



New chute-side test can improve research studies

Test provides accurate bovine blood leukocyte differential in seconds

Reduce risk in research studies and improve outcomes with a new chute-side test that provides more data with less hassle. The QScout[®] BLD test quickly and accurately provides a blood leukocyte differential, objective diagnostic information that can be used to help researchers distinguish themselves from others. This tool is currently being used to measure and predict Bovine Respiratory Disease (BRD) risk on arrival in commercial cattle operations. The QScout BLD test is run on the QScout[®] Cattle Lab, a tough, rugged instrument, designed to operate in dirty environments and harsh temperatures.



The easy-to-use chute-side test can help researchers ensure:

- **Better randomization between groups** Use blood leukocyte differential results to balance study groups by health status, reducing the risk of health variables becoming a confounder of study outcomes.
- **More data** Add value to trials by measuring changes in immune cell concentrations as a response to study treatments.
- **Earlier identification of changes** As first-responders of the immune system, white blood cells provide an early indication of stress, disease, or a response to therapy.
- **Speed** The QScout Cattle Lab performs a white blood cell differential in 35 seconds. Get the accuracy and precision of hematology without waiting hours or days for lab results.
- **Simplicity** Results are available on the QScout Cattle Lab at completion of each test and transmit immediately to QStats[™] online portal.
- **Economy** Cost of the QScout Cattle Lab and QScout BLD tests are significantly less than lab hematology analyzers. Conducting the test and operating the machine requires minimal training and no laboratory skills are required, reducing labor costs.

Accurate results in a few simple steps

To conduct a rapid QScout BLD test, a small blood sample is collected from the calf's jugular vein during processing using the QDraw[™] collection device. The blood sample is transferred to a QScout BLD test and then inserted into the QScout Cattle Lab located near the chute. In 35 seconds, the QScout Cattle Lab delivers the calf's blood leukocyte differential, providing total leukocyte count as well as concentrations and percentages of neutrophils, lymphocytes, and eosinophils. Following completion of each test, results are automatically transmitted to QStats.



About Advanced Animal Diagnostics

Advanced Animal Diagnostics provides livestock producers with diagnostic products that improve profitability and empower more precise care of animals, so they live healthier, more productive lives. AAD is committed to researching, developing and commercializing the industry's most reliable diagnostic tests, such as QScout BLD, along with helping livestock producers use antibiotics more efficiently. With our diagnostic offerings, we aim to empower real-time management decisions that increase productivity, prevent losses, improve animal welfare and protect our food supply.



Advanced Animal Diagnostics, Inc. 633 Davis Drive, Suite 460, Morrisville, NC 27560 (855) Q2COUNT AADiagnostics.com QScoutLab.com



Access data remotely with QStats™

View, benchmark and track data with QStats[™], an online portal connected to the QScout[®] Cattle Lab. With each QScout[®] BLD test run, real-time results seamlessly transfer to a password protected QStats account. Customized reports can be easily downloaded to Microsoft[®] Excel[®] or printed. Multiple usernames can be assigned, making QStats ideal for sharing data with multiple collaborators.

