r-biopharm

RIDA®SMART APP
User manual
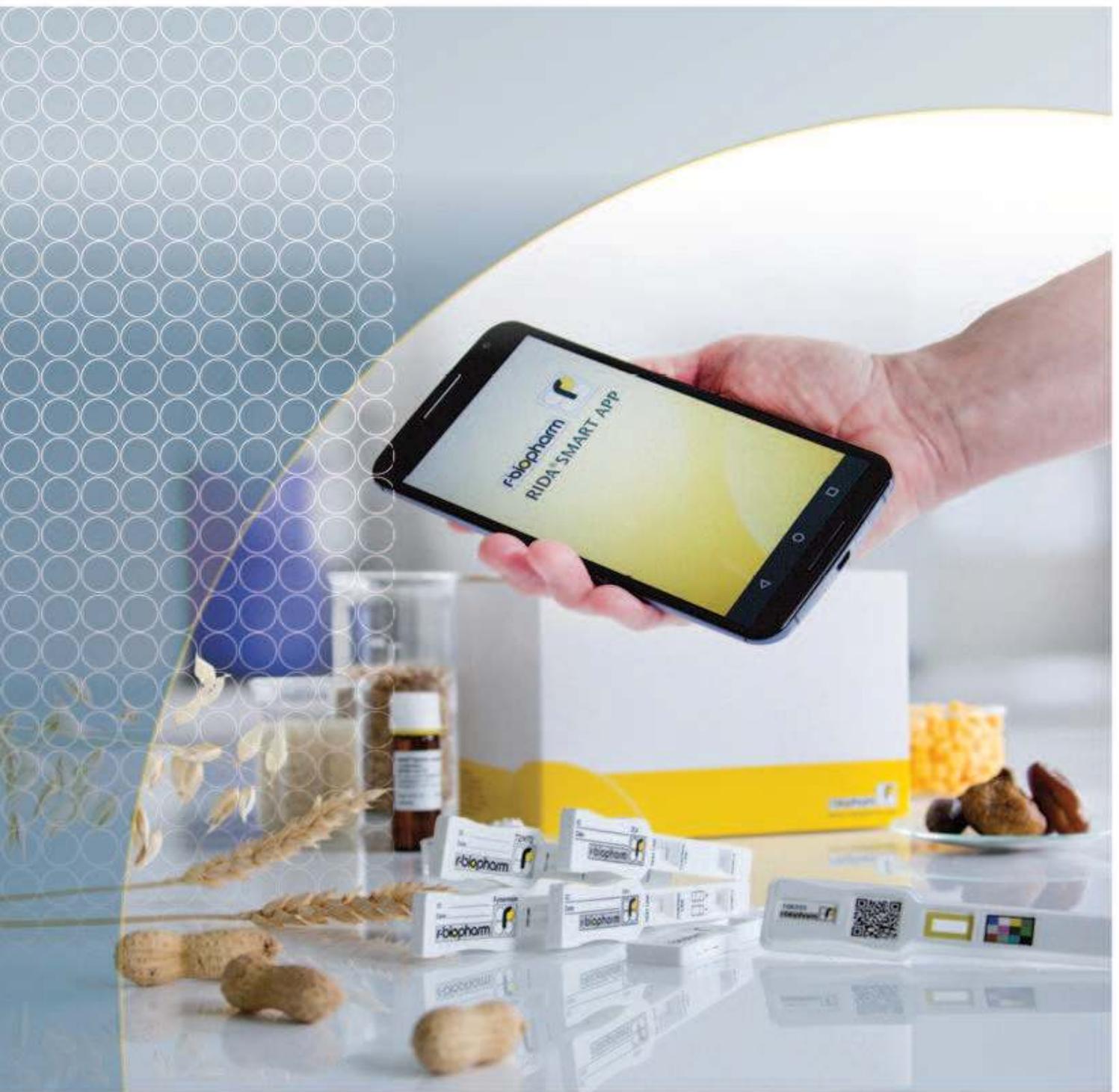
Content

1 Introduction

1.1 Purpose of the RIDA®SMART APP

The RIDA®SMART APP has been developed for general use to determine food and feed parameters quantitatively. The application can be installed only on a **Nexus6/ Nexus 6P and PIXEL XL Smartphone** from Google Inc. The app is fast, easy to use and provides accurate, reliable results.

Please note that the RIDA®SMART APP has been developed for the evaluation of R-Biopharm RIDA®QUICK RQS standard products and can only be used for evaluation in combination with the R-Biopharm RIDA®QUICK RQS test kits. All additional documents and necessary accessories (plastic cover and label) for evaluation with the RIDA®SMART APP will be delivered with your standard RIDA®QUICK RQS test kit.

1.2 About this manual

This user manual guides you in detail through the installation and the application of the RIDA®SMART APP. It is recommended to read the manual thoroughly before the initial use of the application.

1.3 General information

For general use of the RIDA®SMART APP, no Internet or network connection is required. After the installation and activation process of the RIDA®SMART APP (Network connection required) the application can be used in full functionality without any network connection. Additionally there is no requirement of a SIM card with cellular or data contracts for the use of the RIDA®SMART APP. A network connection is only required in the case of downloading additional documents or for data export and technical service requests. The network connection can be established via Wi-Fi, Bluetooth or USB. Alternatively, a SIM card and a suitable mobile or data contract can also be used. More information about how to set up Internet connection on the **Nexus6/ Nexus 6P and PIXEL XL Smartphone** can be found at:

Nexus 6/6P: Internet Connection Setup on Nexus 6/6P
PIXEL XL: Internet Connection Setup on PIXEL XL

Please note that for technical reasons and to guarantee the functionality of the application, the RIDA®SMART APP needs to be connected to the R-Biopharm Servers. The user will be prompted every 2 months, to check for updates!

The results of the tests which have been carried out with the RIDA®SMART APP, can be exported to a pre-defined E-mail address. For data export you need a network connection and an E-mail account which is set up in the **Nexus6/ Nexus 6P and PIXEL XL Smartphone**. For more information on how to set up an E-mail account on the **Nexus6/ Nexus 6P and PIXEL XL Smartphone**, please see:

Nexus 6/6P: E-mail Account Setup on Nexus 6/6P
PIXEL XL: E-mail Account on PIXEL XL

A Google account is not required to use the app.

If you want to use the application and all of its features which come with the **Nexus6/ Nexus 6P and PIXEL XL Smartphone** but you have rare or no access to an appropriate data connection via Wi-Fi, Bluetooth or USB, we recommend to use a SIM card with a suitable network provider's data contract.

2 Installing the RIDA®SMART APP

2.1 Access data

Currently, the RIDA®SMART APP can only be installed on the **Nexus6/ Nexus 6P and PIXEL XL Smartphone**. You can purchase the **Nexus6/ Nexus 6P and PIXEL XL Smartphone** from any retailer of your choice. In addition, there is an opportunity to obtain the Smartphone directly through our dealers.

Before you can install the RIDA®SMART APP on your Nexus6/ Nexus 6P and PIXEL XL Smartphone, you have to purchase the required voucher code to get your access data. The RIDA®SMART APP voucher can be purchased through one of our dealers. After the purchase, a booklet with the voucher code and registration information will be forwarded to you via mail. Please follow the instructions from the voucher booklet and perform the registration and installation of the RIDA®SMART APP. Please keep in mind that the RIDA®SMART APP can only be exclusively purchased through our dealers and distributors.

2.2 Registration and installation

To start the registration process, switch on your supported smartphone and ensure that you have a working internet connection. If your Smartphone does not have a barcode scanner app, we recommend installing an app that is able to detect all regular 1D and 2D codes.

Scan the QR code which is located on the back of your voucher card. This will automatically redirect you to our RIDA®SMART APP homepage. Alternatively, you can navigate using the browser app of your supported smartphone to visit the following page: http://www.app.r-biopharm.de.

Please follow the registration instructions on the website. You will be redirected to the download area, where the RIDA®SMART APP can be downloaded onto your Smartphone. After the installation is complete, please start the RIDA®SMART APP and complete the final registration on your Nexus6/ Nexus 6P and PIXEL XL Smartphone. To activate the application you will need your user name, password, and your voucher code.
Note: during the entire installation process, your Nexus6/ Nexus 6P and PIXEL XL Smartphone must be connected to a network connection.

Registration

Final registration after installation of the RIDA®SMART APP can be performed by entering your user name, password, and the voucher code

The registration is completed by pressing the button **REGISTER**
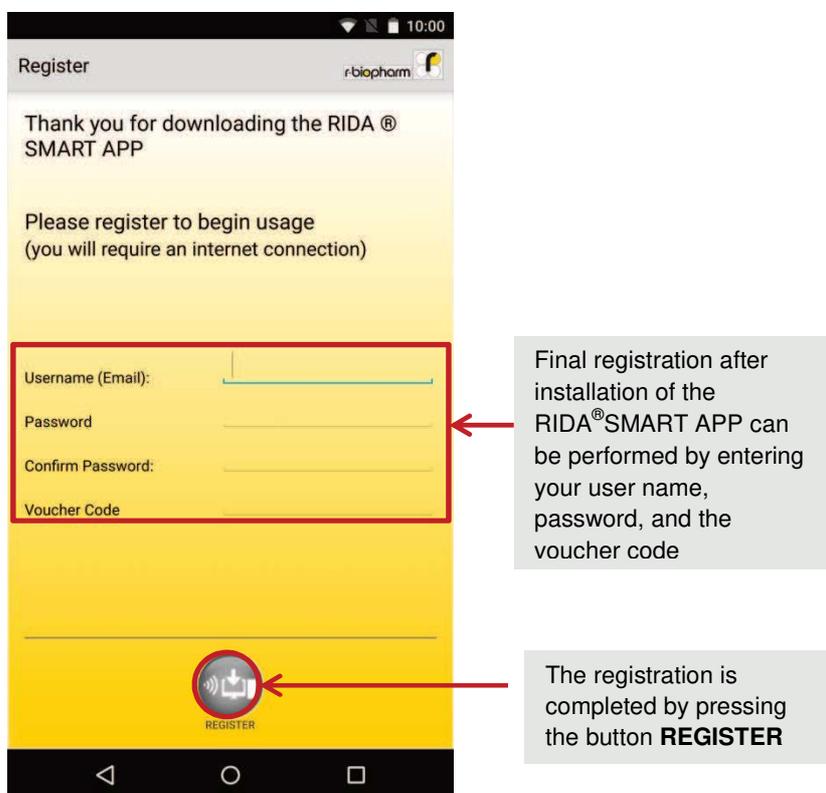
Fig. 1 Registration

Through the button **Register**, you can run the final registration. The RIDA®SMART APP is now ready to use. Please keep in mind that the access data with the corresponding voucher code is unique and valid for only one

Nexus6/ Nexus 6P and PIXEL XL Smartphone. After the activation of the RIDA®SMART APP, a reuse of the access data and voucher code for installation on a different Smartphone is not possible.

