Literature List – Veterinary

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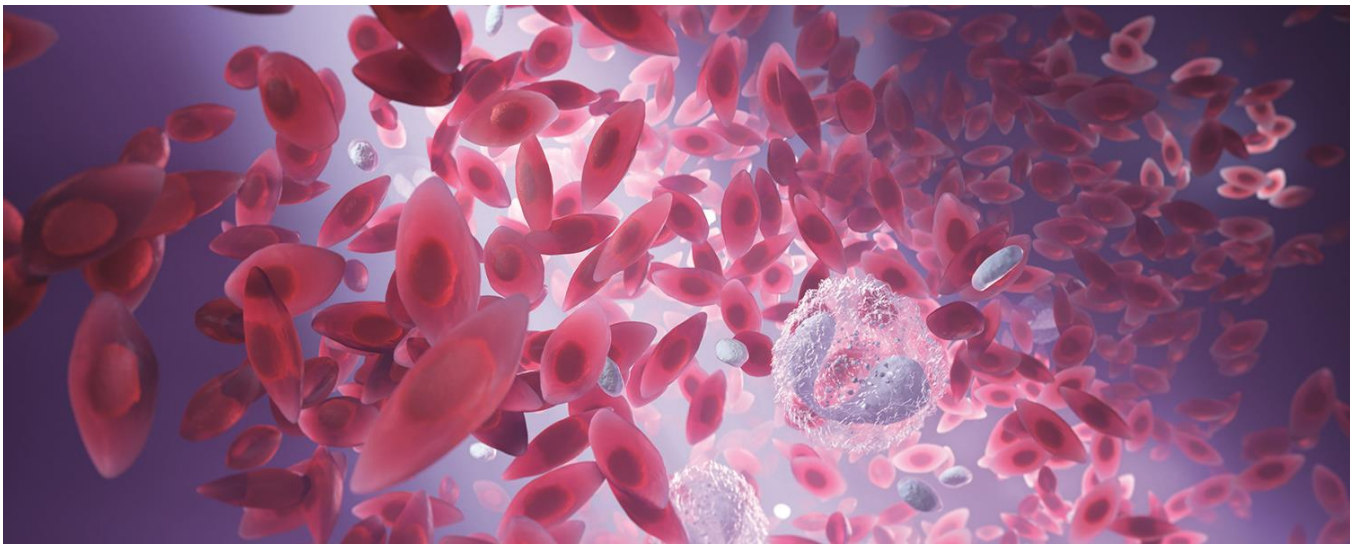
September 2025



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NEW New entries are highlighted by this icon.

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General

Vap LM *et al*. (2012)

ASVCP quality assurance guidelines: control of preanalytical and analytical factors for hematology for mammalian and nonmammalian species, hemostasis, and crossmatching in veterinary laboratories.
Vet Clin Pathol; 41(1): 8

Free online: https://onlinelibrary.wiley.com/doi/10.1111/j.1939-165X.2012.00413.x

Summary: Guideline that provides recommendations for control of preanalytical and analytical factors related to haematology for mammalian and non-mammalian species.

Natibi M *et al.* (2018)

ASVCP guidelines: Allowable total error hematology.
VET Clin Pathol; 47: 9

Free online: https://www.onlinelibrary.wiley.com/doi/epdf/10.1111/vcp.12583

Summary: Recommendations discussing how to perform evaluation of haematological measurements. Definition of Total allowable error (TEa) for the most common analysed haematological parameters are defined.

Cats/Dogs

NEW

Mato-Martin V *et al*. (2025)

Sysmex XN-V scattergrams in feline mastocythemia and basophilia: Two similar but different cases.
Vet Clin Pathol; 54(2): 87

https://onlinelibrary.wiley.com/doi/10.1111/vcp.70006

Summary: The authors describe two feline cases both showing an additional cell cluster in the WDF scattergram erroneously classified as eosinophils, and caused by mast cells and basophils, respectively. While the WNR scattergram of the basophilia case was unremarkable, the mastocytaemia case showed a lyse resistant cell population which agreed with the microscopic mast cell count upon enumeration through manual gating. Visual inspection of scattergrams aids in identifying pathological conditions.

