

IDEXX xChek*: Creating a User-Defined Assay for the Avian Pneumovirus (APV) Antibody 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. 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 “Avian Pneumovirus” into the Name field, “APV” into the Code field, “Unknown” into the Kit Lot field and “12/31/2003” into the Expiration field.

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

Case Type: Population	Samp Filter: 650
Template: Poultry Horizontal	
Species: Chicken	Dilution: 500
Technology: ELISA	Wells: 1

5. Click **OK** to save the settings.

6. Click the **Calculations** button and select or enter the following information:

"S" Part of Ratio: Sample1 - Negative

"P" Part of Ratio: Positive - Negative

"N" Part of Ratio: None

First Calculation

Variable: S/P

Positive Cutoff: 0.2

Suspect Cutoff: 0.2

Comparison: >

The screenshot shows the 'New Assay' dialog box with the following settings:

- Formulas:**
 - "S" Part of Ratio: Sample1 - Negative
 - "P" Part of Ratio: Positive - Negative
 - "N" Part of Ratio: None
 - Blocking Factor: None
- First Calculation:**
 - Variable: S/P
 - Positive Cutoff: 0.2
 - Suspect Cutoff: 0.2
 - Comparison: >
- Second Calculation:**
 - Variable: None
 - Positive Cutoff: 0
 - Suspect Cutoff: 0
 - Comparison: None

Buttons: OK, Cancel, Reset

7. Click **OK** to save these settings.

8. Click the **Titers** button and select or enter the information as indicated in the dialog box below:

The screenshot shows the 'New Assay' dialog box with the following titration data:

Titer 1: 397	Titer 10: 17640	Slope: 1.09
Titer 2: 1000	Titer 11: 21000	Intercept: 3.36
Titer 3: 2000	Titer 12: 24720	Base Var: S/P
Titer 4: 3840	Titer 13: 28800	
Titer 5: 5520	Titer 14: 33240	
Titer 6: 7440	Titer 15: 38040	
Titer 7: 9600	Titer 16: 43320	
Titer 8: 12000	Titer 17: 49080	
Titer 9: 14640	Titer 18: 55320	

Buttons: OK, Cancel

9. Click **OK** to save these settings, and then click the **OK** button to save the assay to the database. You can now test for APV 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.

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
- S/P Ratio
- S/N 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 Technical Services at 1-800-548-9997 (in the U.S.) or 1-207-856-0890 (outside of the U.S.), or visit us on the Web at idexx.com.

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LABORATORIES

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