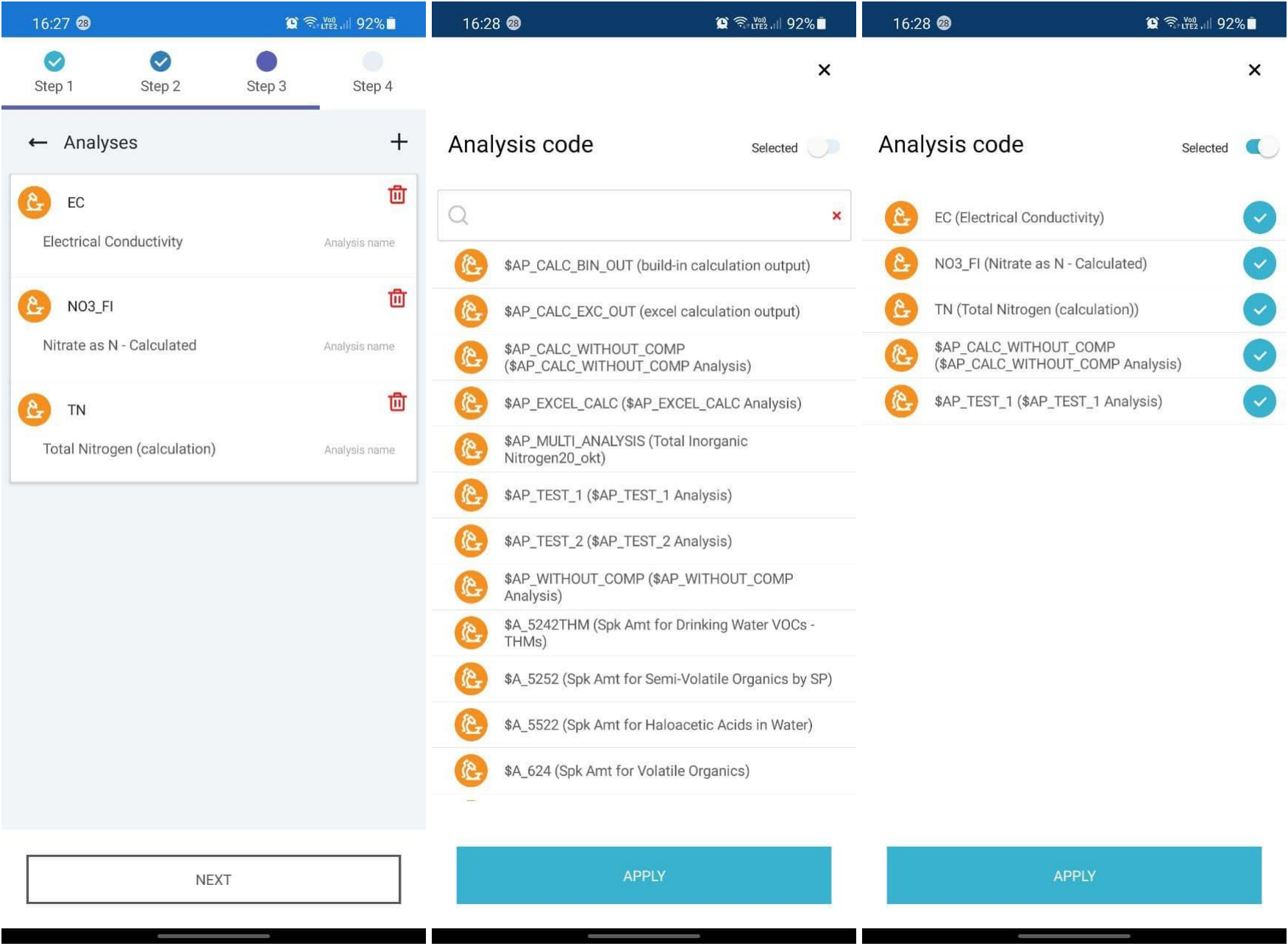
Purchase order number

NEXT

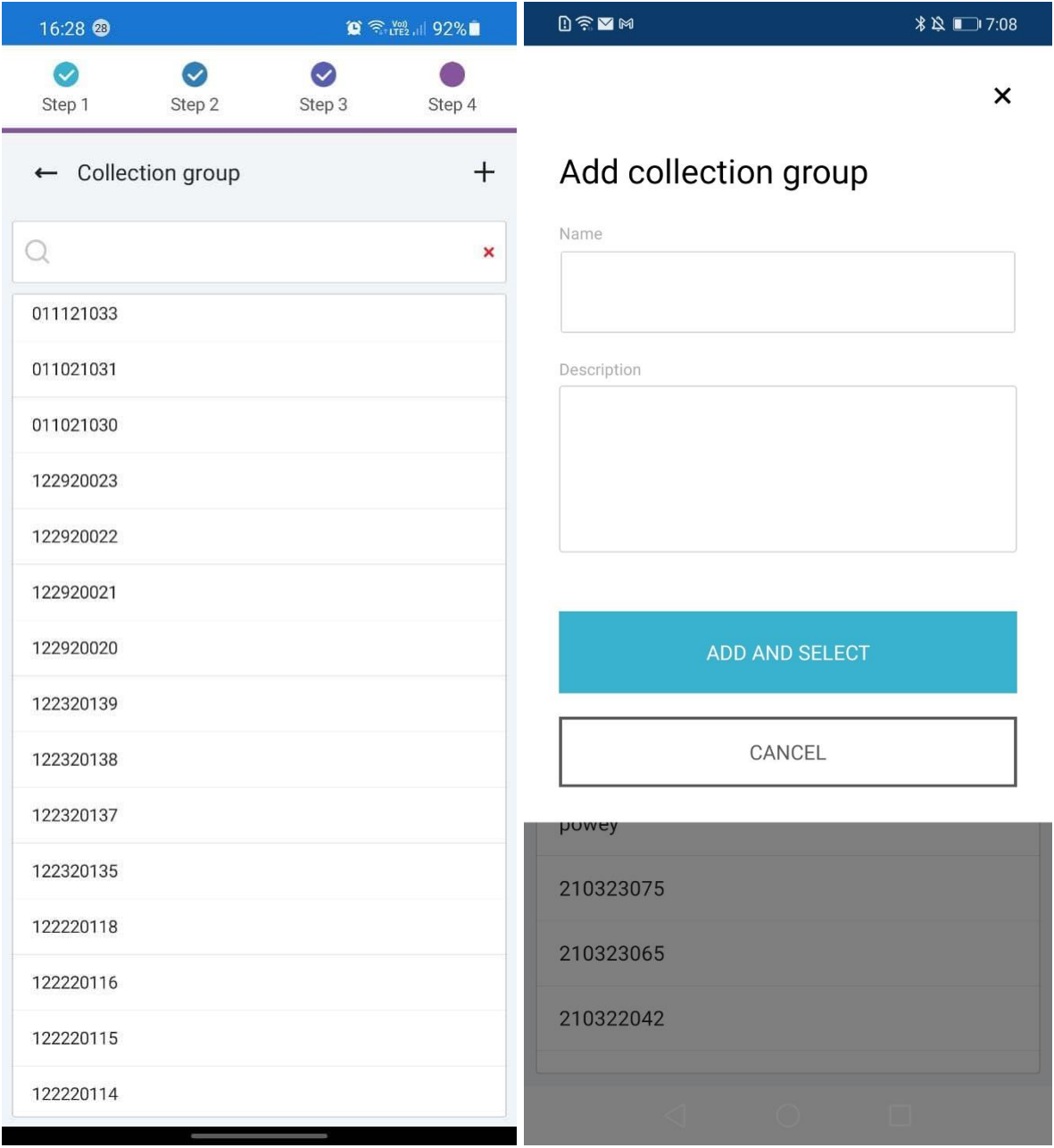
The third step is to specify the set of analyses that will be assigned with the new sample after the creation.