NEW

Lopes R *et al*. (2024)

Feline Infectious Peritonitis Effusion Index: A Novel Diagnostic Method and Validation of Flow Cytometry-Based Delta Total Nucleated Cells Analysis on the Sysmex XN-1000V®.
Vet Sci; 11: 563

Free online: https://www.mdpi.com/2306-7381/11/11/563

Summary: The study presents the diagnostic usefulness of a proposed Feline Infectious Peritonitis (FIP) Effusion Index: a combination of albumin to globulin ratio (ALB/GLOB) plus the difference in total nucleated cells from WNR and WDF of XN-1000V as an exceptionally robust diagnostic tool. FIP effusion index cut-off of >7.54 achieved specificity of 100% and a sensitivity of 96.3%. The article includes a decision tree for the diagnosis of FIP.

Lapsina S *et al*. (2024)

Canine Cerebrospinal Fluid Analysis Using Two New Automated Techniques: The Sysmex XN-V Body Fluid Mode and an Artificial-Intelligence-Based Algorithm.
Animals (Basel); 14(11): 1655

Free online: https://www.mdpi.com/2076-2615/14/11/1655

Summary: In this study comparing automated vs. manual techniques for analysing canine CSF the XN-V BF mode showed correlations of r=0.91 for total nucleated cell count (TNCC) and 0.89 for both MN% and PMN% after applying manual gating and superior precision against manual microscopy in samples with low cellularity (CV 21.5% vs. 47.5%). Further on, the three-part differential (lymphocytes, monocytoid cells, neutrophils) provided by the VS200 AI neural network algorithm on scanned slides was investigated against manual microscopy.

Martinez-Caro J *et al.* (2024)

Cryoglobulinemia concurrent with Leishmania infantum infection in a dog and its interference with two automated hematology analyzers.
Vet Clin Pathol; 54(1): 15

Free online: https://onlinelibrary.wiley.com/doi/10.1111/vcp.13398

Summary: This case report in a dog shows how cryoglobulin interference caused discrepancies between the CBC results from two analysers: XN-1000V and Urit Smart V5. Urit Smart V5 reported false thrombocytosis and leukocytosis, whereas XN-1000V WBC and PLT-F counts correlated with results from manual smear examination, XN-V results from these channels were not affected by this interference.

Martinez-Caro J *et al.* (2024)

Characterization of Feline Basophils on the Sysmex XN-1000V and Evaluation of a New WDF Gating Profile.
Animals (Basel); 14(23): 3362

Free online: https://www.mdpi.com/2076-2615/14/23/3362

Summary: The authors describe that feline basophils can be detected in WDF channel in XN-V. Cases with confirmed basophilia by manual microscopy show an extra cloud in WDF scattergram, located above the eosinophils. The authors propose a manual gate strategy which results correlate with manual microscopy for basophil quantification.

Guerlin M *et al.* (2024)

Validation of the Sysmex XN-V hematology analyzer for feline specimens.
Vet Clin Pathol; 53(3): 294

Free online: https://onlinelibrary.wiley.com/doi/10.1111/vcp.13377

Summary: Validation study in healthy and diseased cats with a wide variety of haematological disorders showed good analytical performance (repeatability, linearity) and correlation with XT-2000iV of r≥0.82 for all variables except reticulocyte indices. Stability was in line with previously published results. Established XT-2000iV reference intervals proved to be transferable to XN-V for most variables except RDW and reticulocytes/fractions. The authors recommended blood smear review of samples with abnormal scattergram patterns, flags, IP messages and suspected PLT clumps and provided case examples for illustration.

