urine iodide

Iodine/Iodide is an essential element that is pivotal to normal function of the thyroid gland and the health and integrity of breast tissue. Iodine/Iodide intake has decreased significantly over the past thirty years and consequentially clinical symptoms have become apparent. Iodine/Iodide sufficiency can be readily assessed by analysis of urinary iodide excretion.

Specific tissues in the body utilize iodide and iodine. Adequate iodide status is essential for the production of normal levels of functional thyroid hormones but iodine/iodide intake has decreased significantly over the past thirty years. Iodide, the reduced form of iodine, is highly concentrated in the thyroid gland where it is incorporated into thyroid hormones. Thyroid hormones regulate growth and metabolic rate, body heat and energy production, and neuronal and sexual development. Iodine is concentrated in the breasts where it is associated with protection against fibrocystic breast disease and cancer. Sub-clinical iodine/iodide deficiency has been associated with impaired mental function and loss of energy due to hypothyroidism.

Doctor's Data, Inc. offers three urine iodide report formats and collection options to allow the practitioner a wide range of assessment options to fit an individual patient's needs.

Traditionally, the level of urinary iodine/iodide from a twenty-four hour collection has been utilized to assess iodine/iodide status. Alternatively, in situations where patient compliance is difficult, a random urine collection, preferably the first morning void, provides a good indication of iodine/iodide status when expressed per milligram creatinine. The urinary iodide value presented on both report formats represents iodide plus iodine reduced to iodide. Patient results are plotted against reference values. Normative values for urinary iodine have been evaluated in large population studies in the U.S. over the past thirty-five years.

In more recent times a "24-hour iodine/iodide load test" has become a useful analysis for practitioners. A specified oral dose of iodine/iodide is given and urine is collected for the subsequent twenty-four hours. The Doctor's Data, Inc. "load" report format leads the industry by permitting the practitioner to obtain individualized results based upon any oral dosage deemed appropriate for a given patient. The test is based on the concept that the body has specific and saturable mechanisms to take up iodine/iodide. When maximal retention is attained, the percentage of an iodine/iodide load that is retained decreases and the percentage urinary excretion increases. The percentage excretion is calculated by dividing the patient's mg/24-hour iodide result by the oral iodine/iodide dosage (mg) provided on the requisition form by the practitioner, then multiplied by 100. The iodide excretion value represents iodide plus iodine reduced to iodide. The load test requires a complete twenty-four hour urine collection.

URINE IODIDE

- **Assessment of essential iodine/iodide status**
- **Variable urine collection periods**
- **Traditional or load test options**
- **Flexible dosing for load test**
- **Patient friendly report**

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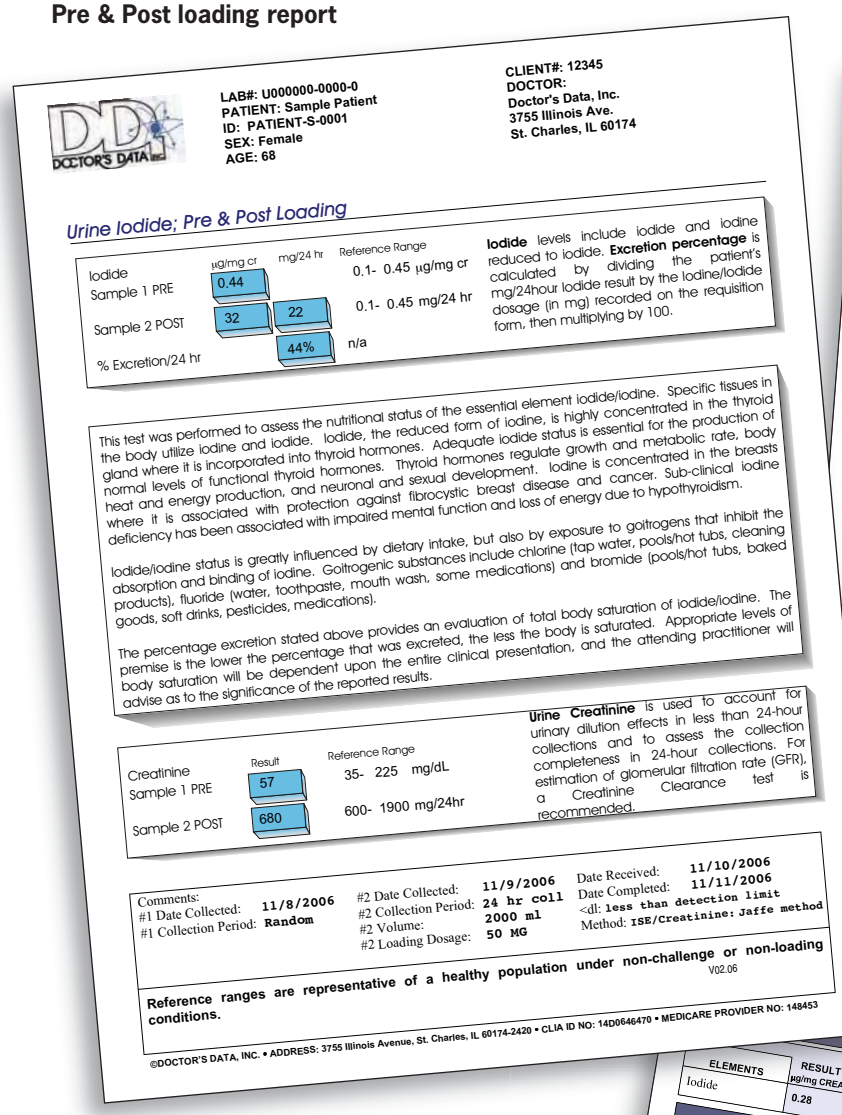
Pre & Post loading report