If you lose your access or registration data, please contact your local distributor or agent.

3 Implementation – use of the RIDA®SMART APP

3.1 Test Processing

First, complete the Immunochromatographic test with the appropriate sample preparation mentioned in the test kit instructions. After the prescribed incubation period a control band (control line) should be visible in the response field of the test strip that is necessary for further evaluation with the RIDA®SMART APP. If this band is missing the test was not performed properly or the reagent steps were not carried out in correct order. The test should be repeated in this case with a new test strip. For more reasons why a control line is invisible or only weakly visible, please refer to the corresponding provision of the test kit.

Test line   Control line
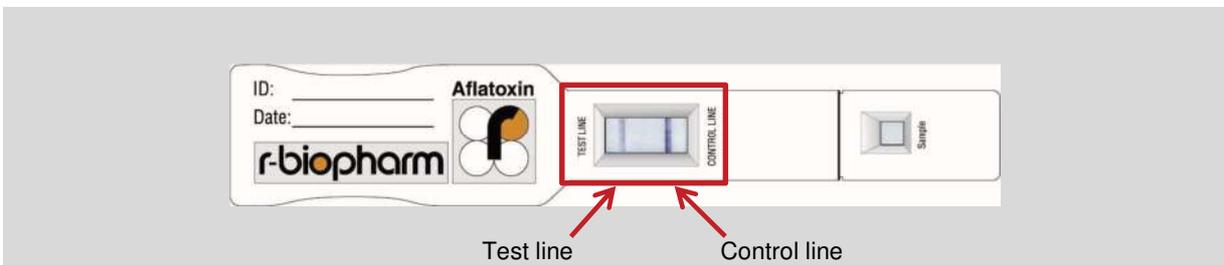
Fig. 2 Test strip strained after incubation with a sample

Together with test kits, the test strips that can be evaluated with the RIDA®SMART APP, contain a plastic cover and a batch specific label. To evaluate a test strip with the RIDA®SMART APP you need both covers. Before you begin evaluating, please check whether the batch number which will be analyzed corresponds to the printed batch number on the front of the cover and the batch number of the test strip certificate. Now, place the cover onto the test strip that must be analyzed.
Note: without the cover strip, the evaluation of the test strip with the RIDA®SMART APP is not possible! In case of loss or destruction of the cover strip, you can use a cover strip from a different test kit which has the same batch number (lot number). Otherwise, please inform your local distributor.
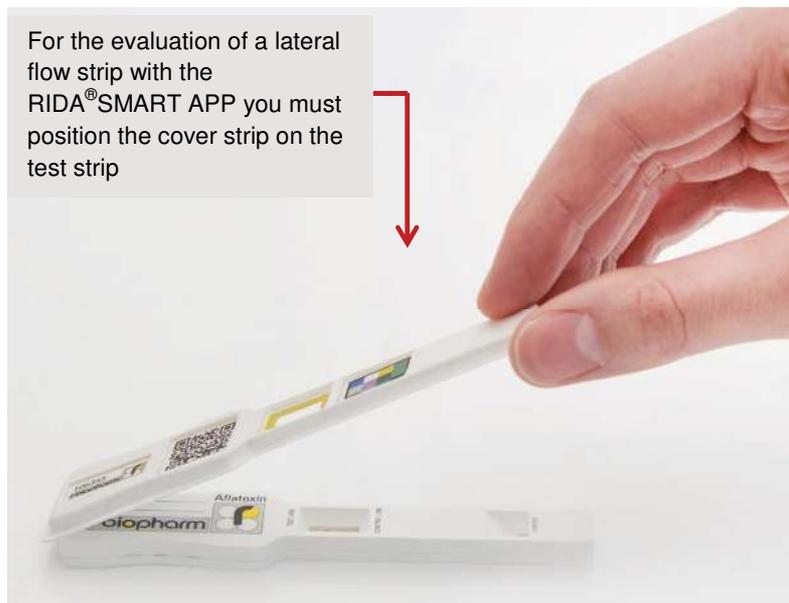
For the evaluation of a lateral flow strip with the RIDA®SMART APP you must position the cover strip on the test strip

Fig. 3 Positioning of the cover strip

Start the RIDA®SMART APP to install the application on the Smartphone. After entering your user data, press the **LOGIN** button to access the **Main Menu**. The main menu is subdivided into different submenus, which are described further in detail.

Enter your user name and password here

The registration is complete when you press the **LOGIN** button
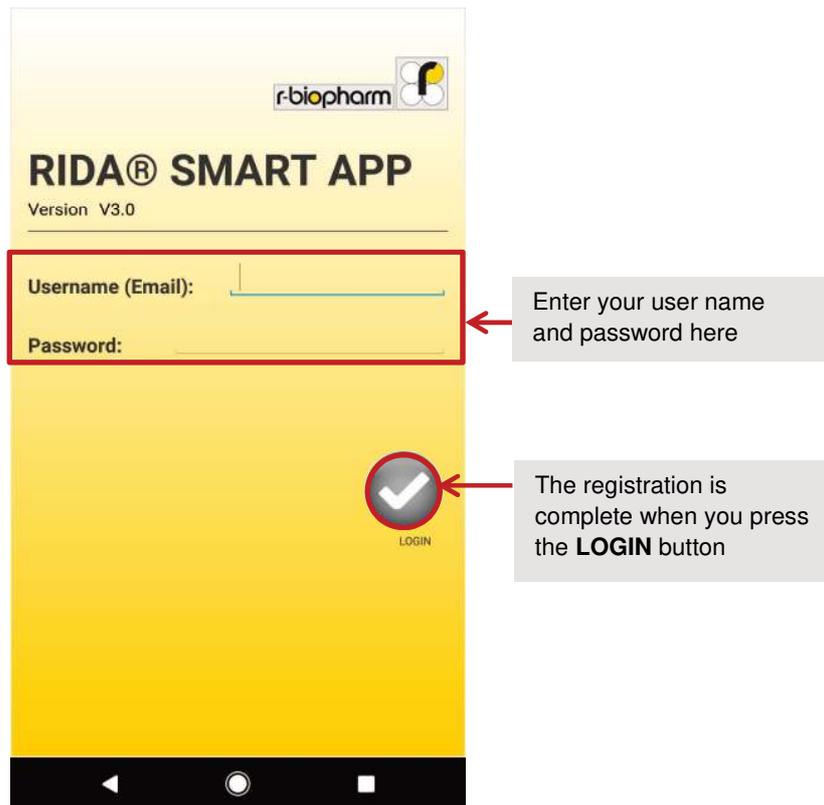
Fig. 4 Log in

3.2 Settings

Before the first measurement can be carried out, all user settings should be set up. This can be done by pressing the **Settings** button in the **Main Menu**.

User settings can be changed in the menu **Settings**
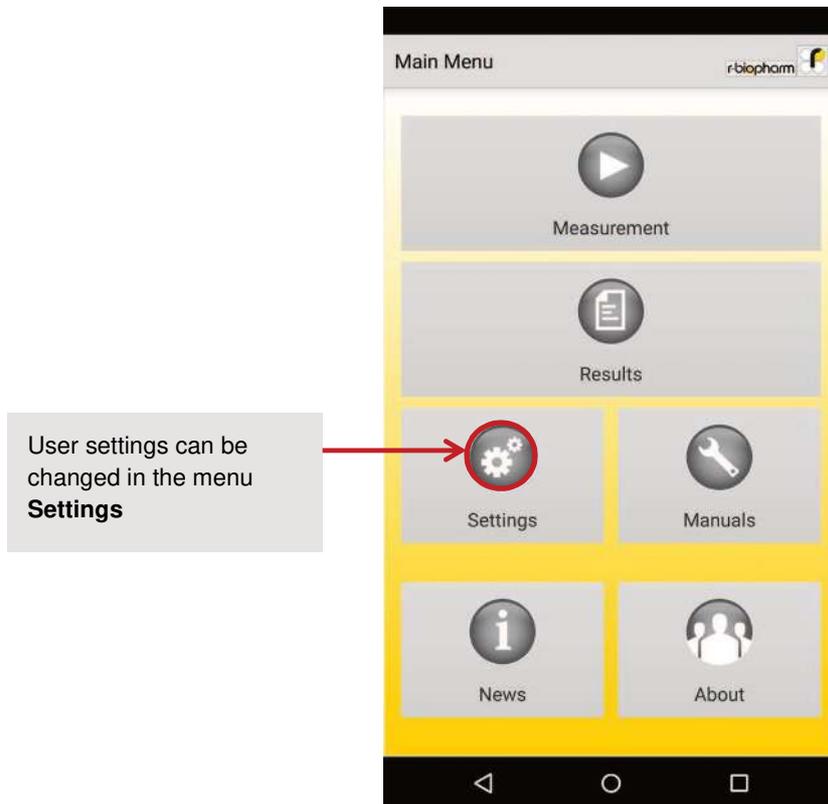
Fig. 5 Main Menu