Ginders J *et al.* (2024)

Validation of the Sysmex XN-V Automated Nucleated Red Blood Cell Enumeration for Canine and Feline EDTA-Anticoagulated Blood.
Animals (Basel); 14(3): 455

Free online: https://www.mdpi.com/2076-2615/14/3/455

Summary: A large retrospective study comparing manual and automated NRBC counting in 3810 dogs and 2844 cats showed an accurate and precise performance on XN-V. Concordance between methods was high (91% in canine, 93% in feline samples). Repeatability of XN-V was good (4.5% CV), and more precise compared to the manual count (19.6% CV). This technological advancement will save time, increase precision and eliminate undetected normoblastosis. In severe normoblastosis blood smear evaluation is recommended.

Chenal T *et al.* (2024)

What is your diagnosis? Abnormal cluster on the WDF and WNR scattergrams from Sysmex XN-V in a dog.
Vet Clin Pathol; 54 Suppl 1(Suppl 1): S5

Free online: https://onlinelibrary.wiley.com/doi/10.1111/vcp.13362

Summary: Case report on abnormal XN-1000V WDF and WNR scattergram patterns in a canine blood sample caused by ultrasound gel interference.

Perez-Ecija A *et al.* (2024)

Utility of immature platelet fraction in the Sysmex XN-1000V for the differential diagnosis of central and peripheral thrombocytopenia in dogs and cats.
J Vet Intern Med; 38(3): 1512

Free online: https://onlinelibrary.wiley.com/doi/10.1111/jvim.17074

Summary: A large retrospective study in non-thrombocytopenic and thrombocytopenic dogs and cats shows the clinical utility of IPF to differentiate between central (CEN) and peripheral (PER) thrombocytopenia (TP). In both species IPF was significantly different between each subtype of TP, with highest values in PER. Once pseudothrombocytopenia (PSE) was ruled out, cut-off values of 6.9% (dogs) and 13.6% (cats) could differentiate CEN and PER with a sensitivity of 95.1%/94% and a specificity of 94.6%/85.3% (dogs/cats).

Perez-Ecija A *et al.* (2024)

The Immature Reticulocyte Fraction (IRF) in the Sysmex XN-1000V Analyzer Can Differentiate between Causes of Regenerative and Non-Regenerative Anemia in Dogs and Cats.
Animals (Basel); 14(2): 349

Free online: https://www.mdpi.com/2076-2615/14/2/349

Summary: A large retrospective study on IRF in dogs and cats resulted in significantly higher values in haemolytic compared to haemorrhagic anaemias in both species. Cut-off values of 44.7% and 54.3% with a sensitivity of 87.2% and 96.4% as well as a specificity of 71.3% and 80% could be determined in dogs and cats, respectively. IRF was significantly lower in animals with bone marrow failure compared to other non-regenerative and pre-regenerative anaemias. RIs for reticulocyte subpopulations in both species were determined and not influenced by gender.

Jornet-Rius O *et al.* (2023)

Performance of the Sysmex XN-V hematology analyzer in determining the immature platelet fraction in dogs: A preliminary study and reference values.
Vet Clin Pathol; 52(3): 433

Free online: https://onlinelibrary.wiley.com/doi/10.1111/vcp.13241

Summary: Variables derived from the PLT-F channel showed excellent analytical performance in dogs. Immature platelets can be reliably detected up to 24 hours post sampling, but interpretation should be done carefully if haemolysis, lipaemia or platelet clumps are present. The authors suggest using specific reference intervals for samples with confirmed platelet aggregation.

Oritz-Nisa S *et al.* (2021)

Performance of the Sysmex XN-V body fluid module for canine cerebrospinal fluid cell count.
Vet Clin Pathol; 50(3): 359

https://onlinelibrary.wiley.com/doi/10.1111/vcp.12992

Summary: XN-V BF mode is a suitable tool for fast and accurate quantification of total nucleated cells (TNC) in canine CSF samples. The study found good analytical performance of XN-V to detect pleocytosis in comparison with Neubauer chamber (92.6% sensitivity and 94.3% specificity).

Grebert M *et al.* (2021)

Validation of the Sysmex XN-V hematology analyzer for canine specimens.
Vet Clin Pathol; 50(2): 184

Free online: https://onlinelibrary.wiley.com/doi/10.1111/vcp.12936

Summary: The performance of the Sysmex XN-V analyser was excellent and compared favourably with the XT-2000iV. Nevertheless, as recommended for all devices, the automated WBC differential should only be accepted after reviewing the scattergram and a blood smear to validate automated results.

