

[Graph 4]

The changes over time of saliva immediately before/after consuming lemon grown without agricultural chemical lemon that have used preservatives, fungicides and anti drying agents.

ORP Unit=mV

Subject	Age	Gender	Local Saliva	Before Consumption	Within 1 Min. of Consumption	After 30 min.	After 40 min.	After 50 min.	After 60 min.
A	10's	M	Parotid- R	-19	56	61	63	66	61
			Parotid- L	-16	46	52	43	56	58
			Collective	26	82	88	100	101	105
B	40's	F	Parotid- R	1	63	55	52	49	51
			Parotid- L	-2	67	58	54	52	57
			Collective	32	115	100	99	96	95
C	30's	F	Parotid- R	5	62	64	66	59	52
			Parotid- L	3	59	61	58	62	47
			Collective	43	80	83	88	104	108
D	80's	M	Parotid- R	33	73	75	69	50	53
			Parotid- L	29	69	83	57	46	51
			Collective	61	84	119	106	103	107
E	60's	F	Parotid- R	9	62	49	53	55	59
			Parotid- L	11	57	45	50	52	62
			Collective	54	94	103	100	104	118

The next generation ORP measuring device utilizes the characteristics of the strong oxidation reaction of the biological reactions that appears when the free radicals are present in the saliva components. The method of saliva sample collection that will be used for the measurement is done before and after the consumption of the testing material, or immediately after targeted excessive activities, or immediately after the targeted excessive psychological burden was impacted, and staying at least 30 min. without eating or drinking anything or without exercise or without feeling any psychological burden, followed by another saliva collection.

By this, we made it possible to make comparative verification of changes over time: before and after of food consumption or before and after of exercise and psychological experience, and after 30 min. of such events. We have grasped the biological responses of the oxidation and reduction reaction that goes through the blood to saliva, that vividly appear after a minimum of 30 min. of said eating or drinking or experience, and used it for the awakening drugs screening application.

This next generation ORP measuring device is certified as a medical device by the Ministry of Health and Welfare of Japan and registered for the United States Copyright, and completed the Japanese patent registration and design registration. This measuring device, which can be used by the general public and not just for the people engaged in medical services, has been developed and registered with the trademark, "ORP reader Wellness Index Meter."

With regards to drug screening, I am confident that it can be clarified easily by using the measuring device, ORPreader Wellness Index Meter that has been certified as a medical device, by tracking the treatment progress of individuals who are confined in facility because of drug usage. We hope that this device can help to diminish the destruction of families and incidents resulting in injury that were caused by drug abuses.

The Correlation between ORP Value and Blood Test Values of the Chronic Disease Patients

In order to know the correlation with the saliva ORP value and blood, we have attempted to conduct a saliva clinical study with Dr. Hiroko Yazaki, Director of Sankeien Clinic, basing on the consent forms of the patients from Yokohama, Satsukidai Clinic and Sankeien Clinic.

From all of the ten people, A~J, who came to the clinics for chronic disease, we have comparatively verified between saliva ORP measurements and blood tests during the treatments.

The items of blood tests that we were making comparative verifications with the saliva ORP were: (1) Neutral fat, (2) Apolipoprotein B, (3) Apolipoprotein E, (4) CRP, (5) LDL-C, (6) HDL-C. Although these data are examples, we believe that they suggest the correlations between the blood test values of the items (1)~(6) that have gone above their corresponding reference range and the body oxidation of the saliva ORP.

Since saliva ORP and blood change every moment, as an indispensable condition, saliva ORP measurement and blood sampling were done at the same time. Depending on the blood tested item, there was a difficulty of conducting the saliva ORP measurement and blood sampling from the same patient at the same time during the course of ongoing examination.

Next, I will explain how to interpret the (1)~(10) data correlations by using data (1) as an example. The saliva ORP normal value is 40mV. The normal range of neutral fat is between 35~149mg. The standard value for CRP is below 0.30. The saliva ORP examination and blood sampling that were done on Sept. 25, 2007 resulted with saliva ORP value of 132mV, neutral fat value of 246, CRP value of 0.55. And, the saliva ORP examination and the blood sampling that were done on Sept. 30, 2007 resulted with saliva ORP value of ± 0 mV, neutral fat value of 78, CRP value of 0.03. I believe that you are able to verify the correlation between other blood tested items and saliva ORP in the similar manner.