3.2. 1 User Management

There are two types of users: Super Users and Standard Users. The user that registers with the voucher code for the first time is a Super User. Some settings are exclusively available to the Super Users only.
Only a super user can perform User Management. To perform user management, go to **Main Menu ➔ Settings ➔ User Management**.
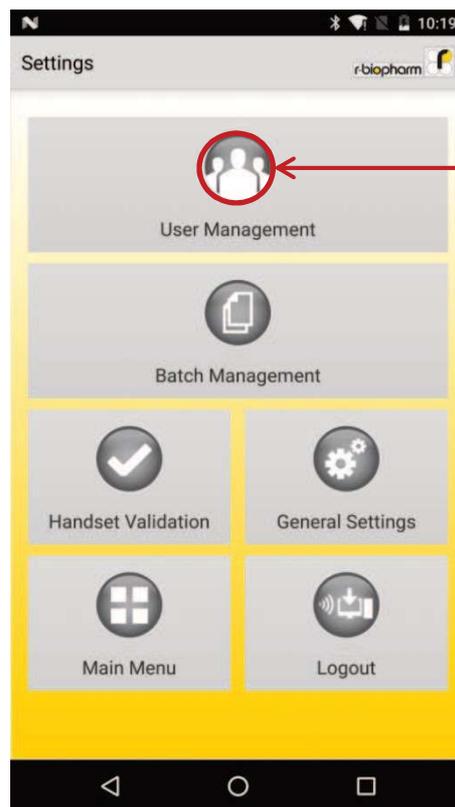
A Super User can modify the settings and setup other users in the **User Management** menu

Fig.6 User Management

Adding New Users

New users can be added to the list here. A Super User can add other Super Users and Standard Users to the App by pressing the **ADD USER** button in the User Management menu.

More users can be added using the **ADD USER** button

Fig. 7 Add User

User Settings

The Super User must enter the e-mail address and the password for other users and allot them the status of a Standard or a Super User. The **ADD USER** button on the Add User Menu will save the settings entered by the Super User and the new user will be able to login with the same credentials next time.

The credentials of the new user are to be entered here by the **Super User** and the role is also to be defined here

The **ADD USER** button will save the credentials of the new user for future login sessions
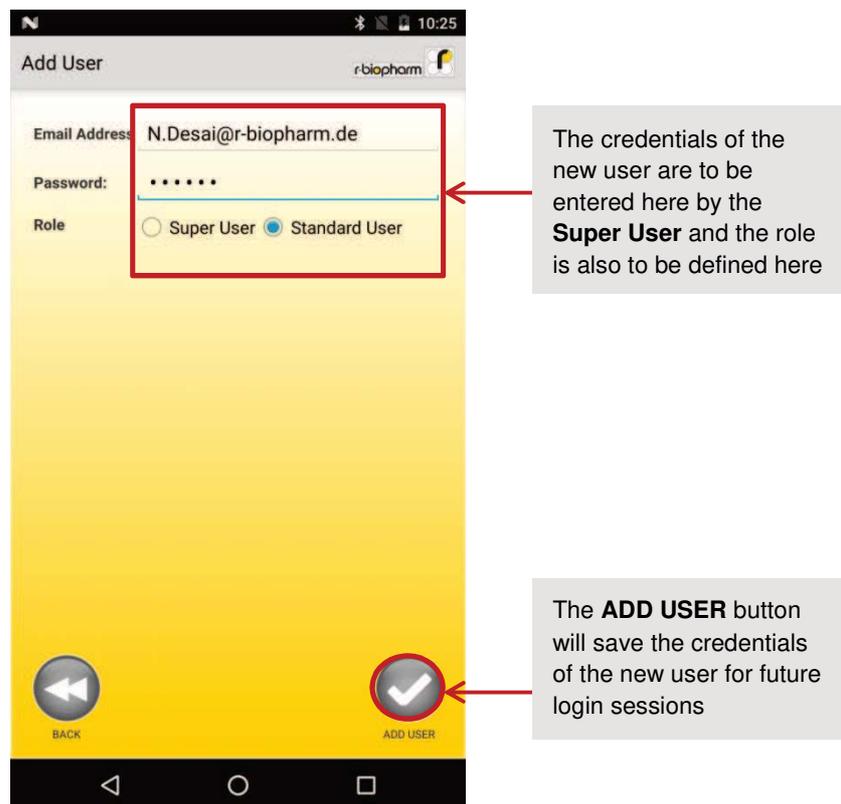
Fig. 8 User Credentials

Deleting Users

The Super User can change the settings of every user in the User Management menu. Press **Edit** on the User Management Menu to delete a user. Further, press **Delete** if you want to delete the user permanently.

A Super User can change the settings of another user or delete the user account by pressing **Edit**

Press **Edit** to manage the settings of the user or to monitor their latest activity

Press **Delete** to permanently delete the user account
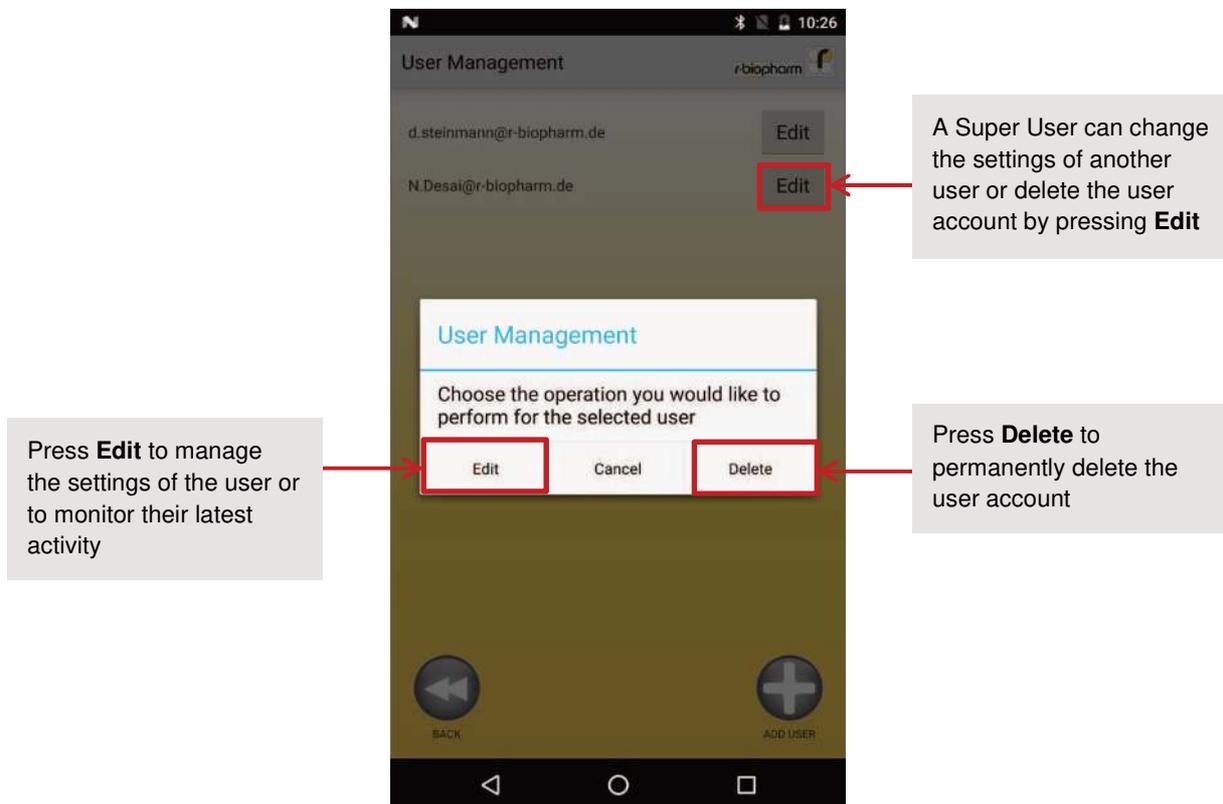
Fig. 9 Delete User

Editing User

Super Users can delete other Super and Standard users. They can also change the role of a Standard user to a Super user and vice versa. Press **Edit** on the User Management Menu to change the settings of a user . A pop-up window will appear which will let you select the desired action. Press **Edit** if you want to change the settings of any user. Here, you can change the login credentials of any user and you can also change the role of the user. You can also monitor the latest activity of the user here. Press **UPDATE** to save the settings.

