



InSight V-IA SDMA Evaluation
vs. Vcheck SDMA

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.

SDMA

Symmetric dimethylarginine (SDMA) is a methylated form of arginine that exists in proteins in vertebrate nucleated cells. SDMA is excreted through the kidneys and is highly correlated with glomerular filtration rate (GFR) in humans, dogs and cats. Both primary kidney disease and secondary kidney insults, such as concurrent disease, can cause an elevation in SDMA concentration. Follow this algorithm to investigate elevated SDMA concentrations and determine whether acute, active or chronic injury is occurring, and how to begin to investigate, manage and monitor disease.

Comparison Items

InSight V-IA:

Test Item – SDMA

Sample Type – Fresh Canine/Feline Clinical

Quantity of Samples – 50 Tests

Vcheck:

Test Item – SDMA

Sample Type – Fresh Canine/Feline Clinical

Quantity of Samples – 50 Tests

Results

SDMA		Vcheck		
		Positive	Negative	Total
InSight V-IA	Positive	19	0	19
	Negative	1	30	31
	Total	20	30	50

Positive Coincidence Rate	95%
Negative Coincidence Rate	100%
Total Coincidence Rate	97.5%

Reference Range of SDMA in Canine or Feline Blood

Detection Range: 1 – 100 µg/dL

Reference Range:

Signification	µg/dL
Normal	≤14
Suspected. Check other evidence of kidney disease	14 – 19.9
Kidney disease probable	>19.9

NOTE: Puppy reference interval is 1 – 16 µg/dL.

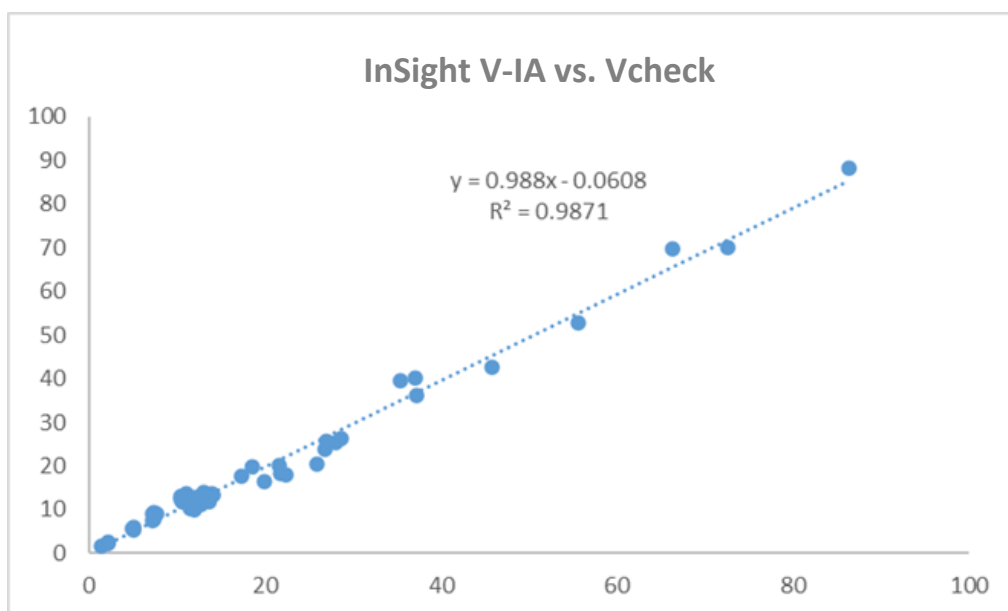
Vcheck

- SDMA concentration is displayed on the BIONOTE Vcheck Analyser screen (10 – 100 µg/dL).
- If "↓10 µg/dL " is displayed, the concentration of SDMA in the sample is less than 10 µg/dL.
- If "↑100 µg/dL " is displayed, the concentration of SDMA in the sample is greater than 100 µg/dL.

Reference	µg/dL
Normal	<14 (≤ 16 µg/dL in puppies)
Check other evidence of kidney disease	14.1 – 19.9
Kidney disease probable	>20

Sample	Vcheck (µg/dL)	InSight V-IA (µg/dL)
1	25.93	20.47
2	28.64	26.36
3	19.9	16.57
4	26.99	25.64
5	21.56	20.24
6	14.18	13.35
7	35.4	39.52
8	17.36	17.65
9	18.63	19.73
10	45.86	42.64
11	28.05	25.29
12	37.29	36.01
13	26.78	23.85
14	55.67	52.93
15	22.39	18.09
16	66.35	69.74
17	72.54	69.93
18	21.71	18.43
19	86.34	88.24
20	37.08	40.19
21	11.73	10.28
22	12.93	13.263
23	13.11	13.952
24	11.94	10.082
25	12.73	11.321
26	13.46	12.304
27	<10	7.448
28	<10	9.166
29	<10	9.439
30	11.07	13.519
31	12.24	12.657
32	<10	5.628
33	12.42	12.355

34	10.51	12.542
35	<10	5.418
36	<10	5.82
37	13.62	11.712
38	13.92	13.779
39	10.53	11.902
40	12.58	12.4
41	<10	7.656
42	<10	9.098
43	12.04	12.772
44	10.38	12.885
45	<10	8.367
46	<10	6.557
47	11.61	11.492
48	11.52	10.36
49	<10	8.474
50	<10	9.498



Sample Concentration	1	2	3	4	5	6	7	8	9	10	Mean Value	Bias%
10 µg/dL	9.32	9.41	10.51	10.73	10.23	9.53	9.65	10.24	11.54	11.57	10.27	8.0%
23 µg/dL	22.07	24.34	21.96	23.76	24.35	25.34	24.28	23.78	24.61	26.86	24.14	5.9%
70 µg/dL	71.85	76.81	67.07	74.06	73.64	71.28	69.05	67.24	68.24	76.24	71.55	5.0%

Conclusion

Based on comparative analysis, the total coincidence rate of InSight V-IA SDMA Rapid Quantitative Test Kit and Vcheck SDMA Rapid Quantitative Test is as high as 97.5%, indicating that the InSight V-IA reagent is comparable to the Vcheck quantitative reagent.