Paltinieri S *et al.* (2018)

Diagnostic performances of manual and automated reticulocyte parameters in anaemic cats.
J Feline Med Surg; 20(2): 122

https://journals.sagepub.com/doi/full/10.1177/1098612X17699067?url_ver=Z39.88-2003&rfr_id=ori:rid:crossref.org&rfr_dat=cr_pub%3dpubmed

Summary: Reticulocyte percentage (Ret%), reticulocyte number (Ret#) and reticulocyte production index (RPI) may be used to differentiate regenerative anaemia (RA) from non-regenerative anaemia (NRA) in cats.

Fuchs J *et al.* (2017)

Canine reticulocyte hemoglobin content (RET-He) in different types of iron-deficient erythropoiesis.
Vet Clin Pathol; 46(3): 422

http://onlinelibrary.wiley.com/doi/10.1111/vcp.12499/abstract

Summary: Based on the study results the authors propose that RET-He can be considered as an early indicator of iron deficiency.

Cook AM *et al.* (2016)

Quality requirements for veterinary hematology analyzers in small animals-a survey about veterinary experts' requirements and objective evaluation of analyzer performance based on a meta-analysis of method validation studies: bench top hematology analyzer.
VET Clin Pathol; 45(3): 466

https://onlinelibrary.wiley.com/doi/abs/10.1111/vcp.12383

Summary: Total allowable error (TEa) is determined for haematological parameters for dogs and cats based on experts survey. Using published data the authors conclude that XT-2000iV, ADVIA 2120 and Cell-Dyn 3500 fulfilled experts requirements. Despite known difficulties of both methods, manual and analyser, in identifying monocytes the authors point out here that medical relevant monocytoses were detected.

Piane L *et al*. (2016)

Spurious reticulocyte profiles in dogs with large form babesiosis: a retrospective study.
Vet Clin Pathol; 45(4): 598

https://onlinelibrary.wiley.com/doi/pdf/10.1111/vcp.12396

Summary: Abnormal reticulocyte scattergrams may occur in dogs with babesiosis and alert clinical pathologist to consider diagnosis.

Lee JM *et al*. (2016)

Changes of hematological reference depends on storage period and temperature conditions in rats and dogs.
Lab Anim Res; 32(4): 241

Free online: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5206231/

Summary: When measuring haematological samples of dogs and rats, it will be necessary to analyse fresh blood since PLT and WBC showed high variation with time and temperature. Good agreement and correlation between Advia 2120i and XN-V for CBC parameters and WBC subpopulations were found.

Riond B *et al.* (2015)

Effective prevention of pseudothrombocytopenia in feline blood samples with the prostaglandin I2 analogue Iloprost.
BMC Vet Res.; 11: 183

Free online: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4545814/

Summary: The study showed an anti-aggregatory effect of Iloprost in feline blood. In all clinically healthy cats investigated, pseudothrombocytopenia was prevented by adding Iloprost to EDTA tubes prior to blood collection.

Novacco M *et al.* (2015)

Analytic errors in Sysmex-generated hematology results in blood from a dog with chronic lymphocytic leukemia.
Vet Clin Pathol; 44(3): 337

https://onlinelibrary.wiley.com/doi/abs/10.1111/vcp.12270

Summary: Dog case of chronic T cell lymphocytic leukaemia showing how extreme lymphocytosis interferes in the RET scattergram leading to false high RBC-O and RET.

Granat F *et al*. (2014)

Feline reference intervals for the Sysmex XT-2000iV and the ProCyte DX haematology analysers in EDTA and CTAD blood specimens.
J Feline Med Surg;16(6): 473

http://journals.sagepub.com/doi/abs/10.1177/1098612X13511811?url_ver=Z39.88-2003&rfr_id=ori:rid:crossref.org&rfr_dat=cr_pub%3dpubmed

Summary: Reference intervals (RI) were established for cats using XT-2000iV and Procyte. These RI can be directly applied in veterinary laboratories using these analysers. CTAD is a better option than EDTA for feline blood samples.