The login credentials of the user and the role of the user can be changed here

The status and the latest activity of the user can be monitored here
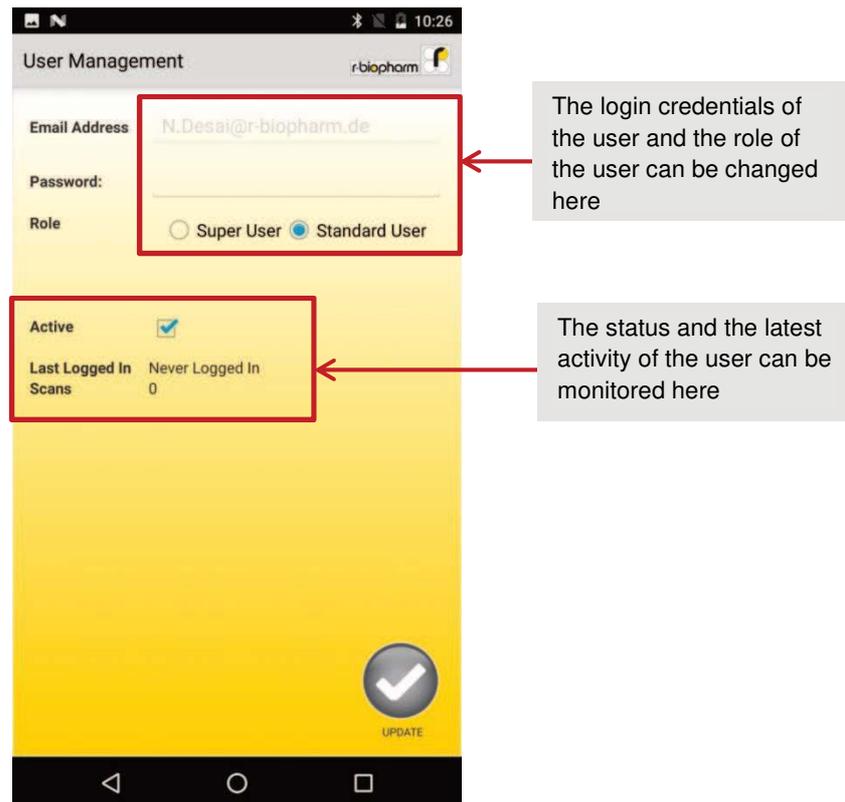
Fig. 10 Edit User

3.2.2 Batch Management

Batch Management is a function available to all users. In this menu, one can add a new batch and also view all the batches that are already available from past tests on the smartphone. It is also possible to delete the batches in this menu. To manage the existing batches go to **Main Menu -> Settings -> Batch Management**.

In the **Settings** menu, go to **Batch Management** to manage the batches already available on the Smartphone

Fig. 11 Batch Management

Adding and Deleting Batches

In the Batch Management menu, one can view all the available batches. They are organized by their individual product names.

To add a new batch, press the **ADD BATCH** button at the bottom right corner of the screen and then scan the QR code on the product certificate. This new batch will appear in the list of batches in the Batch Management menu. If this batch already exists, a pop-up warning will appear to overwrite the existing batch data with this new batch data.

Every batch that is added here will be available in the Measurement menu in a drop-down menu.

It is possible to delete any batch from the list by pressing the delete button. A pop-up will ask you to confirm your decision to keep or discard the batch.

Press the trash can button to **delete** this batch

A new batch can be added by pressing the **ADD BATCH** button
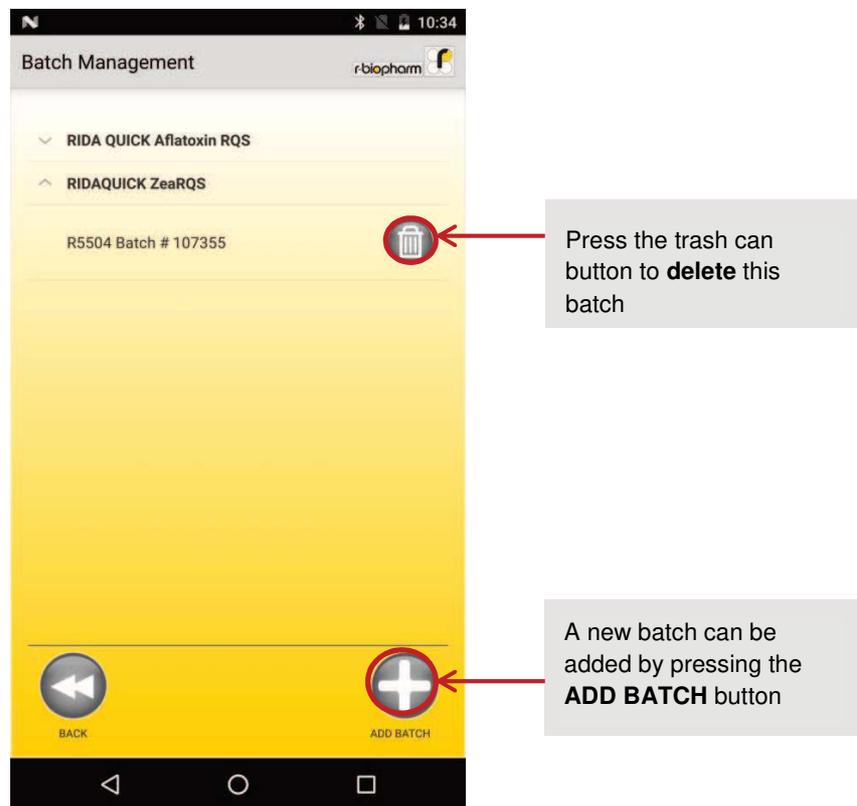
Fig. 12 Batch Management Menu

3.2.3 Handset Validation

If the user wants to verify that the RIDA® SMART App performs the measurements correctly, it is possible to perform a Handset Validation. A validation sheet is provided along with the test kit which can be scanned and the results will show the values of the control line and the test line. If these values are in an acceptable range then the test result will be "Pass." Otherwise, the result will show "Failed." To verify the working of the smartphone and the App, go to **Main Menu -> Settings -> Handset Validation**. In case the validation fails repeatedly, please contact your local distributor.

Validation of the handset can be performed by going to **Handset Validation** in **Settings**
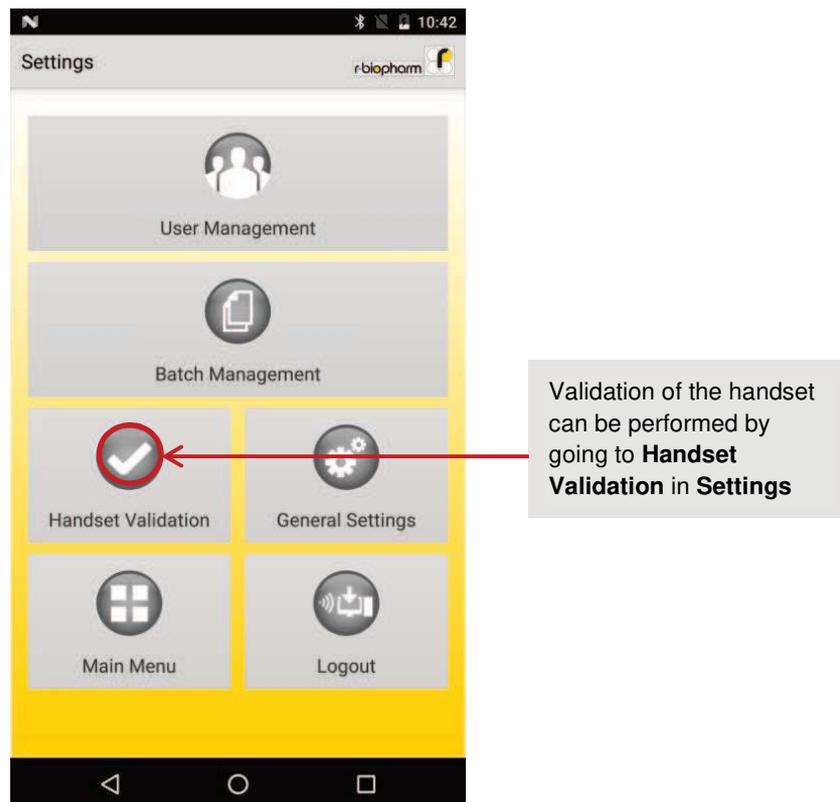
Fig. 13 Handset Validation

The validation menu offers several options to the user. The user can validate the handset by pressing the **VALIDATE** button, or delete the validation results using the **DELETE** button. The user can also select result(s) using the checkboxes and print them using the **PRINT** button.

Under the **Validation** menu, you can see the past validation results

In this menu, you can print validation results using the **PRINT** button, delete validation results using the **DELETE** button and initiate a new validation using the **VALIDATE** button
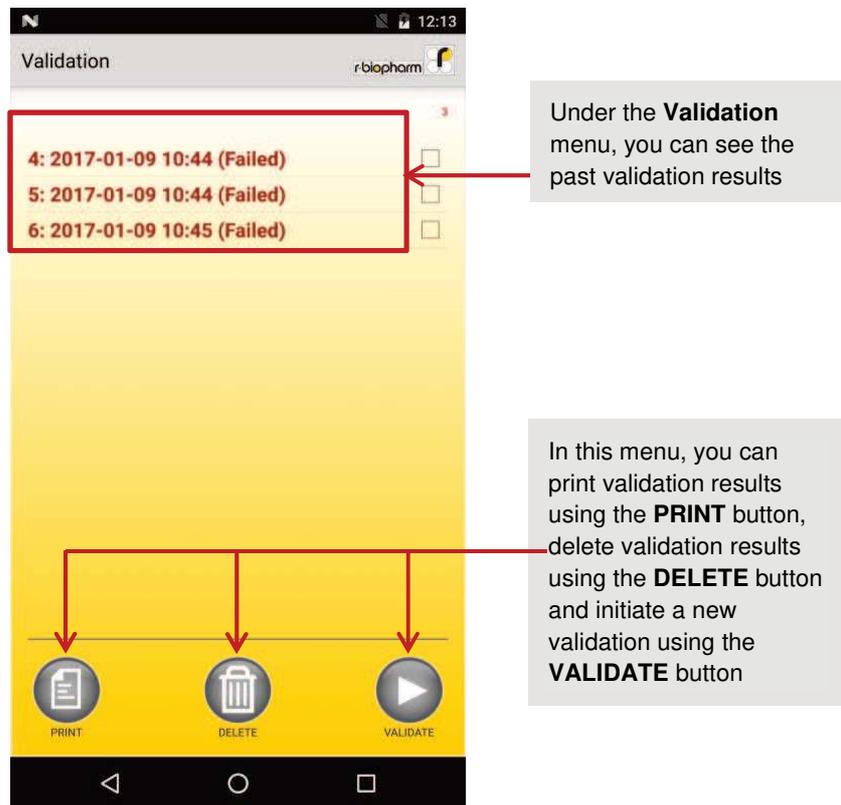
Fig. 14 Validation Menu

To validate the handset, the user must press **Validate** in the Validation Menu and align the smart phone over the validation sheet and press the camera button to scan the strip and get the result as shown below.