As a method for humans to live healthy, I am desiring that the achievement of saliva ORP clinical study done by Dr. Mieko Okazawa, Pediatrician and Hiroko Yazaki, Internal Medicine that established the human physical wellness index of oxidation and reduction potential will become clear by the hands of physicians and dentists of the next generation.

(1) Patient A, 60 s, 'Female

The relations with Saliva ORP and Blood of a Patient with Chronic Disease

Sample Solution	Patient	Gender	Age	Normal Value	Sampling Date and Value	Sampling Date and Value	Sampling Date and Value
	A	F	60's		9-25-2007	11-12-2007	9-30-2008
Saliva ORP				Below 40mV	132	63	± 0
Blood Test- Neutral Fat				35~149mg/dl	246	240	78
Apolipoprotein B				73~109mg/dl	126	116	62
Apolipoprotein E				2.7~4.3mg/dl	5.8	5.4	4.3
CRP				Below 0.30mg	0.55	0.5	0.03
LDL-C				70~139mg/dl	138	125	81
HDL-C				35~149mg/dl M40~80 F40~85	74	66	56

(2) Patient B, 50's, Male

The relations with Saliva ORP and Blood of a Patient with Chronic Disease

Sample Solution	Patient	Gender	Age	Normal Value	Sampling Date and Value	Sampling Date and Value	Sampling Date and Value
	B	M	50's		6-19-2007	12-18-2007	9-30-2008
Saliva ORP				Below 40mV	95	150	46
Blood Test- Neutral Fat				35~149mg/dl	188	207	183
Apolipoprotein B				73~109mg/dl	119	94	116
Apolipoprotein E				2.7~4.3mg/dl	5	6.3	4.7
CRP				Below 0.30mg	0.03	0.16	0.04
LDL-C				70~139mg/dl	138	125	136
HDL-C				35~149mg/dl M40~80 F40~85	52	66	46

(3) Patient C, 50's, Male

The relations with Saliva ORP and Blood of a Patient with Chronic Disease

Sample Solution	Patient	Gender	Age	Normal Value	Sampling Date and Value	Sampling Date and Value	Sampling Date and Value
	C	M	50's		9-4-2007	2-29-2008	5-27-2008
Saliva ORP				Below 40mV	56	93	58
Blood Test- Neutral Fat				35~149mg/dl	84	119	94
Apolipoprotein B				73~109mg/dl	93	91	96
Apolipoprotein E				2.7~4.3mg/dl	4.2	5.5	5.1
CRP				Below 0.30mg	0.2	0.4	0.17
LDL-C				70~139mg/dl	101	116	112
HDL-C				35~149mg/dl M40~80 F40~85	74	83	88

(4) Patient D, 70's, Female

The relations with Saliva ORP and Blood of a Patient with Chronic Disease

Sample Solution	Patient	Gender	Age	Normal Value	Sampling Date and Value	Sampling Date and Value	Sampling Date and Value
	D	F	70's		11-27-2007	8-19-2008	10-28-2008
Saliva ORP				Below 40mV	218 Right after dental treatment	117	104
Blood Test- Neutral Fat				35~149mg/dl	106	155	175
Apolipoprotein B				73~109mg/dl	82	/	98
Apolipoprotein E				2.7~4.3mg/dl	4		4.6
CRP				Below 0.30mg	0.8	0.06	0.7
LDL-C				70~139mg/dl	88	115	111
HDL-C				35~149mg/dl M40~80 F40~85	57	54	59

(5) Patient E, 60's, Female

The relations with Saliva ORP and Blood of a Patient with Chronic Disease

Sample Solution	Patient	Gender	Age	Normal Value	Sampling Date and Value	Sampling Date and Value	Sampling Date and Value
	E	F	60's		10-30-2007		3-25-2008
Saliva ORP				Below 40mV	121		92
Blood Test- Neutral Fat				35~149mg/dl	155		175
Apolipoprotein B				73~109mg/dl	120		130
Apolipoprotein E				2.7~4.3mg/dl	4.5		4.2
CRP				Below 0.30mg	0.6		0.03
LDL-C				70~139mg/dl	110		111
HDL-C				35~149mg/dl M40~80 F40~85	58		60

