



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 Iodine; Pre & Post Loading

Iodine	$\mu\text{g}/\text{mg cr}$	$\text{mg}/24 \text{ hr}$	Reference Range	
Sample 1 PRE	0.44		0.1- 0.45 $\mu\text{g}/\text{mg cr}$	Iodine levels include iodine and iodide oxidized to iodide. Excretion percentage is calculated by dividing the patient's $\text{mg}/24\text{hour}$ Iodine result by the Iodine/Iodide dosage (in mg) recorded on the requisition form, then multiplying by 100.
Sample 2 POST	32	22	0.1- 0.45 $\text{mg}/24 \text{ hr}$	
% Excretion/24 hr		44%	n/a	

This test was performed using ICP-MS to estimate the dietary intake, and total body sufficiency 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 thyroid hormones and the integrity of the thyroid and mammary glands. 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. Iodine deficiency has been associated with impaired mental function, loss of energy due to hypothyroidism and increased incidence of thyroid and breast cancer.

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 sufficiency of iodide/iodine. The premise is the lower the percentage that was excreted, the more the body has retained. Appropriate levels of total body I retention will be dependent upon the entire clinical presentation, and the attending practitioner will advise as to the significance of the reported results.

Creatinine	Result	Reference Range	
Sample 1 PRE	57	35- 225 mg/dL	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.
Sample 2 POST	680	600- 1900 $\text{mg}/24\text{hr}$	

Comments:

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

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

V02.06