Bourges-Abella NH *et al*. (2014)

Changes in hematology measurements in healthy and diseased dog blood stored at room temperature for 24 and 48 hours using the XT-2000iV analyser.
Vet Clin Pathol; 43(1): 24

Free online: http://onlinelibrary.wiley.com/doi/10.1111/vcp.12119

Summary: "Delayed analysis of canine blood stored at room temperature and measured by the XT-2000iV was accompanied by moderate variations in certain haematologic variables (MCV, HCT, MCHC, PLT, RET#, RET%, MONO#)."

Bauer N *et al*. (2012)

Evaluation of the automated hematology analyzer Sysmex XT-2000iV ™ compared to the ADVIA ® 2120 for its use in dogs, cats, and horses. Part II: Accuracy of leukocyte differential and reticulocyte count, impact of anticoagulant and sample aging.
J Vet Diagn Invest; 24(1): 74

Free online: http://journals.sagepub.com/doi/pdf/10.1177/1040638711436243

Summary: The overall performance of the Sysmex XT-2000iV was excellent and compared favourably with that of the ADVIA 2120 as well as manual count.

Bourges-Abella NH *et al*. (2011)

Canine reference intervals for the Sysmex XT-2000iV hematology analyzer.
Vet Clin Pathol; 40(3): 303

https://onlinelibrary.wiley.com/doi/abs/10.1111/j.1939-165X.2011.00333.x

Summary: Reference intervals for haematologic analytes and indices were determined under controlled conditions for a well characterised population of dogs following international recommendations. These reference intervals can be adopted by laboratories using similar equipment and canine patient population.

Weissenbacher S *et al*. (2011)

Evaluation of a novel haematology analyser for use with feline blood for use with feline blood.
Vet J; 187(3): 381

Free online: https://doi.org/10.5167/uzh-32764

Summary: The XT-2000iV is suitable for use with feline blood. Sysmex overcomes the problem of size-overlapping between RBC and PLT with the PLT-O which has a fairly good correlation to the manual count.

Gelain ME *et al*. (2010)

Identification of neoplastic cells in blood using the Sysmex XT-2000iV: a preliminary step in the diagnosis of canine leukemia.
Vet Clin Pathol; 39(2): 169

https://onlinelibrary.wiley.com/doi/abs/10.1111/j.1939-165X.2010.00214.x

Summary: The creation of a 'leukaemia flag' consisting of increased WBC count, a high fluorescence area gate and a lysis resistant region provides an automated, reliable and rapid tool for preliminary investigation of dogs with suspected leukaemia. The flag is objective and has high specificity which can be further increased by scattergram evaluation.

Mathers RA *et al*. (2008)

Evaluation of the Sysmex XT-2000iV haematology analyser for rat, dog and mouse whole blood samples.
Comp Clin Pathol; 17: 137

https://link.springer.com/article/10.1007/s00580-008-0734-2

Summary: The XT-2000iV analyser proved to be reliable with satisfactory performance for analysing rat, dog, and mouse blood samples. The analyser was robust and reliable with no breakdowns or software problem encountered in this pharmaceutical lab setting.

Horses

O'Neil E 2014 *et al*. (2014)

What is your diagnosis - Blood smear from a foal.
Vet Clin Pathol; 43(2): 287

https://onlinelibrary.wiley.com/doi/10.1111/vcp.12133

Summary: Reticulocytes are typically not expected in the blood of horses, even with significant haemolysis or haemorrhage, therefore reticulocytosis evident with automated and manual methods is of particular interest. However, with newer haematology analysers (e.g. XT-2000iV, Advia), the identification of low numbers of cells with nucleic acid fluorescence designated as reticulocytes has been reported in horses.