(6) Patient F, 60's, Female

The relations with Saliva ORP and Blood of a Patient with Chronic Disease

Sample Solution	Patient	Gender	Age	Normal Value	Sampling Date and Value	Sampling Date and Value	Sampling Date and Value
	F	F	60's		7-17-2007	4-22-2008	9-30-2008
Saliva ORP				Below 40mV	94	81	70
Blood Test- Neutral Fat				35~149mg/dl	191	99	80
Apolipoprotein B				73~109mg/dl	141	114	87
Apolipoprotein E				2.7~4.3mg/dl	7.4	7.8	6
CRP				Below 0.30mg	0.5	1.19	0.3
LDL-C				70~139mg/dl	160	152	116
HDL-C				35~149mg/dl M40~80 F40~85	64	54	55

(7) Patient G, 70's, Female

The relations with Saliva ORP and Blood of a Patient with Chronic Disease

Sample Solution	Patient	Gender	Age	Normal Value	Sampling Date and Value	Sampling Date and Value	Sampling Date and Value
	G	F	70's		7-17-2007	4-22-2008	9-30-2008
Saliva ORP				Below 40mV	79	15	70
Blood Test- Neutral Fat				35~149mg/dl	105	108	147
Apolipoprotein B				73~109mg/dl	108	85	91
Apolipoprotein E				2.7~4.3mg/dl	4.9	4.4	3.9
CRP				Below 0.30mg	0.5	0.05	0.13
LDL-C				70~139mg/dl	121	119	109
HDL-C				35~149mg/dl M40~80 F40~85	42	64	54

(8) Patient H, 70's, Male

The relations with Saliva ORP and Blood of a Patient with Chronic Disease

Sample Solution	Patient	Gender	Age	Normal Value	Sampling Date and Value	Sampling Date and Value	Sampling Date and Value
	H	M	70's		7-17-2007	4-22-2008	9-30-2008
Saliva ORP				Below 40mV	94	81	70
Blood Test- Neutral Fat				35~149mg/dl	191	99	80
Apolipoprotein B				73~109mg/dl	141	114	87
Apolipoprotein E				2.7~4.3mg/dl	7.4	7.8	6
CRP				Below 0.30mg	0.5	1.19	0.3
LDL-C				70~139mg/dl	160	152	116
HDL-C				35~149mg/dl M40~80 F40~85	64	54	55

(9) Patient I, 50's, Male

The relations with Saliva ORP and Blood of a Patient with Chronic Disease

Sample Solution	Patient	Gender	Age	Normal Value	Sampling Date and Value	Sampling Date and Value	Sampling Date and Value
	I	M	50's		11-27-2007	5-27-2008	9-30-2008
Saliva ORP				Below 40mV	69	32	72
Blood Test- Neutral Fat				35~149mg/dl	142	143	113
Apolipoprotein B				73~109mg/dl	144	108	118
Apolipoprotein E				2.7~4.3mg/dl	5	4.8	4.4
CRP				Below 0.30mg	0.07	0.07	0.2
LDL-C				70~139mg/dl	122	116	140
HDL-C				35~149mg/dl M40~80 F40~85	88	60	66

(10) Patient J, 70's, Female

The relations with Saliva ORP and Blood of a Patient with Chronic Disease

Sample Solution	Patient	Gender	Age	Normal Value	Sampling Date and Value	Sampling Date and Value	Sampling Date and Value
	J	F	70's		9-25-2007	10-23-2007	11-30-2008
Saliva ORP				Below 40mV	67	86	72
Blood Test- Neutral Fat				35~149mg/dl	130	195	160
Apolipoprotein B				73~109mg/dl	114	123	94
Apolipoprotein E				2.7~4.3mg/dl	4.5	5.6	5
CRP				Below 0.30mg	0.2	0.4	0.2
LDL-C				70~139mg/dl	132	197	140
HDL-C				35~149mg/dl M40~80 F40~85	64	76	66