

# DIAGNOSTIC RAPID TESTS



ZOETIS  
PETCARE



WITNESS®

With diagnostic rapid tests from Zoetis, you get more of what you want and less of what you don't want: more options, more confidence, less hassle, less waiting. VETSCAN® and WITNESS® diagnostic rapid tests offer you the flexibility to do single or multiplex testing, so you can test for what is needed to make the right clinical decisions, and prevent wasted time and expense. Get accurate, fast, and clear point-of-care results with Zoetis.

Zoetis investigates all reported discrepant or unexpected results.

**VETSCAN Technical Support**

24/7  
1 800 822 2947

Confirmation testing available for:

VETSCAN Flex4  
VETSCAN Heartworm  
VETSCAN Lyme  
VETSCAN Anaplasma  
VETSCAN Ehrlichia  
VETSCAN FeLV/FIV\*

**WITNESS Technical Support**

Monday-Friday 9am-7pm ET  
1 888 ZOETIS1 (963-8471)

Confirmation testing available for:

WITNESS Heartworm  
WITNESS FeLV-FIV  
WITNESS FFH

\*Confirmatory FeLV test available, only.

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Ⓢ Also available for tick-borne disease testing

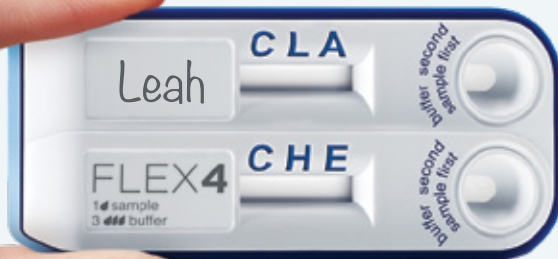
Ⓢ Also available for feline testing

Ⓢ Must be read with the VETSCAN VUE Rapid Test Analyzer



# CANINE INFECTIOUS DISEASE





# FLEX4 Rapid Test

The VETSCAN Canine Flex4 Rapid Test is a convenient and easy-to-use visual rapid test for the qualitative detection of antibodies to *Anaplasma phagocytophilum*, *A. platys*, *Borrelia burgdorferi*, *Ehrlichia canis*, *E. chaffeensis*, *E. ewingii*, and *Dirofilaria immitis* antigens in canine whole blood, serum or plasma.



Read at  
8 minutes

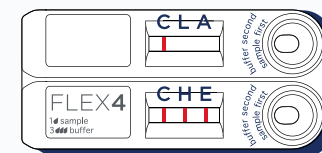
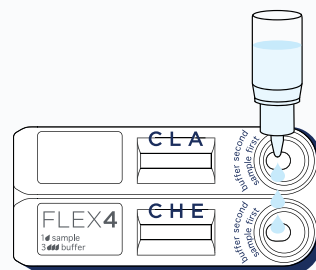
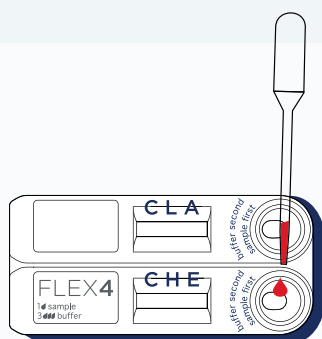


Room temperature  
storage



Available in  
25 test kit

## Test Instructions



**1** Add **1 drop** of anticoagulated whole blood, serum or plasma to each sample well.

**2** Add **3 drops** of the chase buffer provided to each sample well.

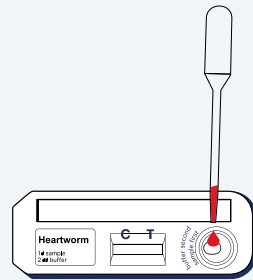
**3** Read results at 8 minutes.  
**Heartworm/Ehrlichia Positive Example**



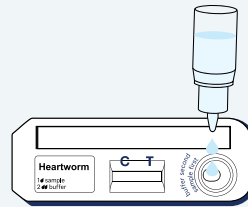
# Heartworm Rapid Test

VETSCAN and WITNESS Heartworm Rapid Tests are convenient, easy-to-use visual rapid tests for the qualitative detection of *Dirofilaria immitis* antigen associated with heartworm disease in dogs and cats.