It is important to note that only the validation sheet can be used to validate the handset as it contains a unique QR code.
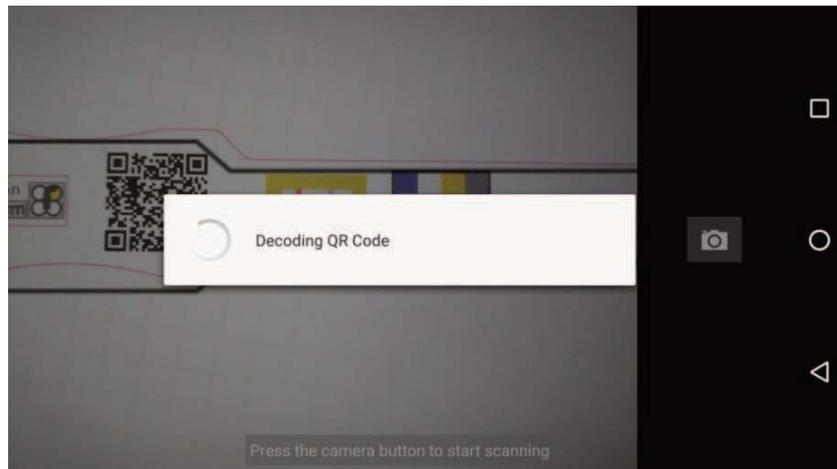
Fig. 15 Validation Process
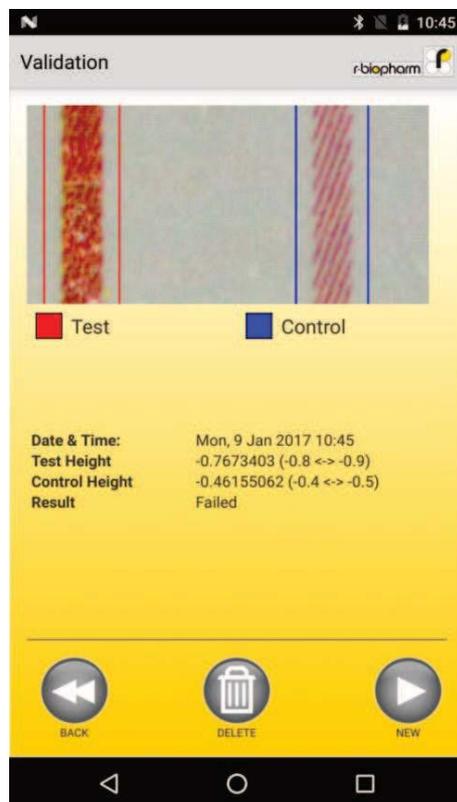
Fig. 16 Handset Validation Results

3.2.4 General Settings

The General Settings that are exclusive to the Super Users are the choice of **Country**, **Workflow Mode** and the **Validation Frequency**. Drop down menus are available for each of these selections . The Super Users can select the workflow mode to be Standard or Serial. They can also set the Validation Frequency to Never, Daily, Weekly, Monthly or Yearly.

Fig. 17 General Settings

3.3 Analyze the test strip with RIDA®SMART APP

To analyse the quantity of mycotoxins in a sample, a new measurement must be performed. The smartphone will capture an image of the Lateral flow Strip during the measurement and evaluate the result automatically. The user can export the result at any time. To perform a measurement, follow the steps below.

3.3.1 Measurement

To evaluate the test strip, select the **Measurement** button in the main menu. This will bring you directly to the **New Measurement** menu.

In the main menu, a new measurement can be started by pressing the button **Measurement**
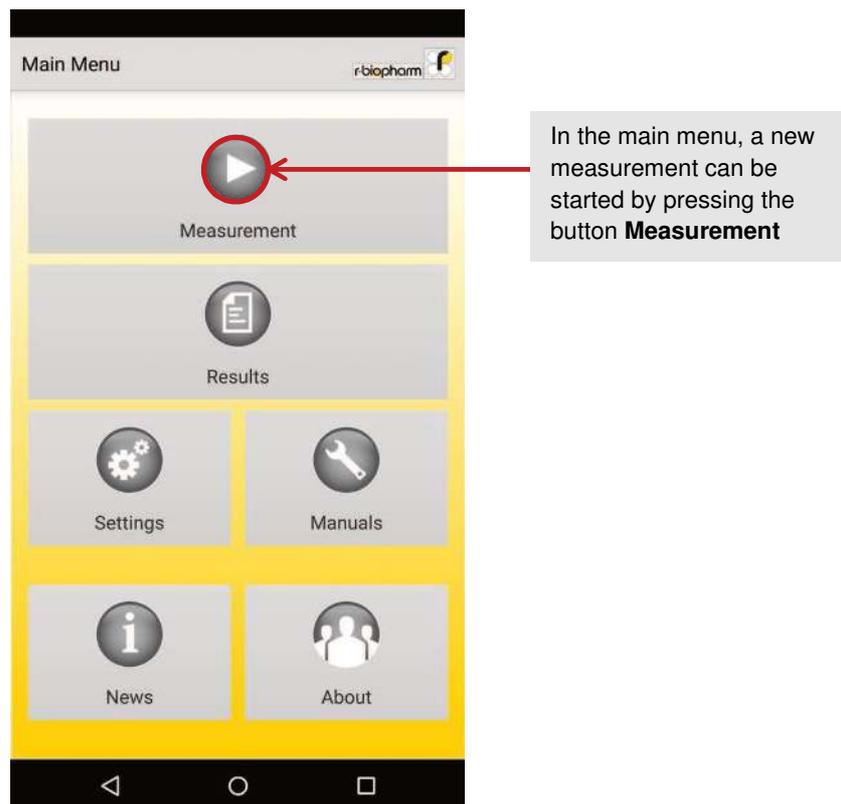
Fig. 18 Main Menu

New Measurement

To perform a new measurement, it is important to enter the sample (**Sample ID**) data. This data can be typed in using the keyboard or it is also possible to scan a barcode using the **SCAN** button next to the text field. The customer (**Customer ID**) data is optional and can be entered in the same way as the sample data.

Verify that your user information is present in the **Operator** field. If this is not the case, logout using the **Logout** button and login with your credentials before performing the measurement.

Next, the batch information must be entered correctly. The batch information can be selected using the drop down menu if the information already exists on the smartphone. Otherwise, it is also possible to scan the QR code from the product certificate provided along with the test kit using the **SCAN** button. Then choose the test's application from the drop down menu and press **NEXT** at the bottom right corner of the screen to perform the measurement.

Fig. 19 New Measurement

It is important to define the Sample (**Sample ID**) before performing a new measurement. It is possible to manually enter this data or to scan a barcode when available. The Customer (**Customer ID**) is optional

The test batch can be selected from the drop down menu if it already exists on the smartphone. Alternatively, it is possible to scan the QR code from a new certificate using the **SCAN** button.
The Application can also be selected from a drop down menu

3.3.2 Scanning

For a reliable test result, we recommend you to scan the test strips only within your laboratories, as defined lighting conditions prevail here.

When you scan the test strip be sure that it is inside the black outlines. A reliable evaluation is not possible with incorrect positioning of the Smartphone!

An image is recorded by pressing the camera button which will be evaluated by the RIDA®SMART APP
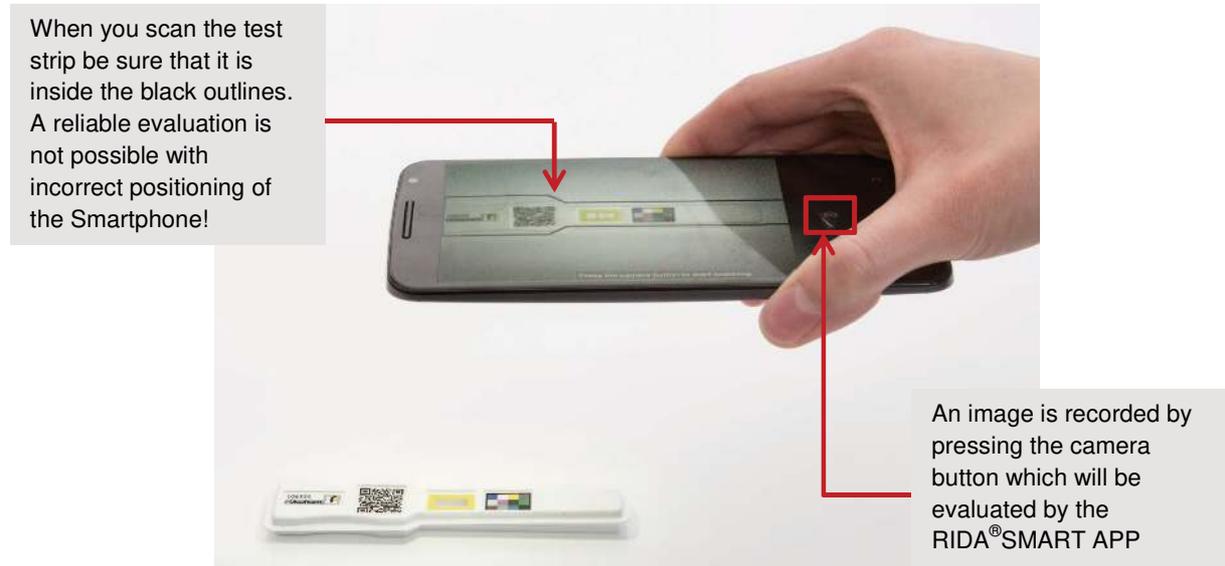
Fig. 20 Scanning

3.3.3 Result

By pressing the camera button we can capture an image which will be evaluated. The result of the test strip appears in the **Results** menu that automatically appears on the screen after the analysis is complete. In relation to the intensity of the control band, the RIDA®SMART APP calculates the concentration of the analyte accordingly, and displays the result.