Initially, you will see the default set of analyses defined for the selected location code. If the “**View**” field option allows you to change the set, you can delete analyses from the list and add new ones.

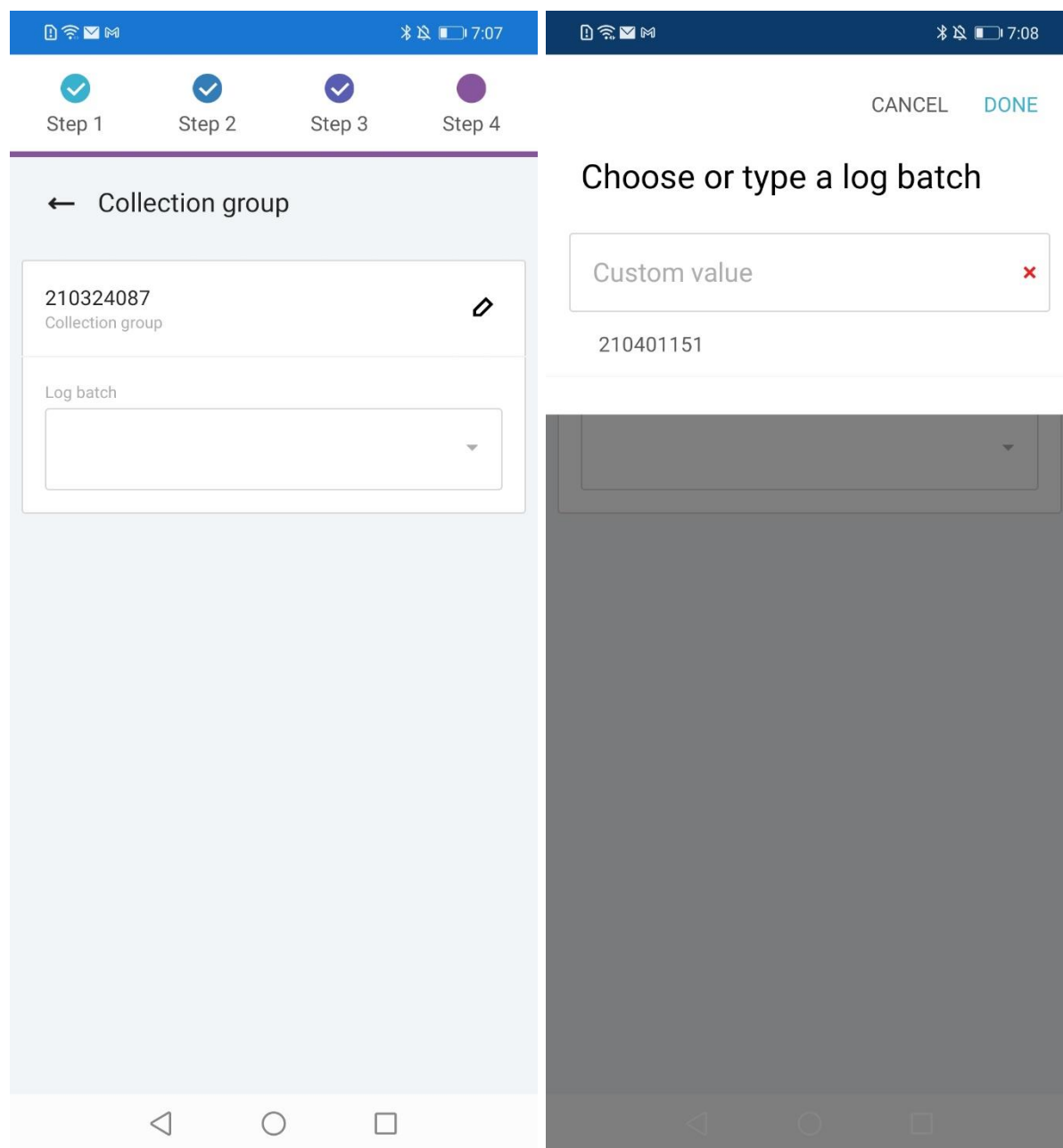
The set of available analysis codes is determined by the "**View**" field option.



The fourth step is to select a collection group where the sample should be added. You can select an existed collection group or add a new one.



As soon as the collection group is selected, you need to specify a log batch for the sample. It may be an existed log batch from the list or you can type a custom log batch value.



---

Right after, you specified a log batch, the Create Sample button becomes available. Click on it to create the sample.

After the sample is created, you can view its details by clicking the “**View created sample**” button or start the creation process of another sample clicking by the “**Create new sample**” button.

---

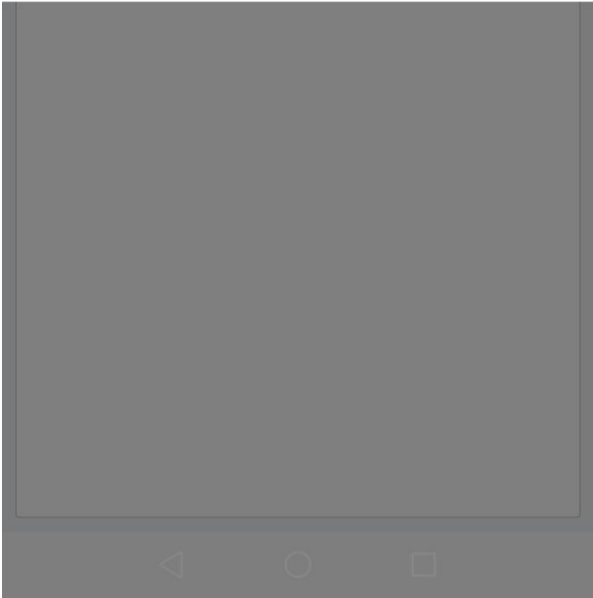


Sample has been successfully created.