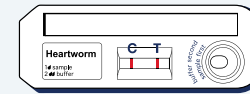
## VETSCAN Test Instructions



1 Add 1 drop of anticoagulated whole blood, serum, or plasma to the sample well.



2 Add 2 drops of chase buffer provided to the sample well.



3 Read results at 10 minutes.  
**Positive Example**



Read at  
10 minutes



Room temperature  
storage

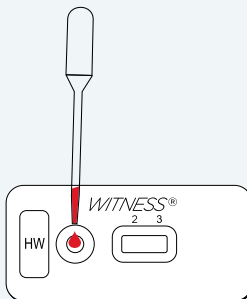


VETSCAN available in  
25 test kit & 100 test kit

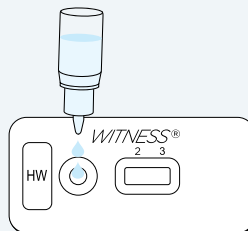


WITNESS available in  
10 test kit & 25 test kit

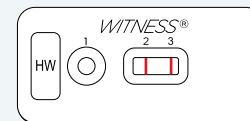
## WITNESS Test Instructions



1 Add 1 drop of anticoagulated whole blood, serum, or plasma to the sample well.



2 Add 2 drops of chase buffer provided to the sample well.



3 Read results at 10 minutes.  
**Positive Example**



# Lepto Rapid Test

WITNESS Lepto detects the primary immune response (immunoglobulin M [IgM] antibodies) that develops within one week of exposure to canine leptospires.<sup>1,2</sup>



Read at  
10 minutes

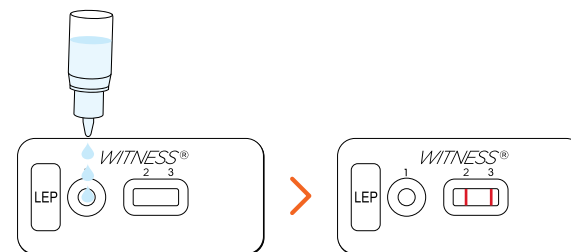
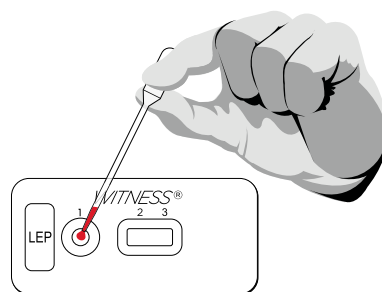
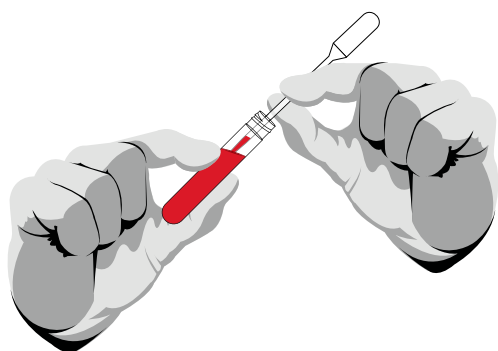


Room temperature  
storage



Available in  
5 test kit

## Test Instructions



**1** Grip the pipette by the stem. Hold a tube of sample and pipette **at an angle** to allow proper filling of pipette. **Without squeezing the bulb**, place the tip of the pipette in the sample. The capillary tube in the pipette will fill automatically in 2-3 seconds.

Remove pipette from sample when the capillary tube has filled.

**2** **Touch** the tip of the pipette to the sample pad and carefully **squeeze** the bulb to express the sample (5 µl), making sure **fingers are covering the vent holes on the pipette bulb**.

**3** Add **3 drops** of chase buffer provided to the sample well. Read results at 10 minutes. **Positive Example**



# TICK-BORNE DISEASE







## Anaplasma Rapid Test

The VETSCAN Canine Anaplasma Rapid Test is a convenient and easy-to-use visual rapid test for the qualitative detection of antibodies to *A. phagocytophilum* and/or *A. platys* in canine whole blood, serum, or plasma.



## Lyme Rapid Test

The VETSCAN Canine Lyme Rapid Test is a convenient and easy-to-use visual rapid test for the qualitative detection of antibodies to *Borrelia burgdorferi* in canine whole blood, serum, or plasma.



## Ehrlichia Rapid Test

The VETSCAN Canine Ehrlichia Rapid Test is a convenient and easy-to-use visual rapid test for the qualitative detection of antibodies to *E. canis*, *E. chaffeensis*, and *E. ewingii* in canine whole blood, serum, or plasma.



