ZOETIS DIAGNOSTICS

vetscan OptiCell

Accurate automated complete blood count results with advanced AI technology[1]

A validation study evaluated the accuracy and precision* of Vetscan OptiCell™ to the Advia® 2120 Reference Laboratory Hematology Analyzer, according to ASVCP guidelines.

Accuracy Study[1]

The study analyzed anticoagulated (EDTA) blood samples

COLLECTED FROM
113 canines
72 felines

TESTED WITH
2 Vetscan OptiCell analyzers with randomized operators

TESTED FOR
Method comparison with the Advia 2120 and 200-cell manual blood count by a clinical pathologist (for subset of samples)

Study Results[1]

Vetscan Opticell demonstrated excellent agreement for key parameters† vs. the Advia 2120.

Accuracy measurements were determined using Lin's concordance correlation coefficient for most parameters (ρ):[2,3]

INTERPRETATION OF LEVEL OF AGREEMENT[3]

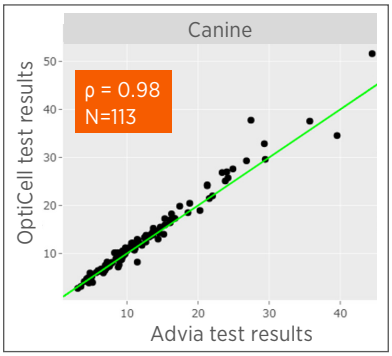
- **Excellent agreement beyond chance** >0.75
- **Good agreement beyond chance** 0.40-0.75
- **Poor agreement beyond chance** <0.40

MINIMAL BIAS

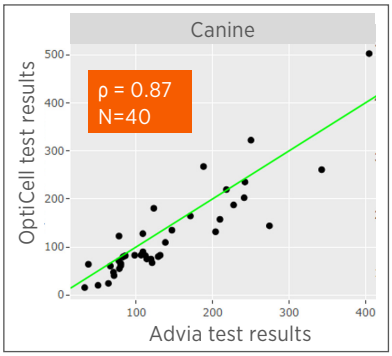
Canine
Minor proportional and constant bias for key analytes

Feline
Minor proportional and constant bias for key analytes

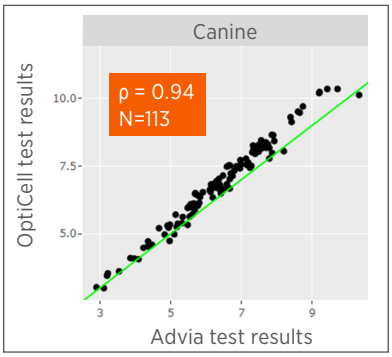
WBC (10^9/L)



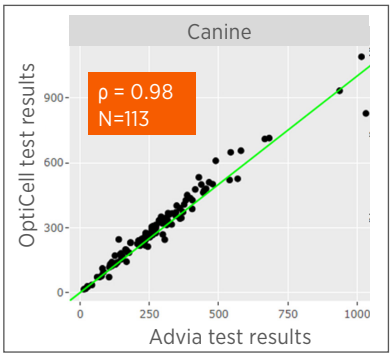
RETIC (10^3/L)



RBC (10^{12}/L)



PLT (10^9/L)



WBC=White Blood Cells, RETIC=Reticulocytes, RBC=Red Blood Cells, PLT=Platelets, ASVCP=American Society of Veterinary Clinical Pathology.
* High accuracy is achieved when an instrument hits the correct target or value. High precision is achieved when an instrument generates consistent results from repeated tests.
† Key parameters include: WBC, RBC, PLT and RETIC.

Reference: 1. Data on file, Study No. DHXMZ-US-24-235, 2024, Zoetis, Inc. **2.** Dawson B, Trapp RG. Basic and clinical biostatistics. 4th ed. Lange Medical Books; 2004:159-174. **3.** Landis JR, Koch GG. The measurement of observer agreement for categorical data. Biometrics. 1977;33(1). https://doi.org/10.2307/2529310https://doi.org/10.2307/2529310
This document contains examples of performance data and is not exhaustive of analysis that was performed in the validation study. Additional data available upon request.

LOOK DEEPER

Learn more at **zoetisdiagnostics.com/opticell**

zoetis

Powerful AI and Viscoelastic Focusing technology enable precise automated complete blood count results[1]

Precision Study

The study analyzed canine EDTA blood samples and tri-level commercial quality control material

TESTED FOR
Precision with canine samples
Precision with tri-level control material

TESTED WITH
2 Vetscan OptiCell analyzers and 40 replicates across both analyzers using 3 control levels

TESTED ON
148 repeat runs using canine samples

Study Results

Vetscan OptiCell demonstrated precise results for key parameters, including PLT, across control levels and clinical samples.[1]

<8.5%
Total precision below 8.5% for most parameters

<5%
Replicate precision was below 5% for most parameters

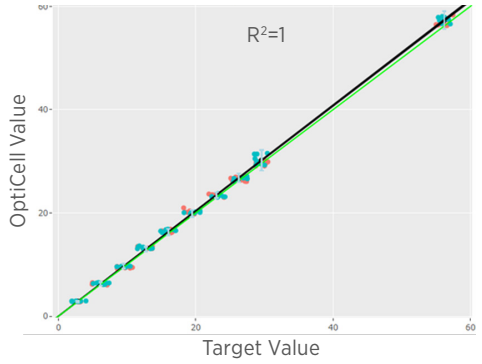
<6.5%
Clinical precision below 6.5% for most parameters

Short term precision with controls[1]

Parameter	Control Level	Mean	SD Total	CV% (Replicate)
RBC (M/µL)	Low	2.67	0.06	2.3
WBC (K/µL)	High	19.41	0.97	3.8
PLT (K/µL)	Low	70.67	2.87	3.5
NEU (K/µL)	High	10.43	0.53	4.5
LYM (K/µL)	High	7.04	0.40	3.8
MON (K/µL)	High	1.43	0.14	7.6

Wide reportable ranges across all parameters[1]

HGB (g/dl): Analyzer A+B



Reportable range analyzed for RBC, WBC, HCT, HGB, and RETICs. Only HGB shown here for example.

Vetscan OptiCell delivers advanced cell focusing with AI–powered technology that evaluates blood cells in their native state

Reference-lab quality
Automated complete blood count results[1]

Viscoelastic Focusing
Enables a cartridge-based design to minimize errors

Detailed flags
Identify abnormal cell morphology

HGB=Hemoglobin, NEU=Neutrophils, LYM=Lymphocytes, MON=Monocytes, SD=standard deviation, CV=coefficient of variation.

Reference: 1. Data on file, Study No. DHXMZ-US-24-235, 2024, Zoetis, Inc.
This document contains examples of performance data and is not exhaustive of analysis that was performed in the validation study. Additional data available upon request.

LOOK DEEPER
Learn more at **zoetisdiagnostics.com/opticell**

zoetis