

## Unison Prostate Specific Antigen (PSA) Technical Information

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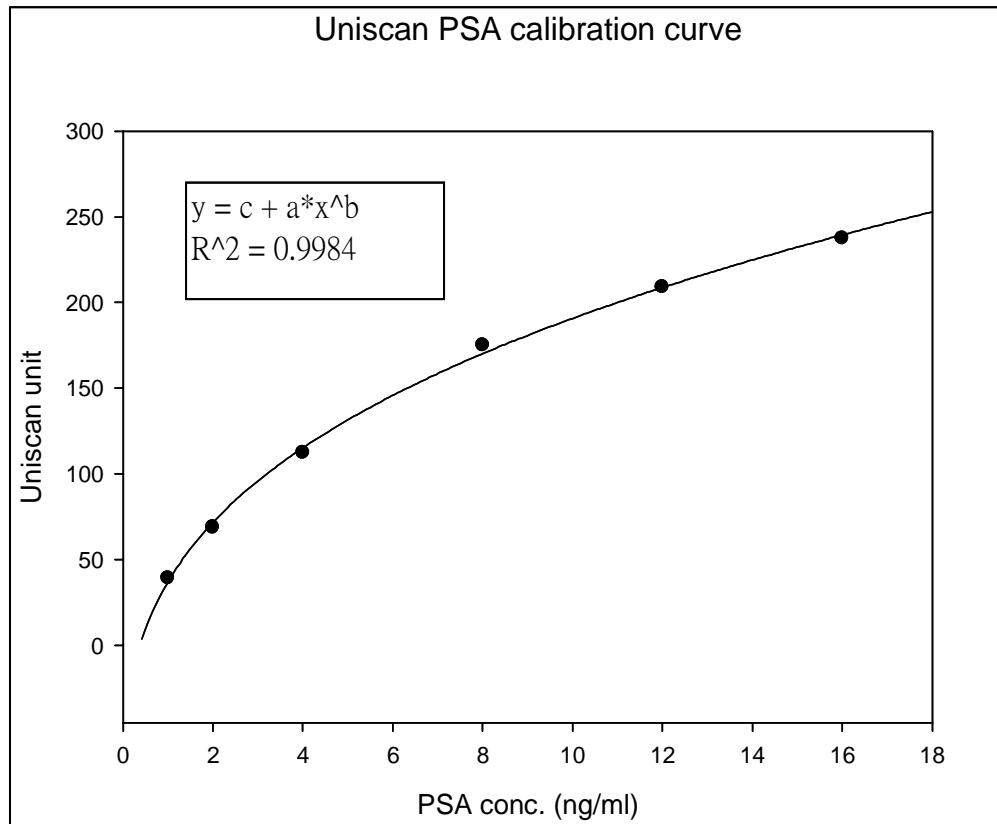
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Hsinchu Science-based Industrial Park - Chunan Site

Chunan Miaoli 350, Taiwan R.O.C.

1. method: membrane-based lateral flow sandwich immunochromatographic assay
2. test line: polyclonal anti-PSA
3. label material: colloidal gold
4. PSA standard was spiked with women serum to conc. 0 ~ 16 ng/ml
5. sample volume: 120 ul
6. reaction time: 60 min
7. the color intensity was detected by the quantitative test strip scanner Uniscan
8. PSA concentration was computed via the calibration equation
9. result:

	Uniscan signal						
PSA conc.(ng/ml)	0	1	2	4	8	12	16
strip1	19	36	65	110	172	207	244
strip2	18	39	72	107	180	218	223
strip3	16	39	67	108	166	218	233
strip4	18	39	73	112	176	203	243
strip5		41	73	118	170	210	245
strip6		41	67	112	185	198	237
strip7		41	70	117	175		
strip8		39	65	116	178		
strip9							
strip10							
strip11							
strip12							
average	17.8	39.4	69.0	112.5	175.3	209.0	237.5
stdev	1.3	1.7	3.4	4.1	6.0	8.0	8.5
CV% (signal)	7.1	4.3	5.0	3.7	3.4	3.9	3.6
$\Delta$ maxium	1	2	4	6	10	9	8
$\Delta$ minium	2	3	4	6	9	11	15



Calibration equation

$$y = c + a \cdot x^b$$

$$R = 0.9992$$

$$R^2 = 0.9984$$

$$c = -95.2233$$

$$a = 132.396$$

$$b = 0.3345$$

	Uniscan measured PSA conc. (ng/ml)						
PSA conc.(ng/ml)	0	1	2	4	8	12	16
strip1	0.64	0.97	1.77	3.71	8.16	11.79	16.66
strip2	0.63	1.04	2.01	3.55	8.91	13.12	13.76
strip3	0.59	1.04	1.84	3.60	7.63	13.12	15.09
strip4	0.63	1.04	2.05	3.82	8.53	11.33	16.51
strip5		1.09	2.05	4.16	7.98	12.15	16.80
strip6		1.09	1.84	3.82	9.41	10.77	15.65
strip7		1.09	1.94	4.10	8.44		
strip8		1.04	1.77	4.04	8.72		
strip9							
strip10							
strip11							
strip12							
average	0.62	1.05	1.91	3.85	8.47	12.05	15.74
stdev	0.02	0.04	0.12	0.23	0.56	0.95	1.18
<b>CV% (conc.)</b>	<b>3.3</b>	<b>3.7</b>	<b>6.2</b>	<b>6.0</b>	<b>6.6</b>	<b>7.9</b>	<b>7.5</b>
$\Delta$ maximum	0.02	0.04	0.14	0.31	0.93	1.07	1.06
$\Delta$ minium	0.03	0.08	0.14	0.30	0.85	1.27	1.99
<b>Recovery (%)</b>		<b>105</b>	<b>95</b>	<b>96</b>	<b>106</b>	<b>100</b>	<b>98</b>

### Uniscan PSA Performance

