

Table 1. Bovine hematology reference intervals according to 3 sources.*

Parameter	Unit	Wood and Quiroz-Rocha (2010) ^{50†}	Kraft and Dürr (2005) ^{27‡}	George et al. (2010) ^{16§}
Erythrocytes	$10^6/\mu\text{l}$	4.9–7.5	5–10	5.1–7.6
Hematocrit	%	21–30	28–38	22–33
Hemoglobin	g/dl	8.4–12.0	9–14	8.5–12.2
Mean corpuscular volume	fL	36–50	46–65	38–50
Mean corpuscular hemoglobin	pg	14–19	11–17	14–18
Mean corpuscular hemoglobin concentration	g/dl	38–43	31–34	36–39
Red cell distribution width	%	16–20	NA	15.5–19.7
Reticulocytes	$10^3/\mu\text{l}$	0	NA	NA
Leukocytes	$10^3/\mu\text{l}$	5.1–13.3	5–10	4.9–12.0
Segmented neutrophils	$10^3/\mu\text{l}$	1.7–6.0	1.0–3.5	1.8–6.3
Band neutrophils	$10^3/\mu\text{l}$	0–0.2	0.0–0.2	Rare
Lymphocytes	$10^3/\mu\text{l}$	1.8–8.1	2.5–5.5	1.6–5.6
Monocytes	$10^3/\mu\text{l}$	0.1–0.7	0–0.3	0–0.8
Eosinophils	$10^3/\mu\text{l}$	0.1–1.2	0.3–1.5	0–0.9
Basophils	$10^3/\mu\text{l}$	0–0.2	0–0.1	0–0.3
Platelets	$10^3/\mu\text{l}$	160–650	300–800	193–637
Mean platelet volume	fL	4.6–7.4	NA	4.5–7.5

* NA = not available

† Reference intervals for the ADVIA 120 hematology analyzer from 99 clinically healthy cows, 50% in first lactation, all milking for 30–150 days, from 10 farms in Ontario, Canada.

‡ Mainly based on several German original research papers.

§ Reference intervals for the ADVIA 120 hematology analyzer from 58 healthy adult dairy Holstein cows in mid-lactation (at least 18 weeks into lactation) and producing 50–70 pounds of milk per day from 4 herds in California.

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