Bauer N *et al*. (2012)

Evaluation of the automated hematology analyzer Sysmex XT-2000iV ™ compared to the ADVIA ® 2120 for its use in dogs, cats, and horses. Part II: Accuracy of leukocyte differential and reticulocyte count, impact of anticoagulant and sample aging.
J Vet Diagn Invest; 24(1): 74

Free online: http://journals.sagepub.com/doi/pdf/10.1177/1040638711436243

Summary: The overall performance of the Sysmex XT-2000iV was excellent and compared favourably with that of the ADVIA 2120 as well as manual count.

Mice/Rats

Schroeder JM *et al*. (2024)

Performance evaluation of the Sysmex XN-1000V in side-by- side comparison with the Siemens ADVIA 120 and manual methods for healthy CD Sprague–Dawley rats and CD-1 mice.
Vet Clin Pathol; 53(1): 8

https://onlinelibrary.wiley.com/doi/10.1111/vcp.13314

Summary: The comparison of the Sysmex XN-1000V with the Siemens ADVIA 120 and against manual microscopy analysing blood from healthy mice and rats showed comparable performance and acceptable correlation with the majority being very good to excellent. XN-1000V was easy to use and only required small sample volumes while providing essential information used frequently in complete blood counts of animals within the biopharmaceutical industry.

Davenport P *et al*. (2021)

Development of gates to measure the immature platelet fraction in C57BL/6J mice using the Sysmex XN-V series multispecies hematology analyzer.
J Vet Diagn Invest; 33(5): 913

https://journals.sagepub.com/doi/10.1177/10406387211027899?url_ver=Z39.88-2003&rfr_id=ori:rid:crossref.org&rfr_dat=cr_pub%20%200pubmed

Summary: Platelet counts and IPF measured in diluted blood using two newly created IPF gates (thrombocytopenic / non thrombocytopenic) agreed well with those measured in undiluted blood and had good reproducibility. These diluted gates allow for the accurate measurement of PLT and IPF in small blood volumes, which can be obtained easily from adult and newborn mice.

Poitout-Belissent F *et al*. (2021)

Aspiration and Inspiration: Using Bronchoalveolar Lavage for Toxicity Assessment.
Toxicol Pathol; 49(2): 386

Freeonline: https://journals.sagepub.com/doi/10.1177/0192623320929318?url_ver=Z39.88-2003&rfr_id=ori:rid:crossref.org&rfr_dat=cr_pub%20%200pubmed

Summary: XN-1000V allows high throughput total nucleated cell count (TNCC) and cellular differential evaluation at very low concentrations of bronchoalveolar lavage fluid (BALF) in laboratory animals. XN-V allows manual gating to create different profiles according to the species.

Ennis KM *et al*. (2018)

Reticulocyte hemoglobin content as an early predictive biomarker of brain iron deficiency.
Pediatr Res; 84(5): 765

Free online: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6519747/

Summary: The study shows that RET-He is the only red cell parameter that identifies rat individuals at risk for brain iron deficiency in the pre-anaemic stage.

Lee JM *et al*. (2016)

Changes of hematological reference depends on storage period and temperature conditions in rats and dogs.
Lab Anim Res; 32(4): 241

Free online: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5206231/

Summary: When measuring haematological samples of dogs and rats, it will be necessary to analyse fresh blood since PLT and WBC showed high variation with time and temperature. Good agreement and correlation between Advia 2120i and XN-V for CBC parameters and WBC subpopulations were found.

White JR *et al*. (2016)

Evaluation of hematologic variables in newborn C57/BL6 mice up to day 35.
Vet Clin Pathol; 45(1): 87

Free online: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4805471

Summary: Reference intervals (RI) were established for newborn mice of C57/BL6 strain, which is commonly used for research in disease models.

Moorhead KA *et al*. (2016)

Alterations due to dilution and anticoagulant effects in hematologic analysis of rodent blood samples on the Sysmex XT-2000iV.
Vet Clin Pathol; 45(2): 215

Free online: http://onlinelibrary.wiley.com/doi/10.1111/vcp.12338

Summary: Several variables, most notably platelet count, differ based on the anticoagulant used thus the values from heparinized vs EDTA-anticoagulated samples should not be directly compared. Dilution has effect on MCV and MCHC.

