xChekPlus*

Comprehensive Information Management Software
for Livestock and Poultry Diagnostics

Quick Guide

Test With Confidence™ IDEXX

Contents

IDEXX

1. Introduction

xChekPlus* software is a comprehensive information management system developed by IDEXX specifically for the livestock and poultry industries.

This guide provides the essential information you need to quickly start using xChekPlus software to run IDEXX tests; view, save, and export test results; and run reports.

For detailed information about all xChekPlus features, refer to the *xChekPlus User's Guide*.

2. Working with Templates

2.1 Creating a Template

A template is a map that tells xChekPlus* software how the controls and samples are arranged on test plates.

When you create a template, you specify the location of the samples on the plate and identify the cases to which the samples belong. It is best to build a template **before** reading a plate.

To create a template:

1. Open xChekPlus software.

2. Select **File > Template**. The Template Manager opens.

3. Select an assay from the appropriate species tab and then click **New**. The Template Editor opens, displaying a new template with default control wells.

4. In the Template Name field, type a template name or leave the default name (which is based on the current date).

5. In the table at the bottom of the window, add a case by entering information in the data row below the controls (press the right arrow ➜ or the **TAB** key to move from field to field):

   a. In the **Case** field, enter a case identification number.

   b. In the **Count** field, enter the number of samples in the case.

   c. Enter additional information, such as tube number, age, etc., in the appropriate fields.

      Note: The wells in the plate diagram are marked with the "key code" assigned to this case (the first case is always A).

      Tip: In the template, double-click on Tube Number or Animal ID to open a dialog box; then copy and paste tube numbers or animal IDs from an Excel* spreadsheet into the template.

   d. To enter the next case, press the down-arrow ↓ key or click **New**. The cursor moves to the next data strip.

6. Repeat **step 5** until you've added all the cases for this template.

7. When finished, click **OK** and then click **Done**.

For instructions on using the template to read a plate, see "Reading Plates and Saving Data."

2.2 Inserting and Deleting Cases

Inserting a case places a new case between two cases already in the template.

To insert or delete a case:

1. In the template, decide where the new case should go, and then highlight the case below that location. The new case will be inserted above the case you highlight.

2. Click **Insert** and then enter the case information in the new row.

3. To delete a case, click anywhere in the case row, click **Delete**, and then click **Yes** when prompted to confirm the deletion.

2.3 Moving Controls on Partial Plates

If you are using a partial plate, you may want to move the controls to a new location. Controls must always **precede** the samples on the plate.

To move controls on a partial plate:

1. Create a new template for the partial plate, but do not add case information.

2. In the plate layout, right-click in cell A1, and select **Move Controls**.

3. Choose the row and column where you want to place the controls.

4. Click **OK**.

5. Complete the template as usual, placing all samples after the control wells.

6. If desired, enter case information via the Case Info button.

2.4 Splitting Controls

By default, controls are placed in the upper left corner of the plate. However, you can split controls if needed, by placing one negative and one positive control at the beginning of the plate and one negative and one positive control after the last case on the plate. Many different control combinations are possible using this functionality. The example below is just one possibility.

To split controls:

1. Create a new template, but do not add case information.

2. Click **Controls**, and then drag a negative control and a positive control into the first two empty wells after the well marked with key code "A" in the plate diagram.

3. To remove the extra positive and negative control wells at the start of your plate, right-click on each of the extra control wells in the plate diagram and select **Delete**.

4. Add the case name and sample count to the template and add any additional case information.

5. To add additional cases, click **New** and repeat **step 4**.

6. If desired, enter case information using the Case Info button.

2.5 Adding Internal Control Wells

Internal controls (ICs) can be added to the beginning of the plate directly after the kit controls and before the first case or after the final case.

To add IC wells if using a single plate:

1.   Open a new template and add the cases.

2.   Click the Controls button and drag an IC to the well(s) before the first case or after the final case of the template.

To add IC wells if the case will extend onto a second plate:

1.   Open a new template and click the Controls button.

2.   From the Control Wells dialog box, drag an IC into the first empty well before or after Key Code A.

3.   Add the case name(s) and sample count to the template.

2.6 Adding Additional Case Information

You can add additional case information as you build a template; immediately after reading plates; or later, by opening a saved data file.

To add case information as you build a template:

1.   In the template, click in the data strip for the case you want, and then click **Case Info**.

     The case dialog box opens. It displays the case number for the currently selected case.

2.   On the Case tab, enter or select information for the current case, as needed.

3.   On the Population tab, enter or select information for the population, as needed.

4.   To enter case information for another case, use the scroll arrows at the bottom of the window to select the case, and then repeat **steps 2–3** to enter case and population information.