You can view the newly created sample or start creating a new sample.

VIEW CREATED SAMPLE

CREATE NEW SAMPLE

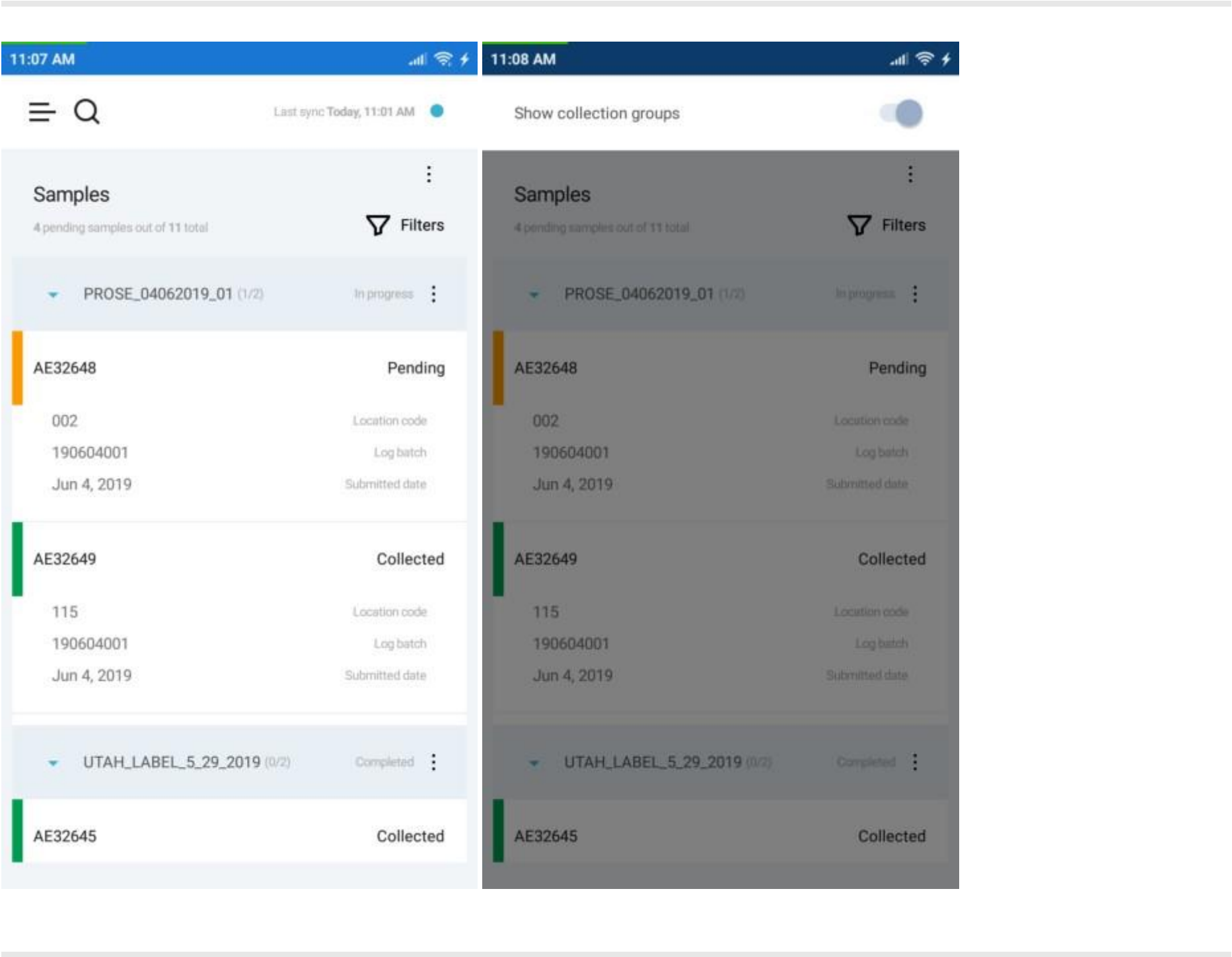


At each step, you can come back to change something if you need to.

# Samples

**Samples** screen is an area of the system where users can access detailed information about the samples.

All available samples can be displayed in a flat list or grouped into collections. The grouping by collection can be enabled under the menu button at the top-right of the screen.



When you click on the collections, it expands revealing the list of samples in that collection.

You can view the details about the sample, its analyses and results by clicking on a particular sample.