Read within  
8-10 minutes

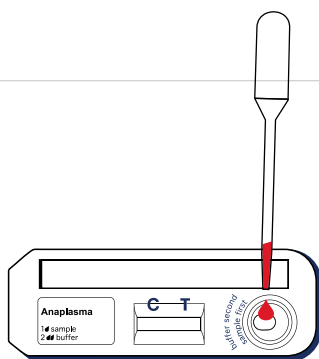


Room temperature  
storage

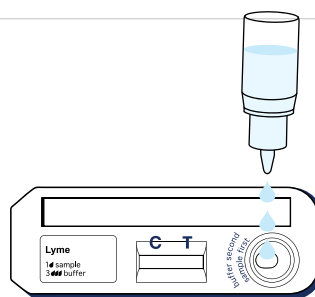


Available in  
25 test kit

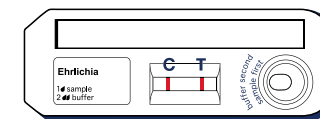
## Test Instructions



**1** Add **1 drop** of anticoagulated whole blood, serum, or plasma to the sample well.



**2** Add **3 drops** of chase buffer provided to the sample well.



**3** Read results within 8-10 minutes.  
**Positive Example**

# FELINE INFECTIOUS DISEASE

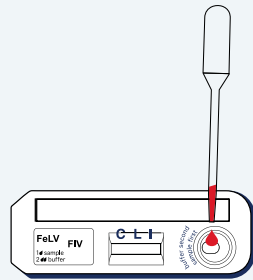




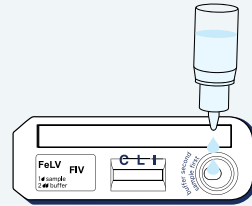
# FeLV/FIV Rapid Test

VETSCAN and WITNESS FeLV/FIV Rapid Tests are convenient, easy-to-use, in-clinic test kits for the qualitative detection of feline leukemia virus antigen and feline immunodeficiency virus antibodies in feline whole blood, serum, or plasma.

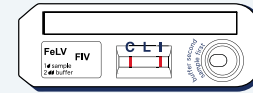
## VETSCAN Test Instructions



- 1 Add 1 drop of anticoagulated whole blood, serum, or plasma to the sample well.

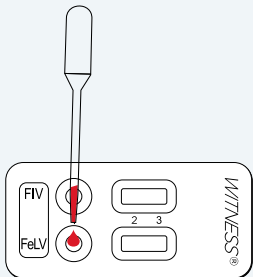


- 2 Add 2 drops of chase buffer provided to the sample well.

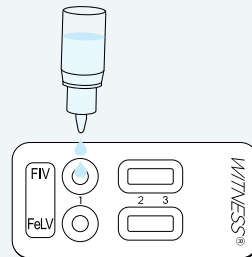


- 3 Read results at 10 minutes.  
**FIV Positive Example**

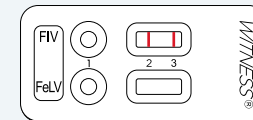
## WITNESS Test Instructions



- 1 Add 1 drop of anticoagulated whole blood, serum, or plasma to each sample well.



- 2 Add 2 drops of chase buffer provided to each sample well.



- 3 Read results at 10 minutes.  
**FIV Positive Example**



VETSCAN now available  
as a single strip test



Read at  
10 minutes



Room temperature  
storage



Available in 10 test kit  
& 25 test kit





## FeLV Rapid Test

WITNESS FeLV is a convenient, easy-to-use, in-clinic test that detects the presence of the feline leukemia virus antigen that is found in high levels in infected cats. Antigen test results are not affected by FeLV vaccination or maternal antibodies. Kittens can be tested at any age.



Read at  
10 minutes

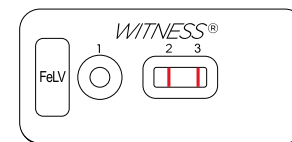
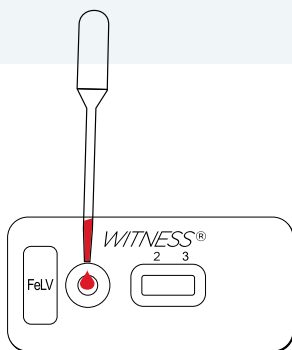


Room temperature  
storage



Available in  
10 test kit

### Test Instructions



**1** Add **1 drop** of anticoagulated whole blood, serum, or plasma to the sample well.

**2** Add **2 drops** of chase buffer provided to the sample well.

**3** Read results at 10 minutes.  
**Positive Example**



## FFH Rapid Test

WITNESS FFH is a triple test kit that detects antigens to feline heartworm and feline leukemia (FeLV) and antibodies to feline immunodeficiency virus (FIV).