Criswell KA *et al*. (2014)

Comparison of the Sysmex XT-2000iV and microscopic bone marrow differential counts in Wistar rats treated with cyclophosphamide, erythropoietin, or serial phlebotomy.
Vet Clin Pathol; 46(2): 137

Free online: http://onlinelibrary.wiley.com/doi/10.1111/vcp.12149

Summary: The Sysmex XT-2000iV provides quantitative bone marrow differential counts in rats treated with cyclophosphamide, erythropoietin, or serial phlebotomy. Analyser results were comparable to microscopic differential counts.

Mathers RA *et al*. (2008)

Evaluation of the Sysmex XT-2000iV haematology analyser for rat, dog and mouse whole blood samples.
Comp Clin Pathol; 17: 137

https://link.springer.com/article/10.1007/s00580-008-0734-2

Summary: The XT-2000iV analyser proved to be reliable with satisfactory performance for analysing rat, dog and mouse blood samples. The analyser was robust and reliable with no breakdowns or software problem encountered in this pharmaceutical lab setting.

Non-mammalian

NEW

Mesalles M *et al*. (2025)

Preliminary Evaluation of an Automated Blood Cell Analyzer for Its Use with Blood Samples from Rainbow Trout Oncorhynchus mykiss.
Animals; 15: 1265

Free online: https://www.mdpi.com/2076-2615/15/9/1265

Summary: This prospective study analysing CBC parameters in 99 aquacultured rainbow trouts showed excellent analytical performance of the XN-1000V, good correlation and agreement with manual methods and sample stability of up to 24 hrs and 48 hrs when stored at room temperature and 4°C, respectively. The authors preferred Li-Heparin over EDTA with rainbow trout samples for increased accuracy of RBC parameters, and established de novo automated and manual reference ranges for heparinized samples of this fish species.

Dickinson VM *et al*. (2002)

Hematology and plasma biochemistry reference range values for free-ranging desert tortoises in Arizona.
J Wildl Dis; 38(1): 143

Free online: https://meridian.allenpress.com/jwd/article/38/1/143/122594/HEMATOLOGY-AND-PLASMA-BIOCHEMISTRY-REFERENCE-RANGE

Summary: This study provides haematological and biochemistry reference ranges for desert tortoises. Rainfall patterns determine the amount of forage that leads to variation in the blood values.

Others

Yu W *et al*. (2019)

Hematological and biochemical parameters for Chinese rhesus macaque.
PLoS One; 14(9): e0222338

Free online: https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0222338

Summary: Establishment of reference intervals for haematologic and biochemical parameters for Chinese rhesus macaque using XT-2000iV. Age and sex specific reference ranges are provided.

Herman N *et al*. (2018)

Hematology reference intervals for adult cows in France using the Sysmex XT-2000iV analyzer.
J Vet Diagn Invest; 30(5): 678

Free online: http://journals.sagepub.com/doi/abs/10.1177/1040638718790310?url_ver=Z39.88-2003&rfr_id=ori:rid:crossref.org&rfr_dat=cr_pub%3dpubmed

Summary: Reference intervals (RI) were established for cattle using XT-2000iV. These RI can be used in veterinary laboratories after validation if the cattle population is different.

Burden FA *et al*. (2016)

Reference intervals for biochemical and haematological parameters in mature domestic donkeys (Equus asinus) in the UK.
Equine Veterinary Education; 28(3): 134

Free online: https://onlinelibrary.wiley.com/doi/epdf/10.1111/eve.12512

Summary: The authors define reference intervals for haematological and biochemical parameters in mature domestic donkeys.

Lilliehöök I *et al*. (2011)

Errors in basophil enumeration with 3 veterinary hematology systems and observations on occurrence of basophils in dogs.
Vet Clin Pathol; 40(4): 450

https://onlinelibrary.wiley.com/doi/abs/10.1111/j.1939-165X.2011.00353.x

Summary: Canine basophils are not well detected in most haematology analysers. Disturbances in dot-plots may guide to check smears for basophils. Nevertheless, a limitation of this study is the small sample size (17 samples).