

IDEXX xChek*: Creating a User-Defined Assay for the Pourquier* Bovine Leukosis Serum Verification ELISA

Creating a user-defined assay is an easy process of two tasks—editing an xChek file to allow you to create an assay, and then creating the assay within xChek.

To edit the xChek.ini file:

1. From the task bar, choose **Start> Run** and type “xchek.ini” into the text box. Click the **OK** button.
2. After the xChek.ini file opens, locate the line labeled “AllowNewAssays.”
3. If the value for that line is “0,” change it to “1.” If the value is already “1,” do not do anything.
4. Locate the line labeled “Basic Graphs” and scroll to the end of the section.
5. Enter “BLVvS-PQ=17.”
6. From the menu bar, choose **File> Save**, and then choose **File> Exit**.

To create the assay:

1. From the task bar, choose **Start> Programs> xChek> xChek** to open the xChek program.
2. From the menu bar, choose **Database> Assays> All** to open the Assay dialog box.
3. Click the **New** button and enter “Pourquier Bovine Leukosis Serum Verification ELISA” into the Name field, “BLVvS-PQ” into the Code field and “unknown” into the Kit Lot field. Today’s date (mm/dd/yyyy) is automatically entered into the Expiration field.

NOTE: When you begin testing, update the information in the Kit Lot and Expiration fields with the actual kit lot number and expiration date.

The screenshot shows the 'New Assay' dialog box with the following fields and values:

- Name: Pourquier Leukosis Serum Verification ELISA
- Code: BLVvS-PQ
- Kit Lot: unknown
- Expiration: 10/10/2007
- Comment: (empty)

Buttons on the right: OK, Cancel, New, Delete, Print.

Buttons at the bottom: Basic, Calculations, Titers, Bins.

Status bar: Assays

4. Click the **Basic** button and select or enter the following information for the respective fields:

Case Type: Animal	Samp Filter: 450
Template: BLVv Vert	Ref. Filter: 0
Species: Cattle	Dilution: 20
Technology: ELISA	Wells: 2

NOTE: The Pourquier Leukosis assay has a negative and a positive control configuration in the insert that is not supported by the IDEXX xChek software. The assay has been set up in xChek to have a vertical control configuration. Therefore, place negative controls in wells A₁ A₂ and B₁ B₂ and positive controls in wells C₁ C₂ and D₁ D₂.

5. Click **OK** to save the settings.
6. Click the **Calculations** button and select or enter the following information:

Formulas:

“S” Part of Ratio: Sample2 – Sample1

“P” Part of Ratio: Positive2 – Positive1

“N” Part of Ratio: None

Blocking Factor: None

First Calculation:

Variable: S/P

Positive Cutoff: 1.15

Suspect Cutoff: 0.86

Comparison: >=

Second Calculation:

Variable: None

Positive Cutoff: 0

Suspect Cutoff: 0

Comparison: None

NOTE: xChek does not support the S/P % calculation. Instead, xChek calculates an S/P value. The cutoff values have been updated to match the new calculation and the interpretation is the same.

7. Click **OK** to save these settings, and then click **OK** again to save the assay to the database. You can now test for antibodies against Leukosis using the xChek Assay Management System.

NOTE: xChek does not evaluate controls or results for validity when you use a user-defined assay. You must evaluate the results from each assay in accordance with good laboratory practices. To evaluate your assay validity, refer to the “Validation Criteria” section in the insert provided with the test kit.

Setting Up Additional Display Variables

Only OD values are displayed in the reporting options for this user-defined assay. To set up additional display variables, follow the directions below.

1. From the xChek menu bar, choose **Reports > Analyze Cases** to open the Filter Criteria for Analyze dialog box.
2. Enter the desired search criteria and click **OK**. The Select Cases for Analyze dialog box appears.
3. Select the desired cases and click **OK**. The Analyze Report dialog box appears.

Analyze Report

Case Options

- Show Block Reports
- Show Statistics
- Show Controls
- Show NHC Wells
- Show Original ODs
- Show Comments
- Show Kit Lot/Expiration
- Single Column

Graph Options

- Show Graphs
- Show Statistics
- Show Key
- Color Graphs
- Stats on Top

Mean

- Arithmetic
- Geometric

Style

- 2D Histogram
- 3D Histogram

Buttons: OK, Cancel, Variables, Sort, Baseline, Footers

4. Click the **Variables** button to open the Display Variables dialog box.

Display Variables

- Well Type
- Optical Density
- Tube Number
- Sex
- Species
- Breed 1
- Breed 2
- Animal Type
- Animal ID1
- Animal ID2
- Calendar Age
- Breeding Age
- Quality
- Mean Sample
- Sample
- Pos
- Neg
- Blocking
- S/P Ratio
- S/N Ratio
- B/A Ratio
- S/NHC Ratio
- Titer
- Titer Log2
- Titer Group
- Result

Buttons: OK, Cancel

5. Select the desired options and click **OK**. Click **OK** again to save the settings.

For more information, call IDEXX Switzerland AG 41-41970-6260, contact your area manager or visit us on the Web at idexx.com.

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