Read at  
10 minutes

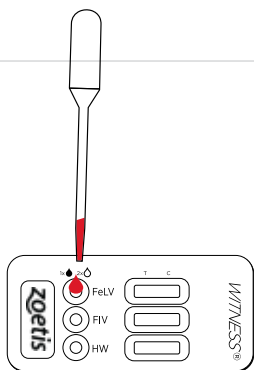


Room temperature  
storage

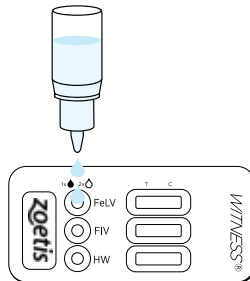


Available in  
10 test kit

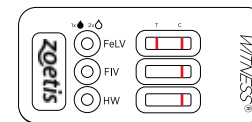
## Test Instructions



**1** Add **1 drop** of anticoagulated whole blood, serum, or plasma to each sample well.



**2** Add **2 drops** of the chase buffer provided to each sample well.



**3** Read results at 10 minutes.  
**FeLV Positive Example**



**FECAL**







# Parvo Rapid Test

VETSCAN and WITNESS Parvo Rapid Tests are convenient and easy-to-use in-clinic tests for the qualitative detection of parvovirus antigens in canine feces.<sup>3</sup>

## VETSCAN Test Instructions

- 1 Coat the swab uniformly with a thin layer of sample. > Break the seal to release sample diluent. > Squeeze the bulb **5 to 6** times to completely mix the sample.
- 2 Transfer **3 drops** of sample into the sample well.
- 3 Read results within 10-15 minutes. **Positive Example**

## WITNESS Test Instructions

- 1 Dispense buffer into tube up to graduation mark. > Collect feces swab and insert it into the tube. Tap to mix. > Break the top of the swab at the blue line.
- 2 Invert and use the device to dispense **5 drops** of sample.
- 3 Read results at 10 minutes. **Positive Example**



Read VETSCAN within 10-15 minutes



Read WITNESS at 10 minutes



Room temperature storage



VETSCAN available in 10 test kit & 20 test kit



WITNESS available in 5 test kit



## Giardia Rapid Test

The VETSCAN Canine Giardia Rapid Test is a highly sensitive and specific test for the qualitative detection of Giardia cyst antigens in canine feces.

### Test Instructions

- 1 Coat the swab uniformly with a thin layer of sample. > Break the seal to release sample diluent. > Squeeze the bulb **5 to 6** times to completely mix the sample.
- 2 Transfer **3 drops** of sample into the sample well.
- 3 Read results within 10-15 minutes. **Positive Example**



Read within  
10-15 minutes



Room temperature  
storage



Available in 10 test kit  
& 20 test kit

### Sample Collection Guide for Fecal Rapid Tests



The sample amount is insufficient and **not recommended** for testing.



The swab is coated uniformly with a thin layer of sample. **It is recommended** to use this amount of fecal sample for testing.



The sample amount is excessive and **not recommended** for testing.



# PANCREATIC







## cPL Rapid Test

The VETSCAN Canine Pancreatic Lipase (cPL) Rapid Test is a convenient and easy-to-use in-clinic test for the semi-quantitative detection of pancreas-specific lipase in canine serum or plasma.

Ⓢ Must be read with the VETSCAN VUE Rapid Test Analyzer



Must be read with  
the VETSCAN VUE

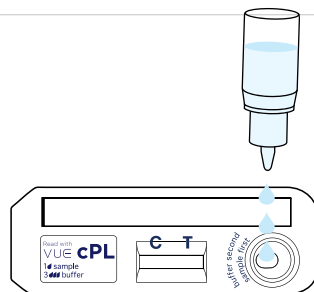
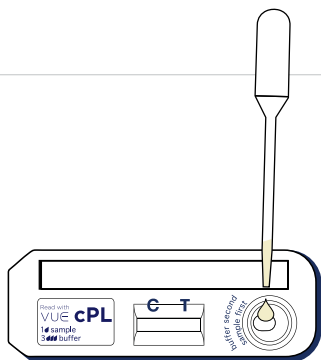


Room temperature  
storage



Available in  
10 test kit

### Test Instructions



**1** Add **1 drop** of serum or plasma\* to the sample well.

\*Serum or plasma only - no whole blood

**2** Add **3 drops** of Chase Buffer to the sample well.

**3** Insert cassette into VUE. Initiate a Timed Scan in the VUE app.

Check mobile device display for numeric result when timer completes.