DOCTOR'S DATA inc

LAB#: U000000-0000-0
PATIENT: Sample Patient
ID: PATIENT-S-0001
SEX: Female
AGE: 68

CLIENT#: 12345
DOCTOR:
Doctor's Data, Inc.
3755 Illinois Ave.
St. Charles, IL 60174

Urine Iodide; Pre & Post Loading

	µg/mg cr	mg/24 hr	Reference Range
Iodide Sample 1 PRE	0.44		0.1- 0.45 µg/mg cr
Sample 2 POST	32	22	0.1- 0.45 mg/24 hr
% Excretion/24 hr		44%	n/a

Iodide levels include iodide and iodine reduced to iodide. **Excretion percentage** is calculated by dividing the patient's mg/24hour Iodide result by the Iodine/Iodide dosage (in mg) recorded on the requisition form, then multiplying by 100.

This test was performed to assess the nutritional status of the essential element Iodide/Iodine. Specific tissues in the body utilize Iodine and Iodide. Iodide, the reduced form of Iodine, is highly concentrated in the thyroid gland where it is incorporated into thyroid hormones. Adequate iodide status is essential for the production of normal levels of functional thyroid hormones. Thyroid hormones regulate growth and metabolic rate, body heat and energy production, and neuronal and sexual development. Iodine is concentrated in the breasts where it is associated with protection against fibrocystic breast disease and cancer. Sub-clinical Iodine deficiency has been associated with impaired mental function and loss of energy due to hypothyroidism.

Iodide/Iodine status is greatly influenced by dietary intake, but also by exposure to goitrogens that inhibit the absorption and binding of Iodine. Goitrogenic substances include chlorine (tap water, pools/hot tubs, cleaning products), fluoride (water, toothpaste, mouth wash, some medications) and bromide (pools/hot tubs, baked goods, soft drinks, pesticides, medications).

The percentage excretion stated above provides an evaluation of total body saturation of Iodide/Iodine. The premise is the lower the percentage that was excreted, the less the body is saturated. Appropriate levels of body saturation will be dependent upon the entire clinical presentation, and the attending practitioner will advise as to the significance of the reported results.

	Result	Reference Range
Creatinine Sample 1 PRE	57	35- 225 mg/dL
Sample 2 POST	680	600- 1900 mg/24hr