5.   When finished, click **OK** to save the case information.

2.7 Adding Animal Information to be displayed in the Bovine Pregnancy Report

The IDEXX Bovine Pregnancy Report allows for additional animal information.

To add animal information to be displayed in the Bovine Pregnancy Report:

1. When creating a bovine pregnancy template, double-click any cell for the first case.

   The Animal Information Screen dialog box opens.

2. Add the information, as needed, by double clicking in the cell you want. The cursor will be active so you can enter additional information.

3. To add information for other samples in this case, click **Add** or arrow down to the next sample row and enter the information.

4. If some of the animal information is the same for all animals in the case, you can copy the information.

   a. Enter the information for the first sample in the case, highlight the well containing the information to be copied and click Copy. You will see this message:"Do you want to copy the case sample data of the selected record to all other records?"

   b. Click **Yes**. The information from this column is entered for all samples in the case.

5. When finished, click **Save**.

6. Repeat **steps 1–5** for other cases in the template.

3. Reading Plates and Saving Data

3.1 Reading Plates and Saving Data in the Database

To read plates and save data in the xChekPlus* database:

1. Select **File > Read**.

2. Select an assay from the appropriate species tab.

3. Select the template you created for this test run, and then click **Read**.

4. Follow the on-screen prompts to load the plate (or plates) in the reader.

   The xChekPlus software displays the results in the Test Results dialog box.

5. To save the data in the database, click **Save** on the toolbar, or select **File > Save**.

6. To close the window, click the **X** in the upper right corner.

3.2 Saving Data Outside the Database

When test results are displayed in the Case View tab of the Test Results dialog box, you can save the results to an Excel* file or to a .txt (text) file. For another option, see "Exporting Data to a Database."

To save data outside the database:

1. Confirm that the variables (columns) you want to be exported are displayed in case view. To deselect or select additional variables, click on the **Variables** button and make your modifications.

2. Select **File > Save As**.

3. In the Save As dialog box, select the location in which to save the file, enter a file name, and choose the file type (Excel 97-2003 Workbook or Text File).

4. Click **Save**.

3.3 Printing Data

From the Test Results dialog box you can print various views of the result data.

To print data:

1. Save the test results by clicking the **Save** icon. You cannot print result data until it has been saved.

2. In the Test Results dialog box, select the tab for the view you want to print.

3. Click **Variables**, choose the variables to include, and click **OK**.

4. Click **Print** 🖶 on the toolbar, or select **File > Print**.

5. In the Printout Options dialog box, select the type of printout from the list on the right, and then select from the available options.

    Different options become available, depending on the printout.

6. Click **OK** to see a preview of the printout.

7. In the Preview window, click the **Print** button 🖨 on the toolbar, and then click **Print** in the Print dialog box.

8. To close the Preview window, click the **X** in the upper right corner.

3.4 Retrieving and Viewing Saved Data

To retrieve saved data, you must specify filter criteria to retrieve the cases from the database and then select the cases from the search results list.

The filter criteria window is also used when you export a file and when you generate reports.

To retrieve and view saved data:

1. Select **File > Open**. The Filter Criteria window opens. It contains two tabs, Quick Search and Detailed Search.

2. Click **All** to clear any previous criteria.

3. On the Quick Search tab, enter a date, range of dates, case, or range of cases, or select the desired assay(s).

4. On the Detailed Search tab, specify additional criteria, as needed. Be sure to check the box for "Display Field in Selection List," so the information will be displayed in the next screen.

5. Click **Find Cases**.

    A list of the cases found is displayed in the Select Cases dialog box.

6. Select the individual cases you want from the list and click **OK**.
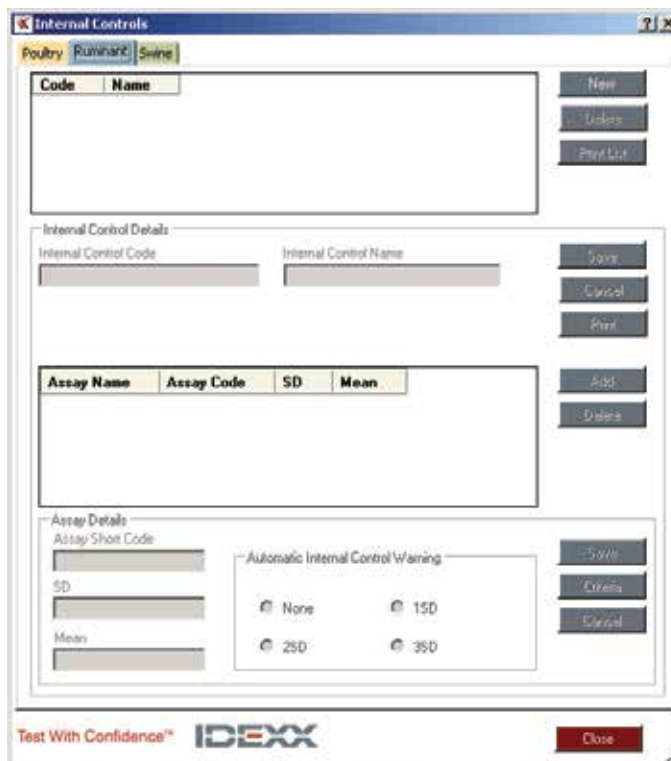
4. Creating Internal Controls

The Internal Controls dialog box allows you to create or edit internal controls before using them in a template and it allows you to delete internal controls.