In the **Results** menu, you will automatically see the test result when the analysis is complete. In relation to the control line intensity, the concentration of the analyte is calculated and specified in the appropriate concentration units

You can export the result of the test via the **EXPORT** button

The **DELETE** button deletes the test result

Using the button **NEW,** you can directly perform a new measurement. The current test result is stored automaticallyand can be retrieved at any time in the future

Fig. 21 Results

The test result can be deleted immediately via the **DELETE** button. On the other hand a new measurement can be carried out directly (via the **NEW** button) without exporting the result of the current measurement. This data is stored within the RIDA®SMART APP results database. These results can be accessed again at a later time and exported.

The test result can be exported in two ways. The selection is made in the menu **Export Options** that can be accessed by going from **Results -> Export -> Export Options** . The test result can be exported via E-mail or it can be sent to a printer.

Through the **Email** button, you can export your test results to any E-mail address

To print the test result, select the **Print** button
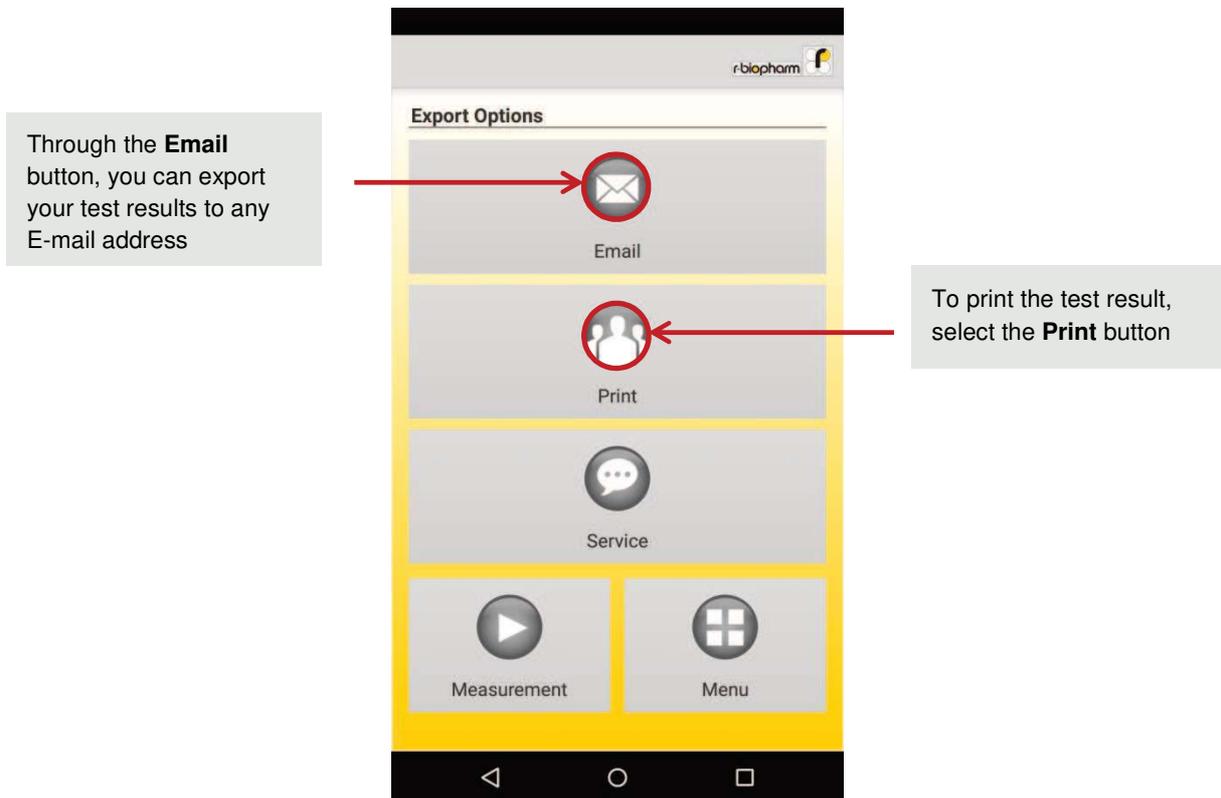
Fig. 22 Export Options Menu

3.4.1 E-mail Export

The default E-mail address stored in the **Settings** menu appears automatically in the recipient field. The test result is automatically appended with the appropriate sample name as an attachment to the email. The exported file format a HTML file which can be easily accessed in every web browser and includes the result and an image of the analyzed test strip. The E-mail can be sent using the **Send** button.

The test result is sent to the email address that you have saved in the **Settings** menu during setup. Additional email addresses can be entered manually through the drop down menu

The test result can be sent to the appropriate E-mail addresses with the **Send** button

The HTML file attached to the E-mail includes the test result

Compose

From

To   test@r-biopharm.de

LFD | Sample Data Sheet

Sample Data Sheet Attached.

Sample Data Sh...#RCT0500.html
174 KB

Fig. 23 E-mail Export

3.4.2 Printer Export

There is also the possibility to export test results directly to a printer. To do this, an appropriate printer app (offered by many printer manufacturers in the Google play store) must be already configured on your Nexus6/ Nexus 6P and PIXEL XL Smartphone. For the instructions of the printer installation on an Android-based operating system, please refer to
Print from your Nexus device
Print from your PIXEL XL

You can also export your data to your printer via the "Cloud print" app, which is based on the Google cloud print service. You can get more information about this at http://www.google.com/landing/cloudprint/.

In the menu **Export Options,** click on the button **Print.** Select the correct printer using the drop-down button and then the data export is done by pressing the button with the printer icon .

The printer to which the test result will be sent, is selected using the drop down button

The test result is exported using the button with the printer icon
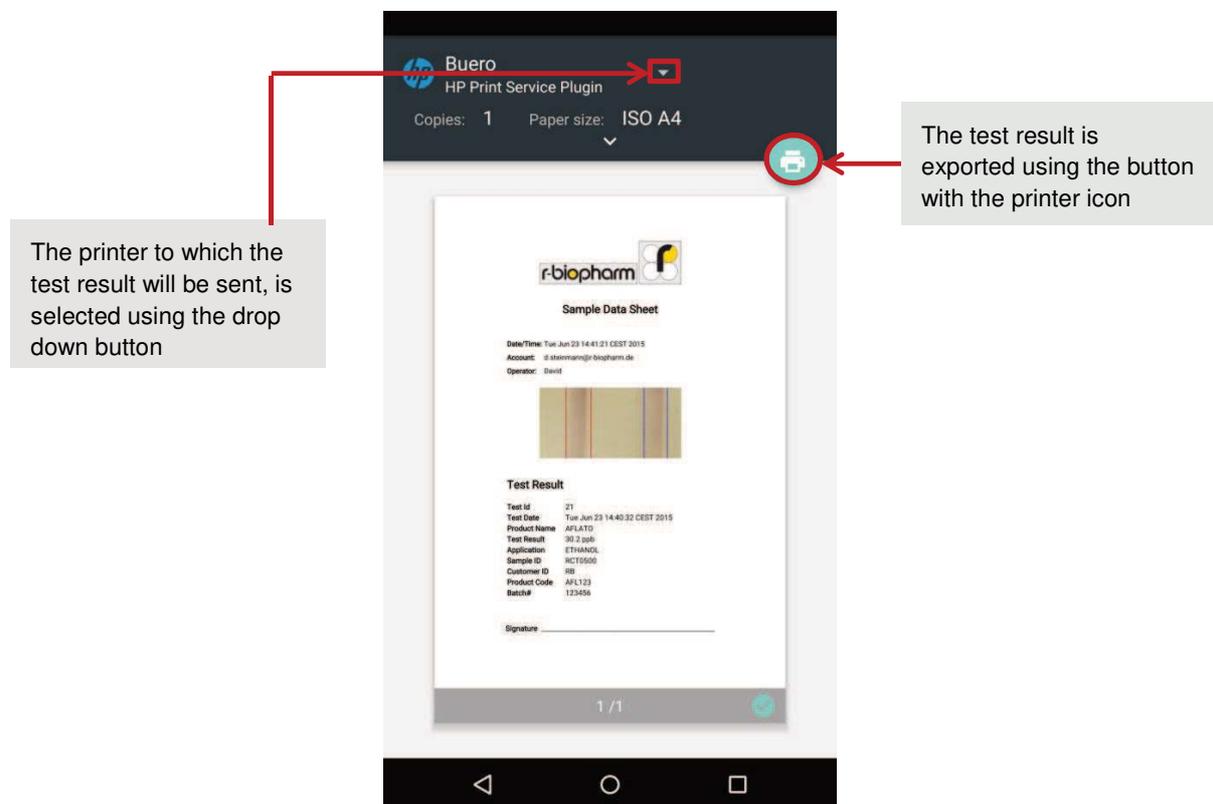
Fig. 24 Printer Export

3.5 Data storage

Each performed measurement is stored in the RIDA®SMART APP database and can be accessed at any time, regardless of whether it was exported or not. Therefore it is not required to export each individual test result immediately to an E-mail address or to a printer. This allows you to perform multiple tests first and then to export the results on a later date.