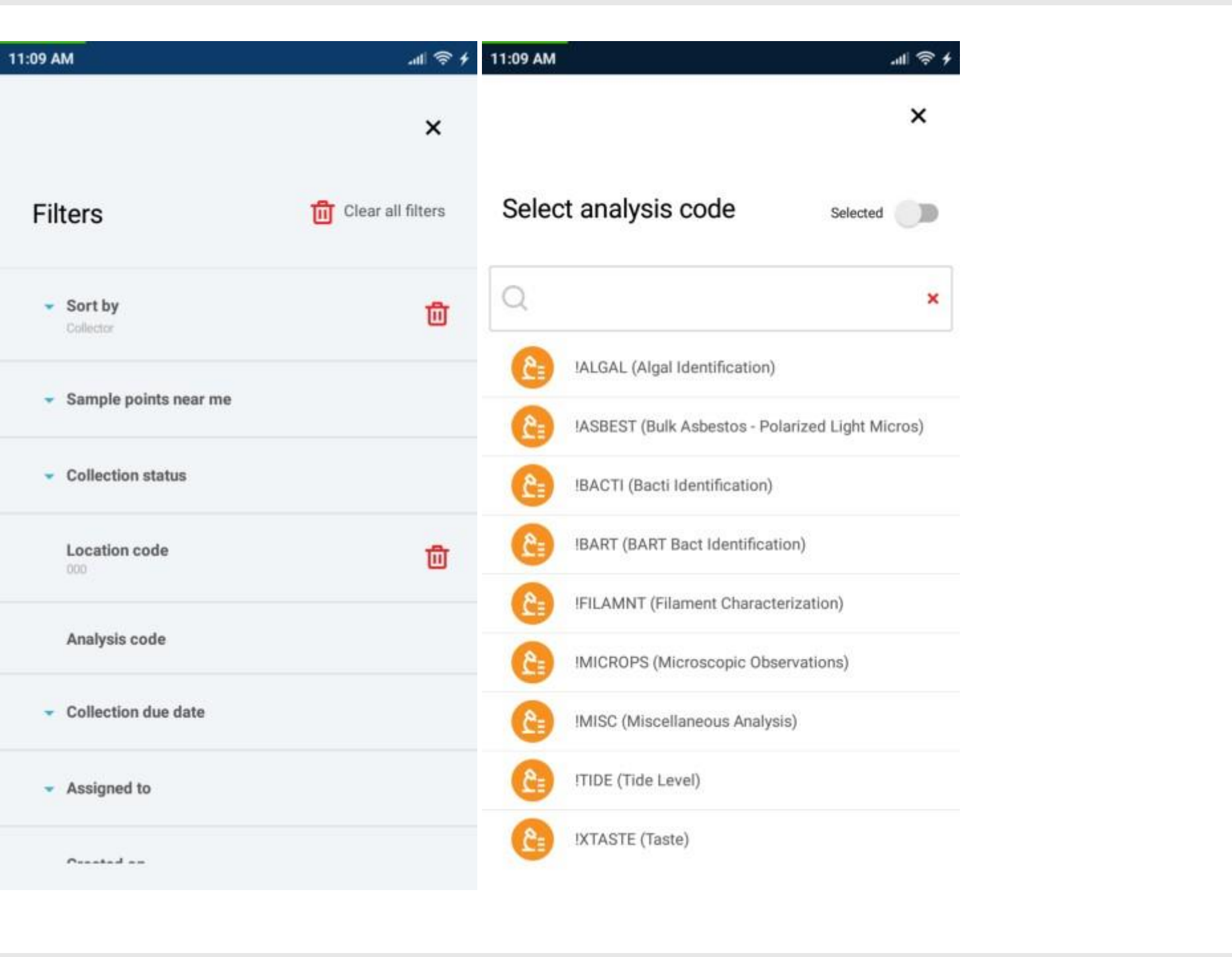
The set of displayed fields can be changed on the **Settings** screen.

Please refer to [sample filters](#) for details about sorting and filtering options.

# Sample Filters

The data on the [Samples](#) screen is displayed according to the filters.

You can narrow down the displayed data by clicking the "**Filters**" button in the top-right and selecting filters to apply.



Note that you can control the order in the list of samples by selecting a field under the "**Sort by**" element. To reverse the order, select the field once again.

To apply a filter, click on it in the list of filters and select one or multiple options to filter by.

Filters with multiple options open in a window where you can search for options or make so that only the selected ones are displayed by enabling the "**Selected**" switch at the top-right of the window.

You can reset a particular filter by clicking the **recycle bin** icon next to it or reset all filters by clicking "**Clear filters**" button on the top-right of the screen.



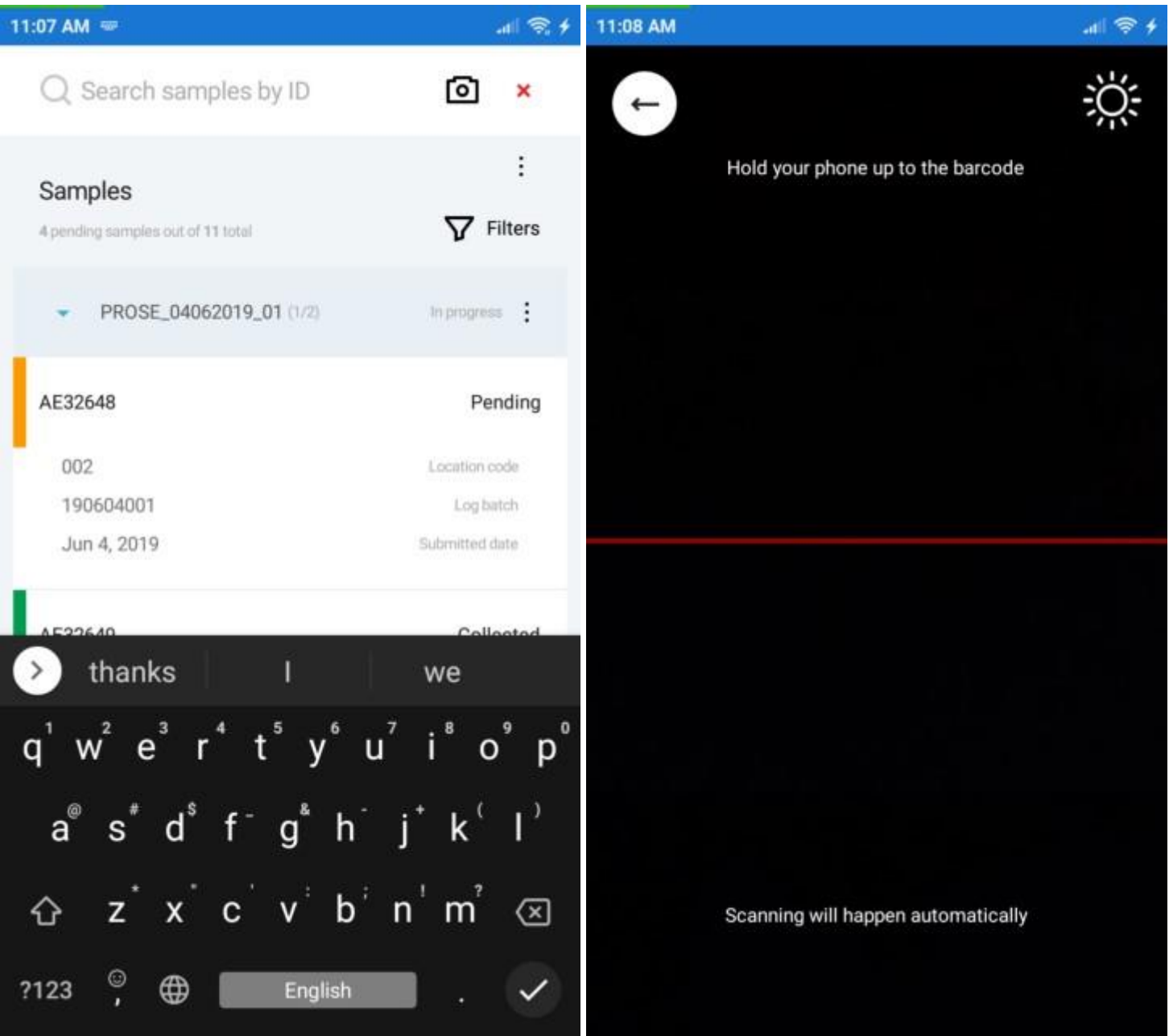
# Sample Search

You can search for samples from any screen with **magnifying glass** icon in the header. When you click on the icon, the header is replaced with search form meant to find samples by their ID.