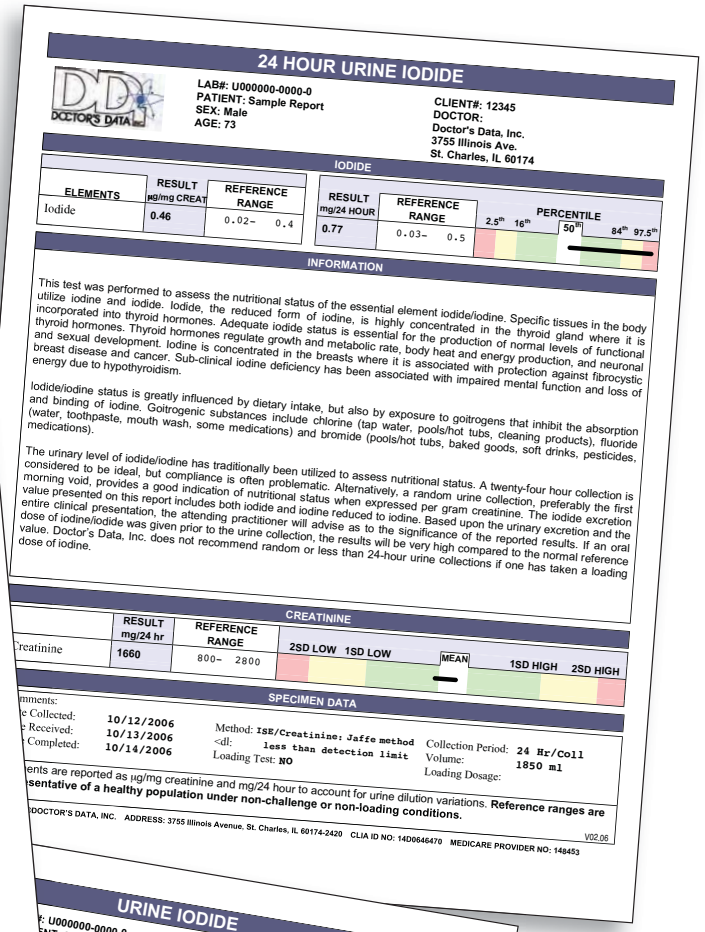
Urine Creatinine is used to account for urinary dilution effects in less than 24-hour collections and to assess the collection completeness in 24-hour collections. For estimation of glomerular filtration rate (GFR), a Creatinine Clearance test is recommended.

Comments:
#1 Date Collected: **11/8/2006**
#1 Collection Period: **Random**
#2 Date Collected: **11/9/2006**
#2 Collection Period: **24 hr coll**
#2 Volume: **2000 ml**
#2 Loading Dosage: **50 MG**
Date Received: **11/10/2006**
Date Completed: **11/11/2006**
<dl: **less than detection limit**
Method: **ISE/Creatinine; Jaffe method**

Reference ranges are representative of a healthy population under non-challenge or non-loading conditions.

V02.06

24-hour traditional report



24 HOUR URINE IODIDE

DOCTOR'S DATA inc

LAB#: U000000-0000-0
PATIENT: Sample Report
SEX: Male
AGE: 73

CLIENT#: 12345
DOCTOR:
Doctor's Data, Inc.
3755 Illinois Ave.
St. Charles, IL 60174

IODIDE

ELEMENTS	RESULT µg/mg CREAT	REFERENCE RANGE	RESULT mg/24 HOUR	REFERENCE RANGE
Iodide	0.46	0.02- 0.4	0.77	0.03- 0.5

PERCENTILE: 2.5th, 16th, 50th, 84th, 97.5th

INFORMATION

This test was performed to assess the nutritional status of the essential element Iodide/Iodine. Specific tissues in the body utilize Iodine and Iodide. Iodide, the reduced form of Iodine, is highly concentrated in the thyroid gland where it is incorporated into thyroid hormones. Adequate iodide status is essential for the production of normal levels of functional thyroid hormones. Thyroid hormones regulate growth and metabolic rate, body heat and energy production, and neuronal and sexual development. Iodine is concentrated in the breasts where it is associated with protection against fibrocystic breast disease and cancer. Sub-clinical Iodine deficiency has been associated with impaired mental function and loss of energy due to hypothyroidism.

Iodide/Iodine status is greatly influenced by dietary intake, but also by exposure to goitrogens that inhibit the absorption and binding of Iodine. Goitrogenic substances include chlorine (tap water, pools/hot tubs, cleaning products), fluoride (water, toothpaste, mouth wash, some medications) and bromide (pools/hot tubs, baked goods, soft drinks, pesticides, medications).

The urinary level of Iodide/Iodine has traditionally been utilized to assess nutritional status. A twenty-four hour collection is considered to be ideal, but compliance is often problematic. Alternatively, a random urine collection, preferably the first morning void, provides a good indication of nutritional status when expressed per gram creatinine. The Iodide excretion value presented on this report includes both Iodide and Iodine reduced to Iodine. Based upon the urinary excretion and the entire clinical presentation, the attending practitioner will advise as to the significance of the reported results. If an oral dose of Iodine/Iodide was given prior to the urine collection, the results will be very high compared to the normal reference value. Doctor's Data, Inc. does not recommend random or less than 24-hour urine collections if one has taken a loading dose of Iodine.