# REPRODUCTION





## LH Rapid Test

WITNESS LH helps pinpoint the optimum time for canine breeding by identifying the day of the luteinizing hormone (LH) surge. It may also aid in distinguishing between ovariectomized female dogs or cats from those that are sexually intact.



Read at  
20 minutes



Room temperature  
storage



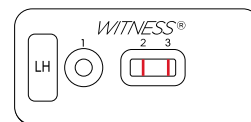
Available in  
6 test kit

### Test Instructions



**1** Add **4 drops** of serum\* to the sample well.

\*Serum only - no whole blood or plasma



**2** Read results at 20 minutes.

**LH Positive Example**

\*Test Line "2" is darker or similar in intensity to Control Line "3"





# Relaxin Rapid Test

WITNESS Relaxin offers an early, reliable means for determining pregnancy status in dogs and cats.



Read at  
10 minutes

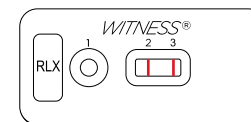
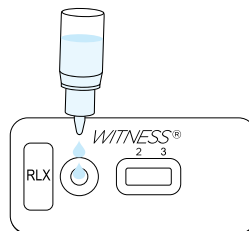


Room temperature  
storage



Available in  
5 test kit

## Test Instructions



**1** Add **2 drops** of serum or plasma\* to the sample well.

\*Serum or plasma only - no whole blood








**2** Add **2 drops** of the chase buffer provided to the sample well.

**3** Read results at 10 minutes.

**Positive Example**







# RAPID TEST ACCURACY




Test	Sensitivity	Specificity	Species	Test Type
 VETSCAN Flex4	See below for Heartworm, Lyme, Ehrlichia, and Anaplasma sensitivity and specificity.			
 VETSCAN Heartworm <sup>4</sup>	98.5%	94.0%	Canine	Antigen
 VETSCAN Lyme <sup>5</sup>	100%	100%	Canine	Antibody
 VETSCAN Ehrlichia <sup>6</sup>	97.4%	97.5%	Canine	Antibody
 VETSCAN Anaplasma <sup>7</sup>	93.3%	96.4%	Canine	Antibody
 WITNESS Heartworm <sup>8</sup>	97.0%	96.4%	Canine	Antigen
 WITNESS Lepto <sup>9</sup>	83.7%	90.2%	Canine	Antibody

Data from USDA submission or recent peer reviewed publications.



	Test	Sensitivity	Specificity	Species	Test Type
	VETSCAN FeLV/FIV <sup>10</sup>	FeLV 94.6% FIV 99.2%	FeLV 99.4% FIV 99.2%	Feline	FeLV - Antigen FIV - Antibody
	WITNESS FeLV/FIV <sup>11,12</sup>	FeLV 92.9% FIV 93.8%	FeLV 96.5% FIV 93.4%	Feline	FeLV - Antigen FIV - Antibody
	WITNESS FFH <sup>13,14</sup>	FeLV 95.9% FIV 100% Heartworm 91.4%	FeLV 98.0% FIV 95.8% Heartworm 99.2%	Feline	FeLV - Antigen FIV - Antibody Heartworm - Antigen
	VETSCAN Giardia <sup>15</sup>	98.1%	99.3%	Canine	Antigen
	WITNESS Parvo <sup>16</sup>	86.3%	96.1%	Canine	Antigen
	WITNESS Relaxin <sup>17,18</sup>	96.4% 100%	100% 95.9%	Canine Feline	Antibody to relaxin hormone

Data from USDA submission or recent peer reviewed publications.

	Test	Level of Agreement	Comparison Standard	Species	Test Type
	VETSCAN cPL <sup>19</sup>	ICC*: 0.96	Spec cPL	Canine	Antibody to canine pancreatic-specific lipase

\*Intraclass Correlation Coefficient (Agreement Scoring)  
cPL does not require USDA licensing.