To Create a New Internal Control:

1. Choose **Database**> **Internal Control** from the menu bar. The Internal Controls dialog box opens.

2. Select the tab you want, and then click the **New** button. A new row with a default internal control code and name is added to the list.

3. Modify the default code and name in the **Internal Control Code** and **Internal Control Name** box, respectively.

    Note: The internal control code has a maximum of eight characters which can consist of letters and numbers. The internal control name has a maximum of up to 20 characters and can be composed of letters, numbers or letters and numbers.

4. Click the **Add** button. The Assay Details dialog box opens.

5. Select the assays to which the internal controls will apply, and click the **Select** button. The assays are displayed in the Internal Control Details section. You must select assays for each internal control you add.

    Notes:

    • To select multiple assays, hold down the CTRL key while selecting additional assays.

    • To delete assays from the list in the Internal Controls dialog box, select the assay name, and then click the **Delete** button.

6. Click the **Save** button in the Internal Controls Details section to save the details.

7. Setting an internal control warning causes xChekPlus to display an alert if the internal control is outside of the specified SD range.

    Type the SD and mean value in the **SD** and **Mean** box, respectively, in the Assay Details section.

    This information is optional. Most users run the internal control 20–30 times before generating the SD and mean for the internal control. The xChekPlus software can retrieve the internal control data stored in the database and use it to calculate the mean and SD via the Criteria button.

8. Select **None**, **SD1**, **SD2**, or **SD3** in the **Automate Internal Control Warning** section.

9. Click the **Save** button to save the details.

5. Generating Reports

To run a report, you must first specify filter criteria to retrieve the cases from the database. xChekPlus* software saves the filter criteria from report to report during the software session, so you can easily produce different reports for the same cases.

This section explains the basic steps needed to run most reports, and includes more detailed instructions for the Compare Case and the Internal Control Tracking reports. For information about all reports available in xChekPlus software, see the *xChekPlus User's Guide*.

5.1 Basic Steps for All Reports

To generate a report:

1. From the Reports menu, select the type of report you want. The Filter Criteria dialog box opens.

2. In the Filter Criteria dialog box, enter search criteria and then click **Find Cases**.

3. In the Select Cases dialog box, select the cases you want and then click **Reports**.

4. In the report options dialog box:

    a. Select the Block Report and the Graph Report options you want to include in the report.

    b. Click **Variables** to see the variables that will be included in the report by default; change the selections as needed and click **OK**.

    c. Click **OK** to save the options. The report opens.

5. Click **Print** 🖨 on the toolbar to print the report.

6. Click **Export** 📄 to save the report in any of these formats: .pdf, .xls, .doc, .rtf

7. To close the window, click the **X** in the upper right corner.

To email any xChekPlus report directly from the report window:

1. Click on the email icon 📧 in the report tool bar. The Save As dialog box opens.

2. Navigate to the location where you want to save the file, name the file, select the file type, and click **Save**.

3. An email message box opens with the report attached. Address the email and send.

5.2 The Compare Cases Report

In the Compare Cases report, multiple cases are grouped together for comparison. All the case components are printed first, followed by all of the graph components.

To generate a Compare Cases Report:

1. Follow **steps 1–4** under "Basic Steps for All Reports."

2. Select the cases that you want to group together on the same page, and then click **Grouping**.

    Tip: Use SHIFT+click or CTRL+click to select multiple cases.

3. Repeat **step 2** to group additional cases, until all cases have been grouped.

4. When finished, click **Done**. The report opens.

5. Click **Print** on the toolbar to print the report.

6. Click **Export** to save the report in any of these formats: .rpt, .pdf, .xls, .doc, .rtf

7. To close the window, click the **X** in the upper right corner.

5.3 The Internal Control Tracking Report

To generate an Internal Control Tracking Report:

1. From the Reports menu, select **Internal Control Tracking Report**.

2. In the Filter Criteria dialog box, enter the date range in which the controls were created, or delete the values in the date fields to include all dates.