CREATININE

	RESULT mg/24 hr	REFERENCE RANGE
Creatinine	1660	800- 2800

2SD LOW 1SD LOW MEAN 1SD HIGH 2SD HIGH

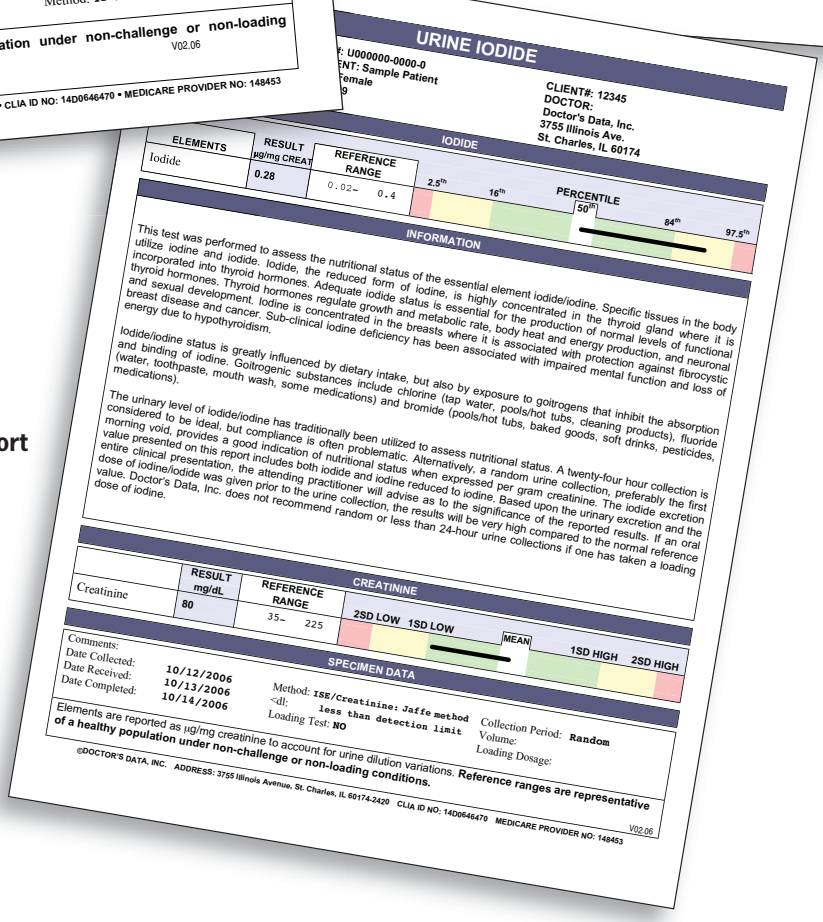
SPECIMEN DATA

Comments:
Date Collected: **10/12/2006**
Date Received: **10/13/2006**
Date Completed: **10/14/2006**
Method: **ISE/Creatinine; Jaffe method**
<dl: **less than detection limit**
Loading Test: **NO**
Collection Period: **24 Hr/Coll**
Volume: **1850 ml**
Loading Dosage:

Elements are reported as µg/mg creatinine and mg/24 hour to account for urine dilution variations. **Reference ranges are representative of a healthy population under non-challenge or non-loading conditions.**

V02.06

First morning void report



URINE IODIDE

#: U000000-0000-0
ENT: Sample Patient
Female
9

CLIENT#: 12345
DOCTOR:
Doctor's Data, Inc.
3755 Illinois Ave.
St. Charles, IL 60174

IODIDE

ELEMENTS	RESULT µg/mg CREAT	REFERENCE RANGE
Iodide	0.28	0.02- 0.4

PERCENTILE: 2.5th, 16th, 50th, 84th, 97.5th

INFORMATION

This test was performed to assess the nutritional status of the essential element Iodide/Iodine. Specific tissues in the body utilize Iodine and Iodide. Iodide, the reduced form of Iodine, is highly concentrated in the thyroid gland where it is incorporated into thyroid hormones. Adequate iodide status is essential for the production of normal levels of functional thyroid hormones. Thyroid hormones regulate growth and metabolic rate, body heat and energy production, and neuronal and sexual development. Iodine is concentrated in the breasts where it is associated with protection against fibrocystic breast disease and cancer. Sub-clinical Iodine deficiency has been associated with impaired mental function and loss of energy due to hypothyroidism.

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CREATININE

	RESULT mg/dL	REFERENCE RANGE
Creatinine	80	35- 225

2SD LOW 1SD LOW MEAN 1SD HIGH 2SD HIGH

SPECIMEN DATA

Comments:
Date Collected: **10/12/2006**
Date Received: **10/13/2006**
Date Completed: **10/14/2006**
Method: **ISE/Creatinine; Jaffe method**
<dl: **less than detection limit**
Loading Test: **NO**
Collection Period: **Random**
Volume:
Loading Dosage:

Elements are reported as µg/mg creatinine to account for urine dilution variations. **Reference ranges are representative of a healthy population under non-challenge or non-loading conditions.**

V02.06