# LATERAL FLOW TECHNOLOGY



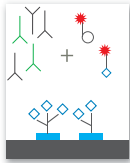
## **HIGHLY ACCURATE RESULTS, DELIVERED THROUGH PROVEN LATERAL FLOW TECHNOLOGY**

Lateral flow technology has served as a reliable tool for efficient diagnosis and patient evaluation in veterinary and human medicine for more than 30 years.

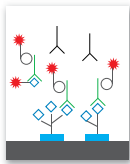


## Antibody Lateral Flow

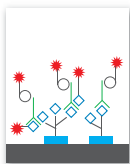
Magnification of the test "T" line



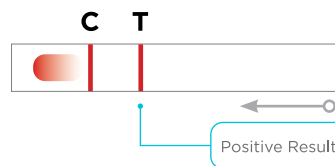
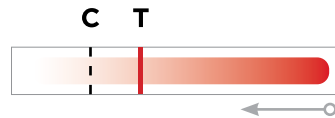
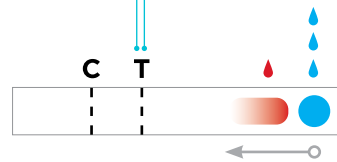
The conjugate pad is pre-treated with specific colloidal gold-conjugated peptides and colloidal gold-conjugated signal amplification proteins. The membrane is pre-coated with antibody specific peptides that have been linked to a protein carrier at the Test "T" line.



When the sample flows through the conjugate pad both colloidal gold conjugates bind to any specific antibodies present in the sample.

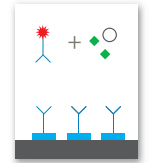


When the gold labeled antibodies reach the test "T" line specific antibodies bind to the test "T" line forming an "amplified sandwich" complex which has been augmented by Abaxis' patented signal amplification technology. The accumulation of the amplified sandwich complexes creates a visible signal.

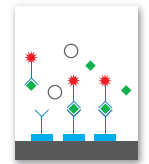


## Antigen Lateral Flow

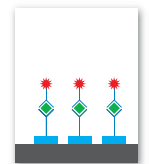
Magnification of the test "T" line



Sample and specific colloidal gold-conjugated antibodies combine in the conjugate pad creating antigen-antibody-gold conjugate. The test is pre-coated with antigen-specific antibodies at the test "T" line.



The conjugates flow across the membrane and bind to the antibodies in the sample line forming a "sandwich".



The accumulation of "sandwich" complexes in the test "T" line creates a visible signal.

◆ Capture Antigen      Y Carrier Protein      \* Gold Nano Particle  
Y Antibody of Interest      Y Generic Antibody      \* Signal Amplification Protein

Y Capture Antibody      ○ Generic Antigen  
\* Gold Nano Particle      ◆ Antigen of Interest

10 Sylvan Way  
Parsippany, NJ 07054 USA  
Tel +1 888 963 8471

3240 Whipple Road  
Union City, CA 94587 USA  
Tel +1 800 822 2947

**zoetisUS.com/dx**

<sup>1</sup> Data on file, Study Report No. BH63W-US-12-029, Zoetis Inc.

<sup>2</sup> Data on file, Study Report No. BH63W-US-16-230, Zoetis, Inc.

<sup>3</sup> Lacheretz A, Laperrousaz C, Kdjo A, et al. Diagnosis of canine parvovirus by rapid immunomigration on a membrane. Vet Rec. 2003;152(2):48-50.

<sup>4</sup> Henry LG, Brunson KJ, Walden HS, Wenzlow N, Beachboard SE, Barr KL, et al. Comparison of six commercial antigen kits for detection of *Dirofilaria immitis* infections in canines with necropsy-confirmed heartworm status. Veterinary Parasitology 2018;254:178–82. doi:10.1016/j.vetpar.2018.02.037.

<sup>5</sup> Data on file, Study Report No. TI-04012, Zoetis Inc.

<sup>6</sup> Data on file, Study Report No. TI-04015, Zoetis Inc.

<sup>7</sup> Data on file, Study Report No. TI-04029, Zoetis Inc.

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<sup>11</sup> Data on file, Study Report No. D880Z-US-14-013, Zoetis Inc.

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<sup>13</sup> Data on file, Study Report No. D880W-US-17-042, Zoetis Inc.

<sup>14</sup> Data on file, Study Report No. D886Z-US-17-043, Zoetis Inc.

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