You can enter the sample ID manually or use the barcode scanner enabled by clicking the **camera** icon to the right.

When you submit the form, only the samples containing the string will be displayed in the list.

To cancel the search, tap the **red "X"** icon on the right-hand side of the search form.



# Sample Details

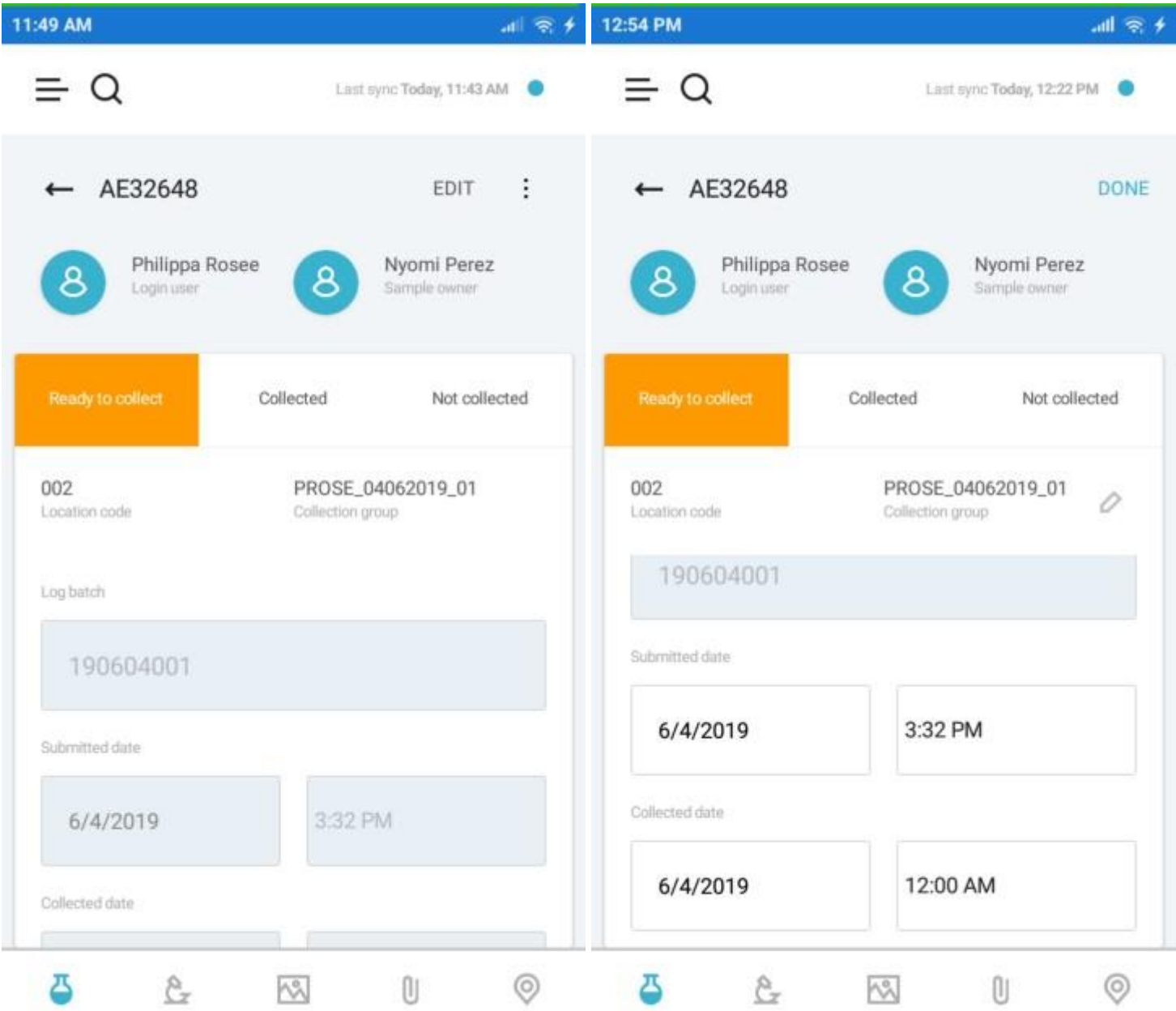
**Sample Details** is a set of screens that display detailed information about the sample and all related analyses.

Under the action menu to the right, you can find an option "**Show samples from the group**" that navigate you to the list of samples with corresponding filter applied.

You can change the Collection group, Login user, Sample owner and values of other fields in the editing mode enabled by the "**Edit**" button at the top of the screen, when the editing of a particular field is allowed by the template selected in the "**View**" field in the application settings.

The "**Edit**" button is replaced with "**Done**" in the edit mode. This button applies all changes on tap.

Sample status can be changed even outside the editing mode. When you set the status to "**Not collected**" you have to specify the reason either by choosing one from the list of popular reasons or entering a custom one.



There is a navigation bar in the bottom of the screen that navigate to the following screens:

- [Sample Details](#)
- [Sample Analyses](#)
- [Sample Images](#)
- [Sample Attachments](#)
- [Sample Location](#)

