InSight V-IA Canine HbA1c Evaluation
vs. Wondfo Canine HbA1c

The InSight V-IA is an easy to use Veterinary Immunoassay Analyser providing accurate and reliable results in 3-15 minutes. The InSight V-IA uses immunofluorescence technology for accurate results. A competitive binding assay is based upon the competition of labelled and unlabelled analytes for a limited number of antibody binding sites. Unbound antibodies and immunocomplexes migrate along the nitrocellulose membrane towards the test line. The unbound antibodies are then captured by antigens immobilised on the test line. The fluorescent signal intensity reflects the amount of analytes captured and is measured by the InSight V-IA.

Canine HbA1c

Canine Glycosylated Haemoglobin (cHbA1c) is a very stable glycosylation product formed by glucose in blood and haemoglobin in red blood cells. It exists in the entire life cycle of red blood cells once HbA1c is formed. The HbA1c level reflects the average blood glucose level in the 2-3 months before the test. Canine HbA1c is used as an aid to diabetes diagnostic testing.

Comparison Items

InSight V-IA:
Test Item – Canine HbA1c
Sample Type – Fresh Canine Whole Blood
Quantity of Samples – 55 Tests

Wondfo:
Test Item – Canine HbA1c
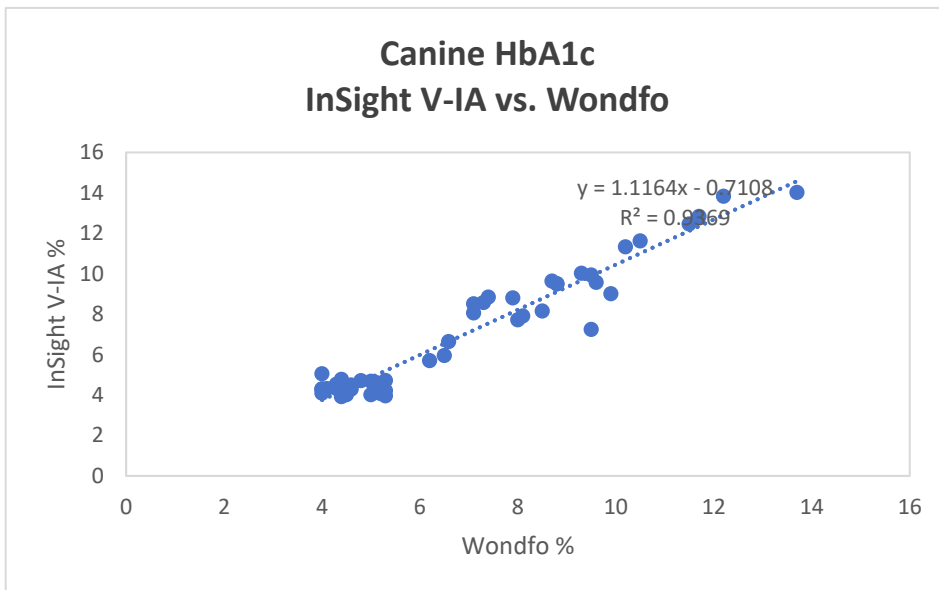Sample Type – Fresh Canine Whole Blood
Quantity of Samples – 55 Tests

Results

Canine HbA1c		Wondfo		
		Positive	Negative	Total
InSight V-IA	Positive	23	0	23
	Negative	2	30	32
	Total	25	30	55

Positive Coincidence Rate	92%
Negative Coincidence Rate	100%
Total Coincidence Rate	96%

Sample	InSight V-IA (%)	Wondfo (%)
1	5.3	4.72
2	4.0	5.05
3	4.8	4.71
4	12.2	13.83
5	4.4	4.77
6	7.4	8.84
7	13.7	14.02
8	4.0	4.29

9	5.3	4.22
10	7.1	8.51
11	4.6	4.49
12	10.5	11.62
13	9.5	9.93
14	5.2	4.45
15	11.7	12.83
16	5.0	4.68
17	7.3	8.57
18	4.0	4.30
19	8.1	7.91
20	5.1	4.62
21	7.1	8.06
22	7.9	8.80
23	8.7	9.63
24	9.5	7.24
25	6.2	5.70
26	8.0	7.72
27	9.3	10.02
28	6.5	5.95
29	8.8	9.5
30	4.3	4.51
31	5.0	4.01
32	8.8	9.50
33	5.2	4.48
34	4.4	4.11
35	4.3	4.32
36	8.5	8.15
37	4.5	4.41
38	6.6	6.64
39	5.2	4.16
40	4.3	4.53
41	9.6	9.57
42	4.4	4.15
43	4.0	4.09
44	9.9	9.01
45	5.2	4.07
46	4.3	4.43
47	11.5	12.46
48	4.4	3.92
49	4.3	4.51
50	4.6	4.29
51	4.1	4.31
52	4.6	4.48
53	10.2	11.33
54	5.3	3.96
55	4.5	4.01

Canine HbA1c
InSight V-IA vs. Wondfo

y = 1.1164x - 0.7108
R² = 0.9369

Sample Concentration	1	2	3	4	5	6	7	8	9	10	Mean Value	Bias
4.48%	5.31	4.71	4.62	4.44	5.08	4.34	4.79	4.48	4.77	4.08	4.66	4%
8.40%	7.91	7.61	7.53	7.82	8.41	7.71	8.43	8.29	8.41	7.63	7.98	-5%
12.30%	12.9	11.29	11.35	12.82	11.25	12.57	11.11	13.1	11.22	11.61	11.92	-3%

Conclusion

Based on comparative analysis, the total coincidence rate of InSight V-IA cHbA1c Rapid Quantitative Test Kit and Wondfo HbA1c Quantitative Test Kit is as high as 96%, indicating that the InSight V-IA reagent is comparable to the Wondfo quantitative reagent.