The results database can be accessed by going to **Main Menu -> Results**.
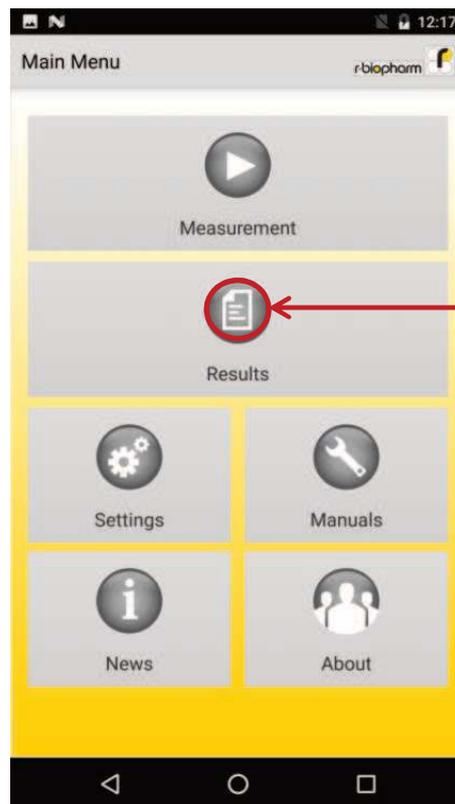
The results database can be accessed by selecting the **Results** button in the main menu

Fig. 25 Results Menu

3.5.1 Search Measurements

The Results menu will direct you to search in the measurements database. The results can be filtered by the Sample ID, Operator, Date of testing, Batch or Product Name. Enter the information in one or more of these filter fields and press the **SEARCH** button.

Enter information into one or more of these filters to search for a result

After setting one or more filters, press the **SEARCH** button
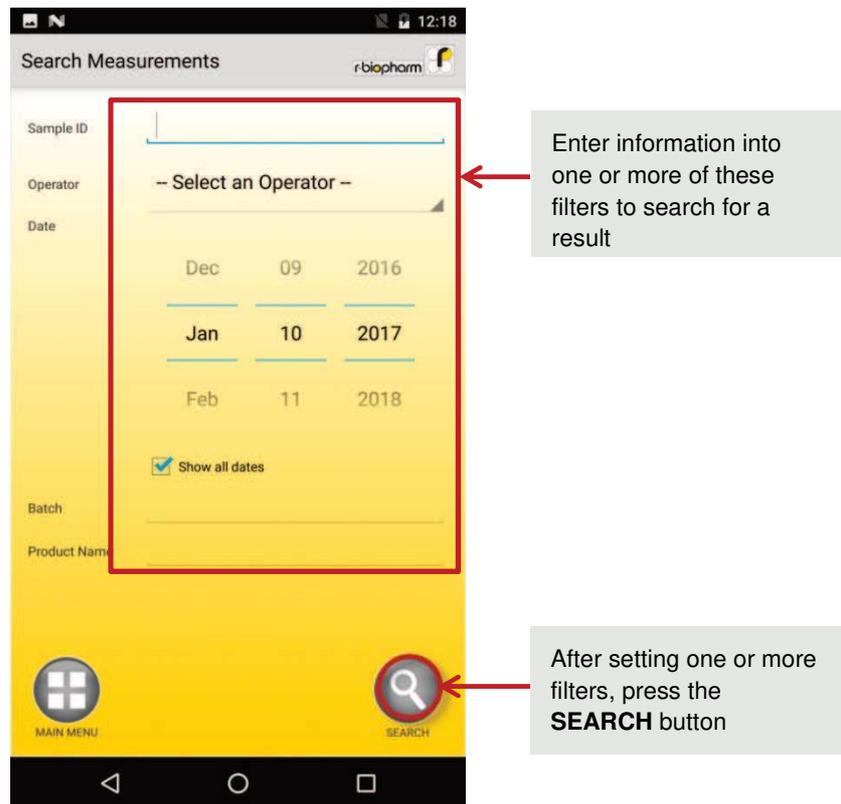
Fig. 26 Search Measurements

3.5.2 Results Database

On the results database page, the user can view, export and delete results.

To view the results on the smartphone, press the **VIEW** button and you will see an image of the control and the test lines, and the test result with other test details.
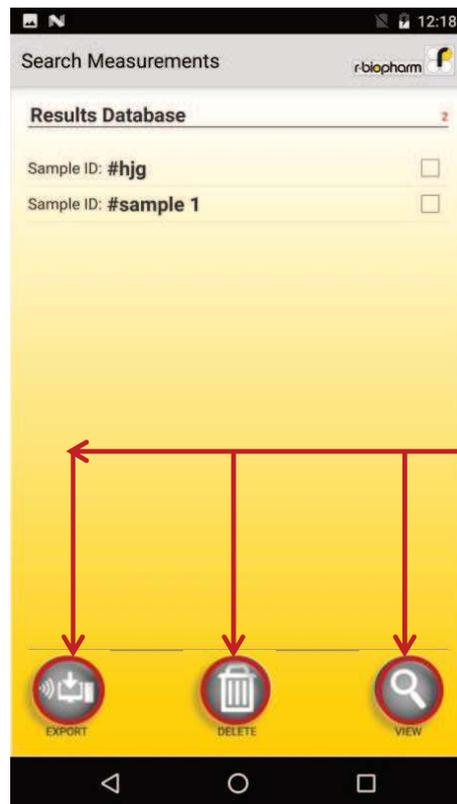
In this menu it is possible to view the results with the **VIEW** button, export the results using the **EXPORT** button and to delete the results using the **DELETE** button

Fig. 27 Results Database

To export the results, press the **EXPORT** button and then select **Email.** A pop-up window will appear which lets you select the export format. It is possible to export the results in the form of a **Summary**, a **CSV** document or a **Detailed** result document attached with an email.

The user can export the result via email in the form of a **Summary**, a **CSV** file or a **Detailed** result file from this pop-up window
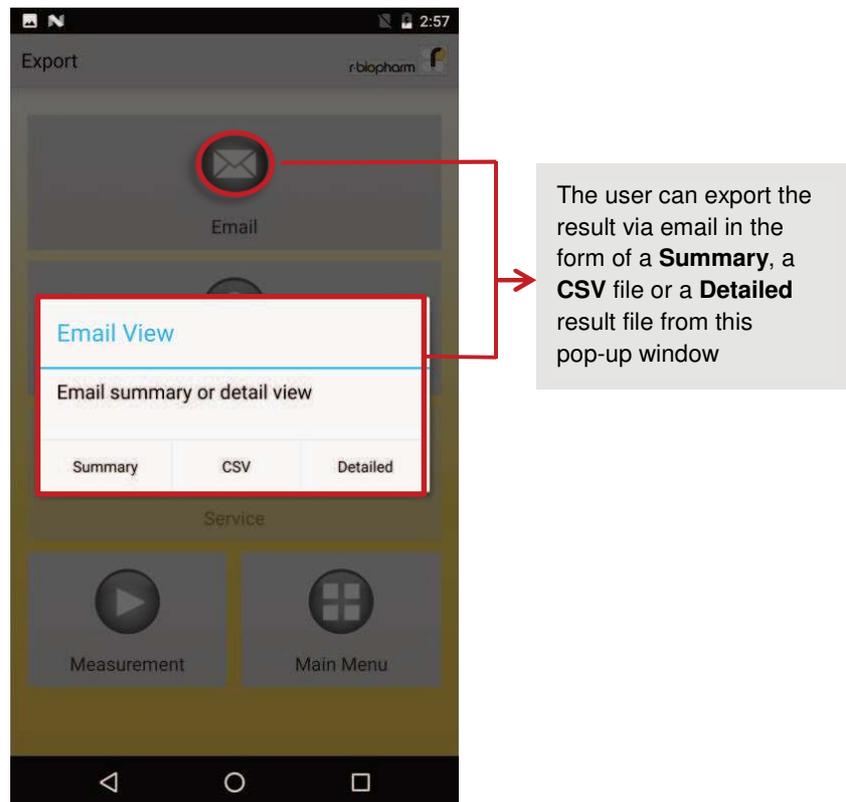
Fig. 28 Export Results

Delete Results from Database

If you want to delete some or all of the results, press the **DELETE** button on the results database page after selecting the results using the check-boxes. Then, a pop-up window will ask you to confirm your choice. It allows you to keep the results using the **Keep** button and to perform either a soft or a hard delete action.
You can perform a soft delete by pressing the **Soft** button. This will only delete the raw images permanently to free some memory. Your result files will still be available to you.
You can perform a hard delete by pressing the **Hard** button. This will delete the raw images of your tests along with your test results permanently.
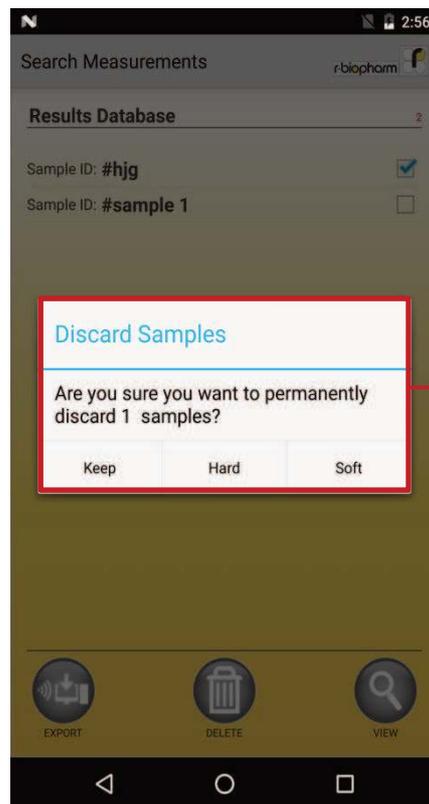
The user can select to **Keep** the data, or to perform a **Hard** or **Soft** delete action from this pop-up window

Fig. 29 Delete Results

4 Customer service information

The RIDA®SMART APP allows you to contact the technical service support in your country directly through the application to discuss difficulties with the analysis of test results and other problems and questions. You can choose this feature in the **Export Options** menu, which is displayed immediately after carrying out a measurement .The **Service** button will guide you to the main window of the **Technical Service**.