# Sample Analyses

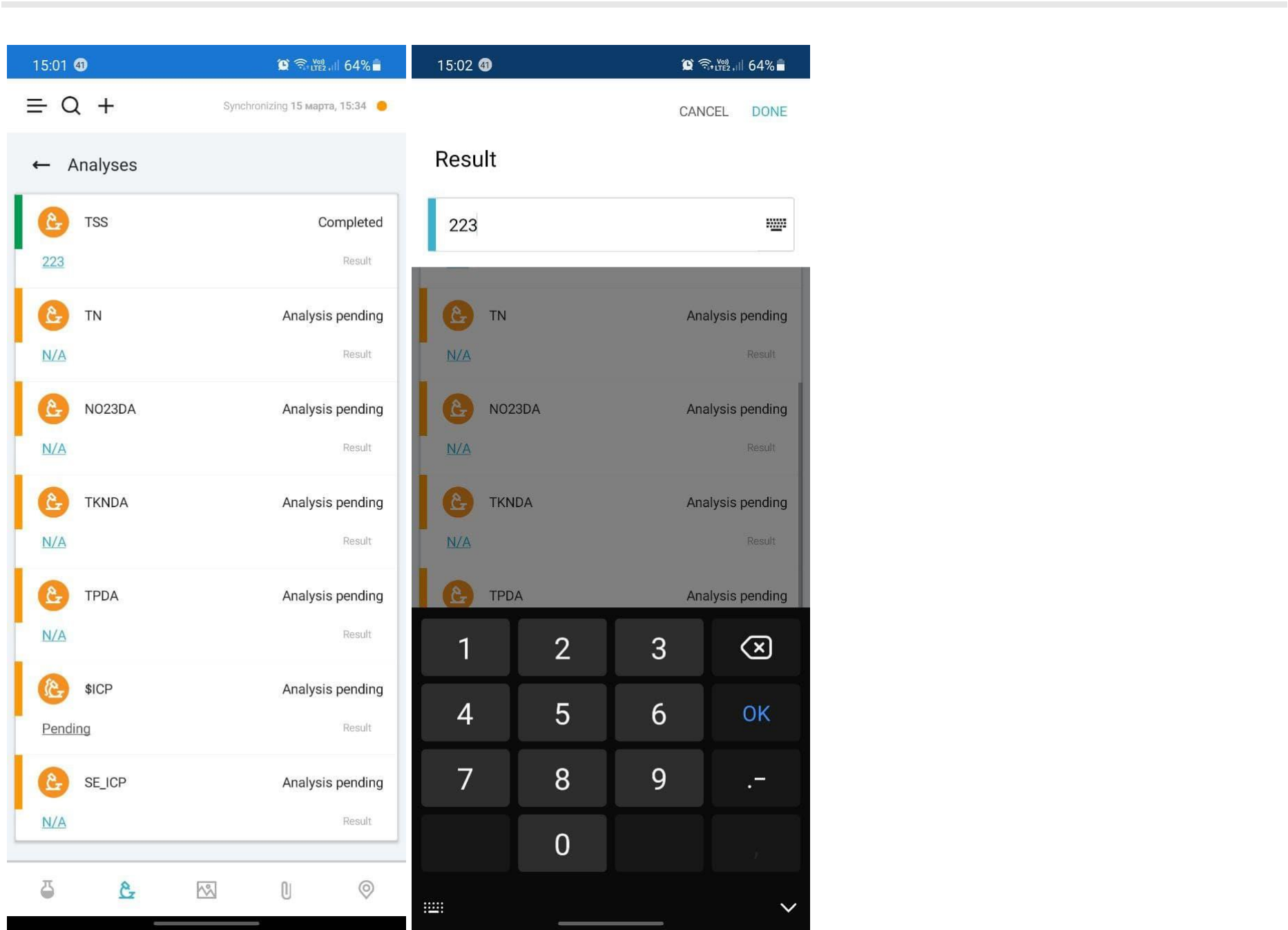
**Sample Analyses** screen contains the list of analyses assigned to the sample.

The set of displayed analysis fields is determined by the **"View"** field option in the [application settings](#).

You can enter or edit an analysis result by clicking the result value in the analysis list.

You can navigate to the [details of a particular analysis](#) by tapping the analysis in the list.

Please refer to [Analysis Legend](#) for information on analysis icons and status colors.



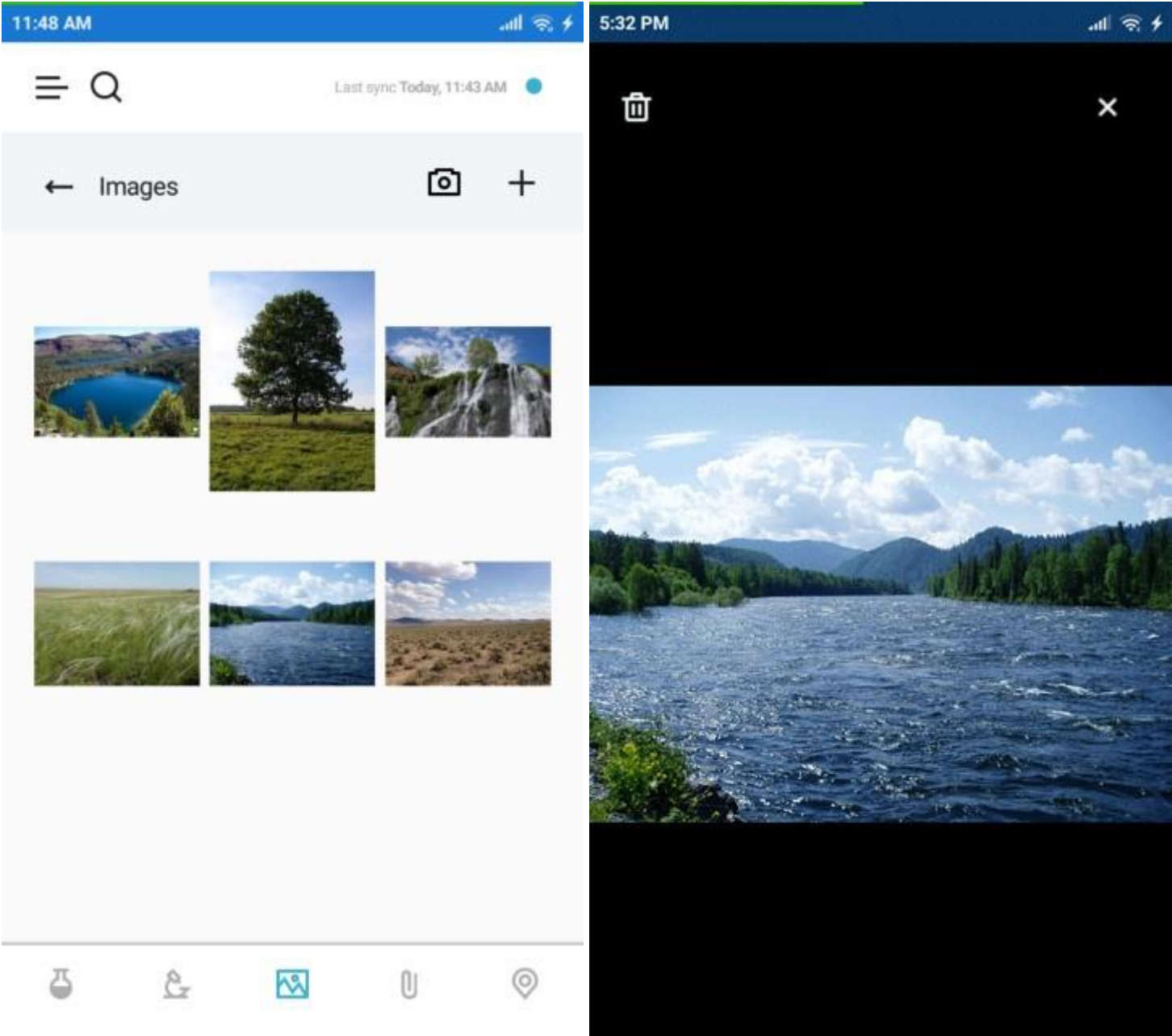
# Sample Images

Samples can have images attached to them.