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Neutrophil; %4 Percent Lymphocyte; %6 Percent Honocyte; %6 Percent Basophil; %11 Percent Immature Neutrophil 18000-																					
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Animal ID	Date Run 👻	Test Type	Diagnosis	Gender	Breed Pen	Lot	TLC	NC	LC	EC*	MC*	BC*	INC*	36N	%L	%E	56M	%8	%JN	17000-	- U
20	08/01/18	Research	Valid	Female	Dairy		13,639	4,024	7,951	1,639	24	0	0	29.51	58.3	12.02	0.18	0	0 +	16000-	5
19	08/01/18	Research	Valid	Female	Dairy		13,820	3,915	8,678	1,226	0	0	0	28.33	62.8	8.88	0	0	0		
18	08/01/18	Research	Valid	Female	Dairy		14,426	4,369	8,712	1,344	0	0	0	30.29	60.39	9.32	0	0	0	15000-	× 0
17	08/01/18	Research	Valid	Female	Dairy		12,374	3,982	7,275	1,069	47	0	0	32.18	58.79	8.65	0.38	0	0	14000	
16	08/01/18	Research	Valid	Female	Dairy		13,101	3,618	8,302	1,129	51	0	0	27.62	63.37	8,62	0.39	0	0	14000	
15	08/01/18	Research	Valid	Female	Dairy		11,816	3,492	7,219	1,077	25	0	0	29.56	61.1	9.12	0.22	0	0	13000-	0
14	08/01/18	Research	Valid	Female	Dairy		11,706	3,519	6,940	1,222	24	0	0	30.06	59.28	10.44	0.21	0	0		0
13	08/01/18	Research	Valid	Female	Dairy		12,544	3,636	7,716	1,178	12	0	0	28.99	61.52	9.39	0.1	0	0	12000-	
12	08/01/18	Research	Valid	Female	Dairy		12,300	4,095	7,173	1,030	0	0	0	33.3	58.32	8.38	0	0	0	T 11000-	0
11	08/01/18	Research	Valid	Female	Dairy		11,760	3,415	7,176	1,155	12	0	0	29.05	61.02	9.82	0.1	0	0	m/0	
10	00/01/10	Research	Valid	Female	Dairy		11,200	3,007	0,009	1,030	12	0	0	35.0	50.72	9.50	0.11	0	0	g 10000-	h h
y 0	00/01/10	Research	Valid	Female	Dairy		12,505	9,407	6,000	1,221	19	0	0	22.29	57.70	9.70	0.11	0	0	×	
7	08/01/18	Research	Valid	Famala	Dairy		11 692	4 168	6.479	1.021	23	0	0	35.65	55.41	8.74	0.2	0	0	4te	
6	08/01/18	Research	Valid	Female	Dairy		11.545	4.012	6,462	1.070	0	0	0	34.75	55.97	9.28	0	0	0	ĕ 8000 -	
5	08/01/18	Research	Valid	Female	Dairy		12,407	4.557	6.817	1.032	0	0	0	36.73	54.95	8.33	0	0	0	đ	
3	08/01/18	Research	Valid	Female	Dairy		11.225	3,454	6,500	1.233	37	0	0	30,77	57.91	10.99	0.33	0	0	5 7000 -	
4	08/01/18	Research	Valid	Female	Dairy		10,728	3,530	6,187	973	37	0	0	32.91	57.67	9.07	0.35	0	0	6000 -	
2	08/01/18	Research	Valid	Female	Dairy		11,648	3,626	7,174	820	26	0	0	31.14	61.59	7.05	0.23	0	0	0000	
1	08/01/18	Research	Valid	Female	Dairy		10,033	3,563	5,716	741	11	0	0	35.52	56.97	7.39	0.12	0	0	5000 -	
15	07/31/18	Research	Valid	Male	Beef		7,691	3,144	3,885	661	0	0	0	40.88	50.52	8.6	0	0	0	4000	0 00000
14	07/31/18	Research	Valid	Male	Beef		6,963	3,057	3,540	365	0	0	0	43.91	50.84	5.25	0	0	0	4000 -	
13	07/31/18	Research	Valid	Male	Beef		7,151	3,205	3,713	217	14	0	0	44.83	51.93	3.04	0.2	0	0	3000 -	000 60 0
12	07/31/18	Research	Valid	Male	Beef		7,388	3,914	3,353	120	0	0	0	52.98	45.39	1.63	0	0	0		0
11	07/31/18	Research	Valid	Male	Beef		7,704	3,798	3,705	199	0	0	0	49.31	48.1	2.6	0	0	0	2000 -	· · · · · · · · · · · · · · · · · · ·
10	07/31/18	Research	Valid	Male	Beef		7,067	3,485	3,582	0	0	0	0	49.31	50.69	0	0	0	0	1000	
09	07/31/18	Research	Valid	Male	Beef		7,341	3,319	3,249	773	0	0	0	45.21	44.25	10.54	0	0	0	1000 -	
08	07/31/18	Research	Valid	Male	Beef		6,977	3,610	2,331	1,036	0	0	0	51.74	33.41	14.85	0	0	0	. 0 -	+
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Accuracy

Table 1. Accuracy data for the QScout Cattle Lab

Parameter	R
Total Leukocyte Count	R ≥ 0.95
Neutrophil Count	R ≥ 0.95
Mononuclear Count	R ≥ 0.90
Eosinophil Count	R ≥ 0.95
Percent Neutrophil	R≥0.91
Percent Mononuclear	R≥0.91
Percent Eosinophil	R ≥ 0.94

Accuracy data were generated from 1,750 chuteside samples on 5 instruments over 7 days at 3 locations and compared to 2 IDEXX ProCyte Dx[®] Hematology Analyzers with Research Applications software. Samples were screened for cell misclassification using ProCyte software flags.

Precision

Precision data were generated by a trained professional running 1 instrument.

Table 2. Precision data for the QScout Cattle Lab

	Low WBC Sample (r	n=20)	High WBC Sample (n=20)			
Parameter	Mean (cells/µL)	CV (%)	Mean (cells/µL)	CV (%)		
Total Leukocyte Count	6,661	< 6.5	11,959	< 6.4		
Neutrophil Count	2,844	< 8.2	5,248	< 7.8		
Mononuclear Count	3,437	< 8.8	5,921	< 9.5		
Eosinophil Count	379	< 15.7	790	< 16.5		