For technical requests or problems with test results, you can get in contact with your country's technical support through the button **Service** in the menu **Export Options**
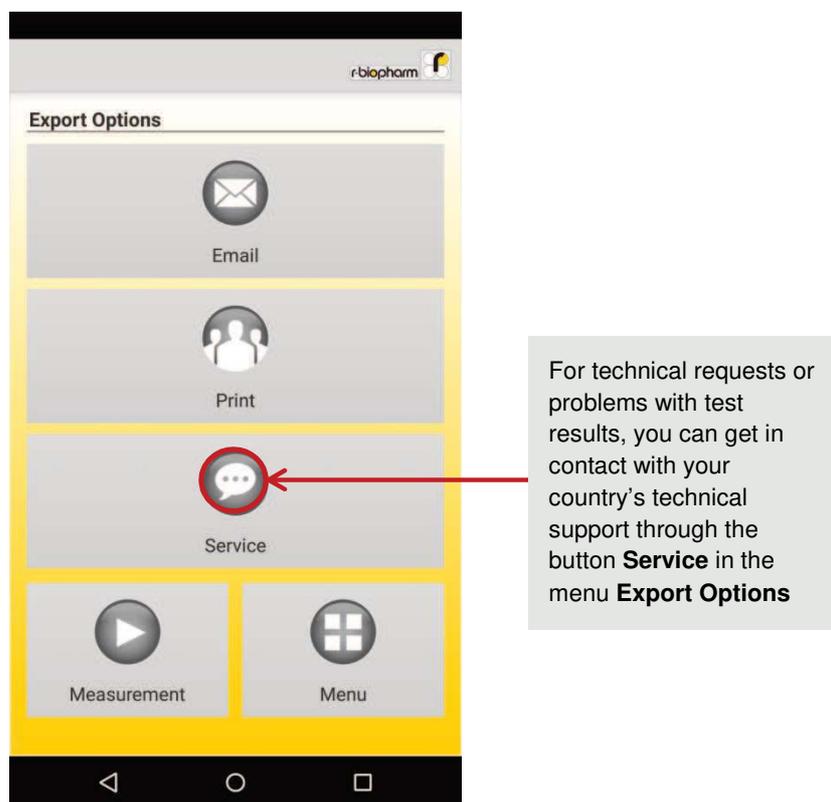
Fig. 30 Export Options Menu

For your request to be processed and answered at the earliest, several details are required regarding your measurement. This information is stored in the menu **Technical Service.** First, you must select the reason for your service request in the **Service Type** field. A drop-down menu allows you to select **Handling Error, Kit Test Error, Matrix, Application, or Software** as the reason. The request will be directed to a field assistant, which you can select in the drop-down menu **Agent**. It automatically displays all field service staff which is responsible for your region. You have already chosen the appropriate location before carrying out the first testing in the main menu under the button **Settings**. Scroll the screen manually to enter further information.

The following questions must be answered:

- To which matrix does your sample belong?
- How was the sample diluted?
- What concentration was adopted by you for calculation?
- What is the specific problem?
- What is your name?
- What is your E-mail address?
- On what phone number are you available?

Please note that only a completely filled out request can be sent to the technical service support.

For sending a request to our technical service, you must enter all the information about your test and your sample in the menu **Technical Service**. You can select the information for the **Service Type** and **Agent** fields using the drop down menus. All other fields need to be filled manually

Only after all the necessary information has been provided, the request can be sent using the button **SEND**

Fig. 31 Service Menu

Your request can be sent using the button **SEND**. The technical service assistant will contact you promptly after receipt of your request.

Note: To forward your request to the technical support team, your Smartphone must be connected to the Internet via WLAN, Bluetooth, USB or a SIM card with a data contract.

5 Additional Options

For more information about the RIDA®SMART APP, additional documents such as the validation report, a quick Starter Guide, and a list of FAQs, please visit our homepage. You are automatically redirected to our homepage via the app if you select the button **Manuals** in the main menu.

You can also select the **News** button in the main menu. It will redirect you to our website www.r-biopharm.com/news. Here, you can get lots of information about our new products.

Note: For visiting the R-Biopharm homepage using the **Manuals** button, your Smartphone must be connected to the internet via Wi-Fi, Bluetooth, USB or a SIM card with a data contract.

By pressing the **Manuals** button, you will be automatically directed to other documents (validation report, FAQ etc.) related to the RIDA®SMART APP

Information about new products can be found on www.r-biopharm.com/news using the **News** button

More information about the RIDA®SMART APP can be found in the **About** menu
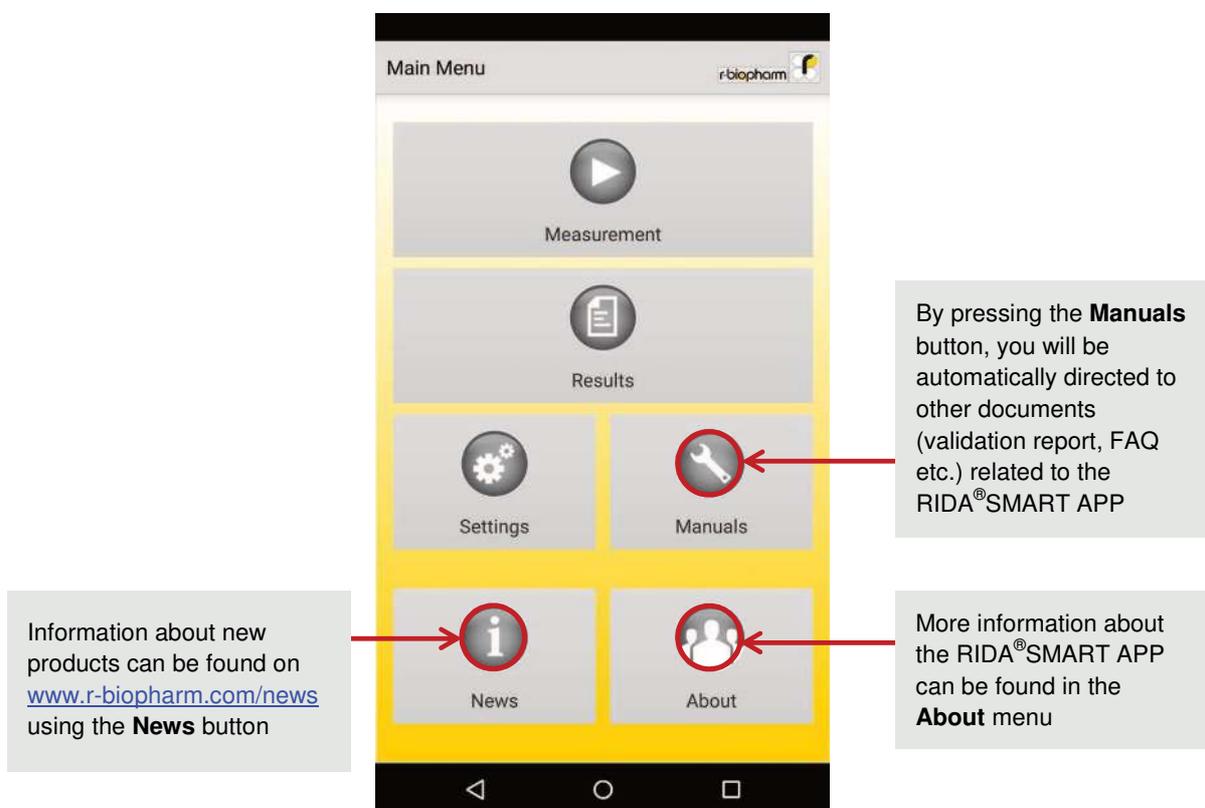
Fig. 32 Main menu

By selecting the **About** button in the main menu, you get additional information about the RIDA®SMART APP.

Fig. 33 App Information

6 Technical Specifications

- **Format:**
  Software: Application for Android 5.1 – Android 7.1.1 operating system from Google

- **Compatibility:**
  RIDA®SMART APP is enabled to be installed and used exclusively on the Android based smartphones Nexus6, Nexus 6P and PIXEL XL

- **Data exports:**
  Export test results to an optional e-mail address, cloud or printer via WiFi, Bluetooth, USB or SIM card with a data contract

- **Data retention:**
  Test results are stored inside the RIDA®SMART APP results database and can be accessed again at any given time

- **Specific for the test systems:**
  R-Biopharm AG RIDA®QUICK RQS product line

7 Proof of manufacturer

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