To attach an image, you can tap the **camera** icon and take a picture with your phone, or attach an existing file by tapping the **plus** icon.

The images will be displayed in a table with option to preview an image in full screen.

In preview mode, you can delete the image by tapping the **recycle bin** icon in the top-left corner of the screen.



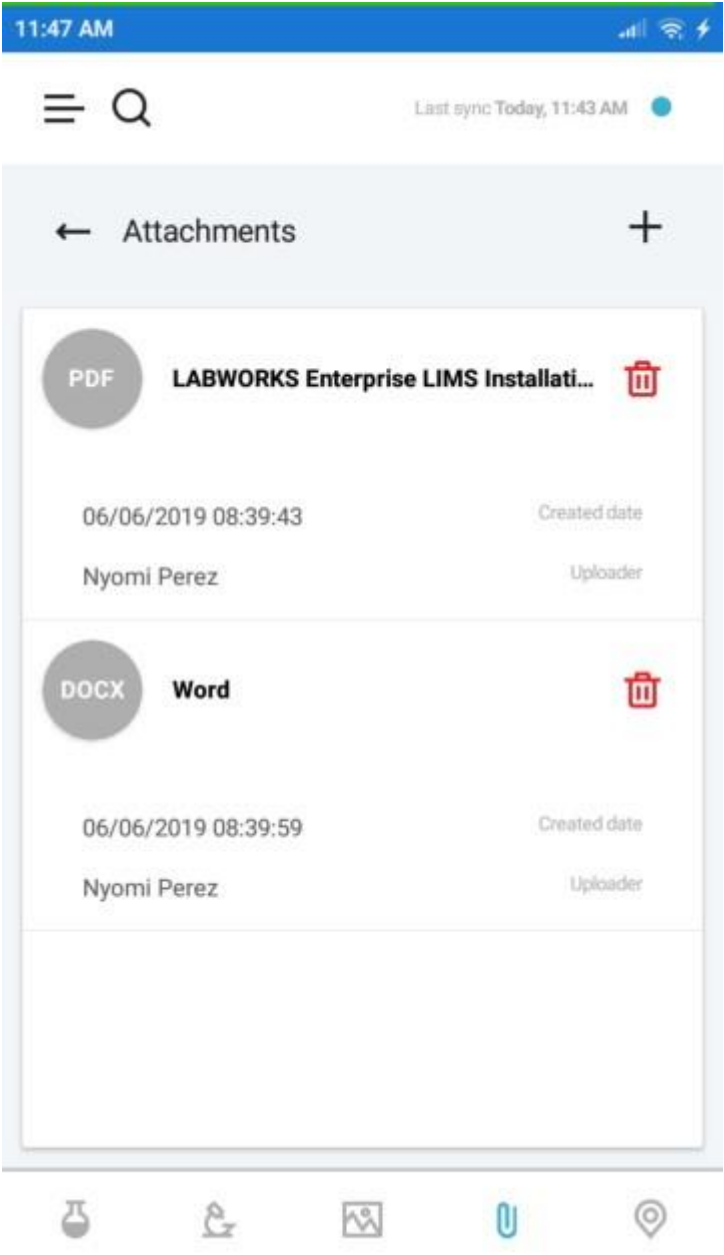
# Sample Attachments

You can attach various files to a sample on the **Sample Attachments** screen.

To attach a new file, tap the plus icon and select it in the file browser.

You can remove the files by tapping the **recycle bin** icon next to the file name.

When you click on a file, it will open with the default application for that file extension.

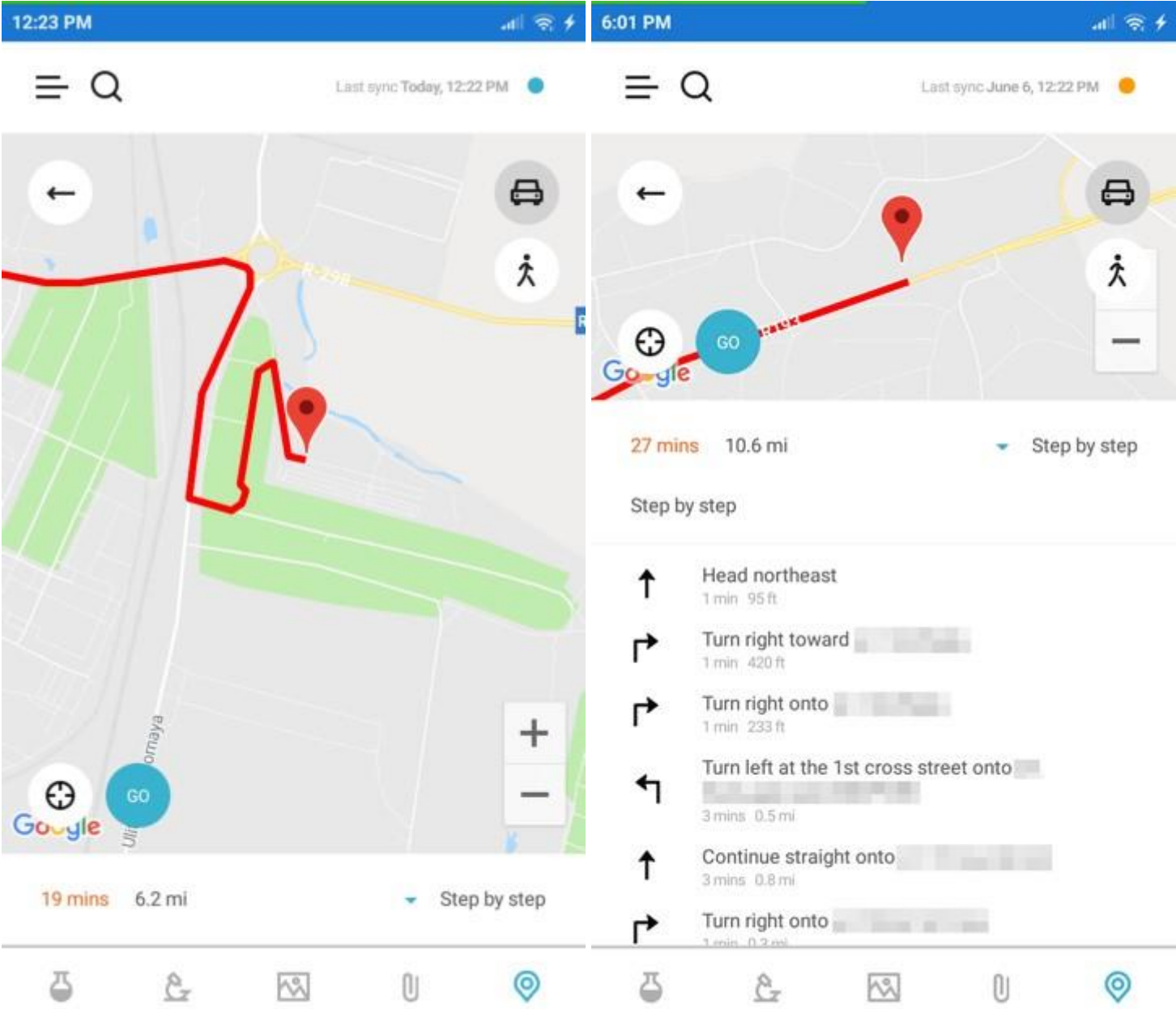


# Sample Location

**Sample Location** screen displays a map with the location of the sample.

The application builds the route between your location and sample location according to the selected option (by car/by foot).