3. Select the assay for which the controls were created, and then select the specific internal control code.

4. Click **OK**.

5. Select the Block Report and the Graph Report options you want to include in the report.

6. Click **OK**. The report opens.

7. Click **Print** on the toolbar to print the report.

8. Click **Export** to save the report in any of these formats: .rpt, .pdf, .xls, .doc, .rtf

9. To close the window, click the **X** in the upper right corner.

6. Working with Databases

6.1 Exporting Data to a Database File

Exporting data is useful for transferring large amounts of data from one xChekPlus* database to another.

To export data to a database file:

1. Select **File > Export > Selected Cases**.

2. In the Filter Criteria dialog box, enter search criteria and then click **Find Cases**.

3. In the Select Cases dialog box, select the cases to export and then click **OK**.

4. Select the location to save the exported data.

5. To save the data in a new database file, enter a unique file name, select **MS SQL Server Compact Edition (*.sdf)** as the file type, and then click **Save**.

   OR

   To add the data to an existing database file, select the existing file and click **Save**. A message warns that the file exists and asks whether to overwrite or append the data. Click "**No**" to append the data instead of overwriting the data.

   IMPORTANT: If you click Yes, xChekPlus deletes all the existing data and replaces it with the newly exported data.

6.2 Importing Data into the Current Database

Importing lets you combine data from multiple xChekPlus databases.

Tip: If the file you want to import is on a USB flash drive, copy the file to your hard drive first, and then follow the steps below.

To import a database file:

1. Select **File > Import**. The Import dialog box opens.

2. Click **Browse**.

3. Select the database file you want to import (it will have a .sdf extension) and then click Open.

   The Import dialog box displays a list of cases in the file.

4. If any of the case names match those in the database, select which version to keep.
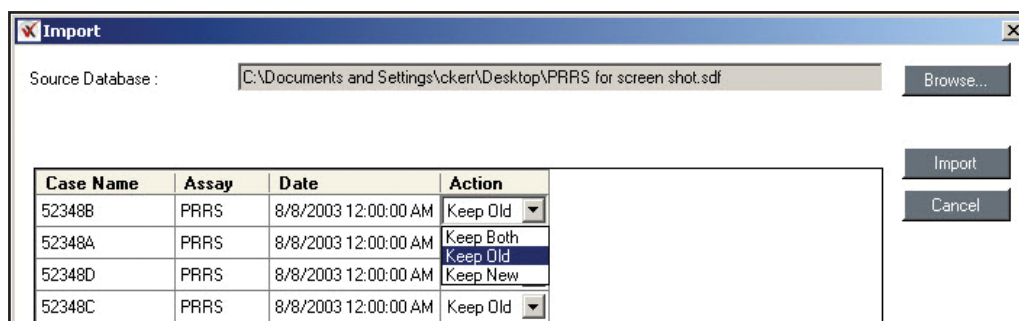
5. Click **Import**, and then click **Yes** to confirm.

   The data from the imported database is appended to your current database.

6.3 Compressing (Zipping) a Database

You can compress a large database to a smaller size so that it fits onto a flash drive or can be sent by email.

To compress a database file:

1. Navigate to the database file you want to compress.

2. Right-click the database file name and select **Send to > Compressed (zipped) folder**.

    A compressed version of the database file, with a .zip extension, is created in the same folder as the original file. The original file is unchanged.

6.4 Extracting (Unzipping) a Database

To use a database that has been compressed, you must extract (unzip) the compressed file.

To extract a compressed database file:

1. Navigate to the compressed (zipped) database file.

2. Right-click the file name and select **Extract All**.

3. Follow the prompts. The extraction steps may vary depending on your operating system and extraction program.

7. Moving Data by Email

7.1 Exporting and Sending Data

To send data by email, you can always attach a database file to an email message. However, a quicker way is to use the xChekPlus* "Export and Send" feature, which requires fewer steps.

To export and send a database file:

1. Select **File > Export > Export and Send**.

2. In the Filter Criteria dialog box, enter search criteria and then click **Find Cases**.

3. In the Select Cases dialog box, select the cases to export and then click **OK**.

4. In the Save As dialog box, navigate to the location where you want to save the exported data.

5. Enter a file name, select **MS SQL Server Compact Edition (*.sdf)** as the file type, and then click **Save**.

    Your email application opens automatically and displays a blank email message with the compressed database file attached. The file has a .sdf.gz extension.

    Note: An extraction program such as WinZip* is needed to extract a .gz file.

6. Enter the recipient's email address, a subject, a message (if needed) and send the email.

7.2 Importing an Emailed Database

To open a database file sent as an email attachment:

1. Open the email message containing the database file attachment.

2. Save the attachment to your hard drive. Refer to section 5.4 Extracting (Unzipping) a Database.

3. In xChekPlus, import the file as explained under "Importing Data into the Current Database," above.