You can tap the bar at the bottom to expand the step-by-step directions.

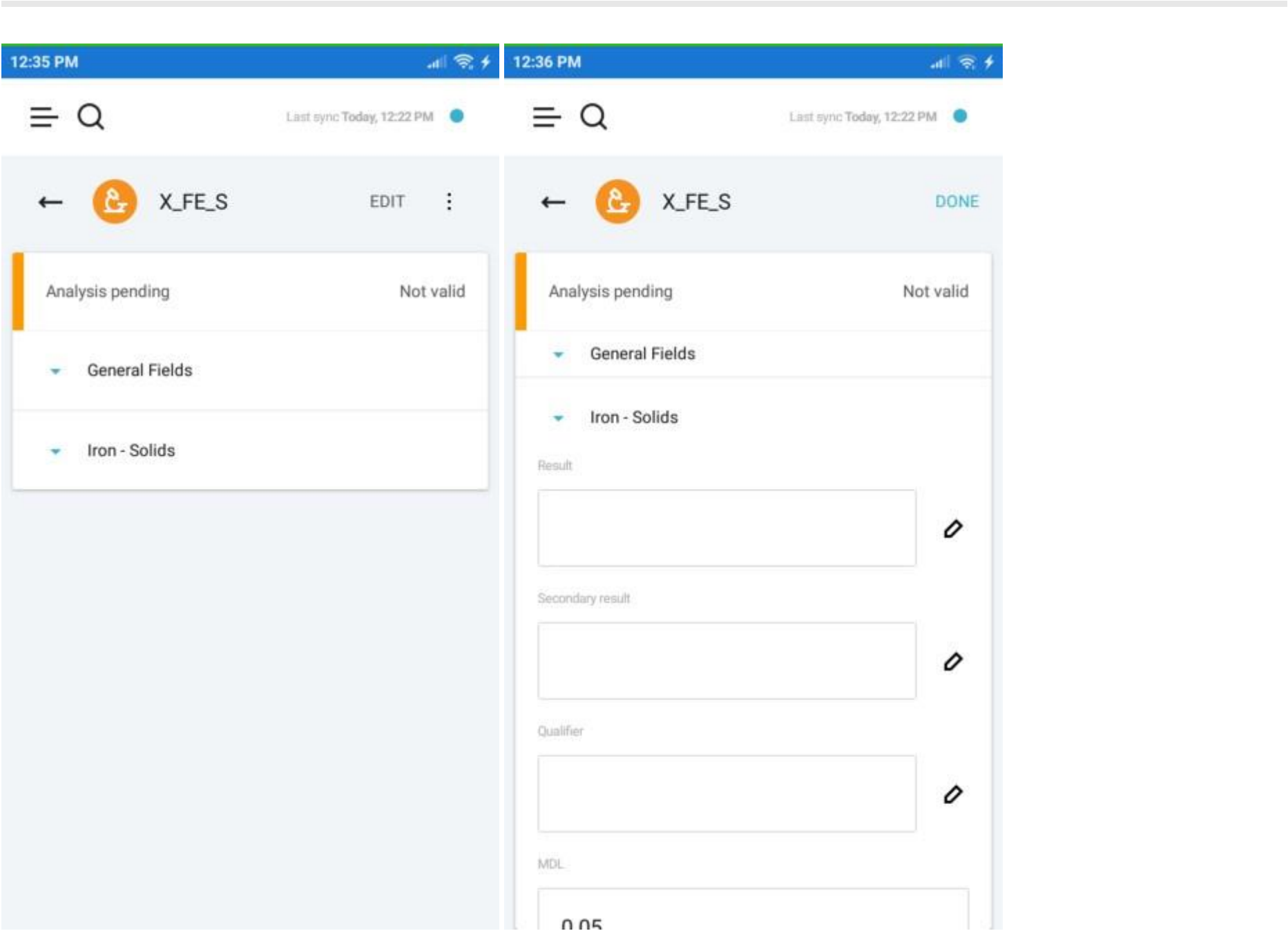




# Analysis Details

**Analysis Details** screen displays all information about the analysis performed with a certain sample.

The data is displayed in groups with General Fields group containing the fields common for all analyses and separate groups for analysis components. The set of displayed fields depends on the selected "**View**" field option in the [application settings](#).



You can enable the editing mode by tapping the "**Edit**" button on the top-right.

In the edit mode, certain fields of the analysis become editable and the "**Edit**" button is replaced with "**Done**" button that applies the changes.

Some fields have a **pencil** icon next to them. These icons open value entry windows with option to search through the standard values for these fields.

Note that every change to the analysis while it is in the "**Validated**" state changes it to "**Not Valid**".

## Result

<div><div></div></div>	<div></div>
DONE	Standard result
CONF	Standard result
TNTC	Standard result
XXX	Standard result
PASS	Standard result
FAIL	Standard result
P	Standard result
A	Standard result
NOO	Standard result
NO	Standard result

X\_FE\_S

DONE

Completed

Not valid

General Fields

Iron - Solids

Result

DONE

Secondary result

Qualifier






MDL

0.05



# Analysis Legend



## Analysis Types

-  Narrative analysis
-  Single-component analysis
-  Multi-component analysis
-  Bottle analysis
-  Group analysis

## Analysis States




-  Validated
-  Not valid

## Analysis Statuses

-  Analysis pending
-  Completed

## Analysis Result Colors

The color of the bar next to the analysis result value depends on the specification violation:

-  The result exceeds specification range
-  The result is exceeding warning range but within the specification range
-  The result is within the warning range

# Sample Legend

## Sample Statuses

-  Pending
-  Not collected
-  Collected

Sample status colors are defined in the desktop State Management application.