

Urine Halides Pre & Post Load

Providing comprehensive assessment of iodine sufficiency and antagonistic halides in a single test, the Urine Halides test assesses iodine as well as exposure to and retention of bromide and fluoride. Iodine is an essential element required for normal function of the thyroid gland and immune system, and the integrity of breast tissue. Bromide and fluoride are non-essential, antagonistic halides that can disrupt iodine homeostasis and function. The test can be performed using conventional random or 24-hour urine collection or after administration of a loading dose of iodide/iodine. Iodine and bromine are measured by ICP-MS, as is used by the CDC.

Turnaround Time

5 to 7 days

Analytes Tested

Analyte	CPT	ABN Required
Bromine, urine	84999	Yes
Fluoride, urine	82735	No
Iodine, urine	84999	Yes

This test is useful for

- Fatigue
- Immune Response
- Thyroid Function
- Estrogen Metabolism

Detailed Information

Specific tissues in the body require adequate iodine and the reduced form of the element, iodide, for normal metabolism and optimal health. Adequate iodide uptake and

organification of iodine by the thyroid gland is required for the production, storage and release of thyroid hormones. Triiodothyronine (T₃) regulates metabolism in several tissues by affecting energy production and neuronal and sexual development. Iodine insufficiency is associated with "sub-clinical" thyroid deficiency, weight gain, loss of energy, goiter and impaired mental function. Iodine is also concentrated in breast tissue where it elicits anti-proliferative effects and protection against fibrocystic breast disease and cancer. Iodine and organic iodine compounds are also concentrated and secreted by the gastric mucosa, salivary glands and the cervix. Iodine status and metabolism are affected not only by iodine intake, which has decreased significantly, but also by intake and retention of goitrogenic halides bromide and fluoride. Excessive intake of the antagonistic halides can accumulate in tissues, displace iodine and compromise the production of thyroid hormones and the integrity of the thyroid and mammary glands. Antagonistic bromide is abundant in commercially produced baked goods, soft drinks, pesticides, brominated chemicals and some medications. Primary sources of fluoride include fluoridated water, beverages, toothpaste, mouthwashes and some medications. The Urine Halides test provides comprehensive assessment of iodine sufficiency and retention of antagonistic halides in a single test. The test requires a spot urine specimen, preferably first morning void (FMV), for determination of baseline halide levels. An oral loading dose of iodine/iodide is ingested and all urine is collected for the subsequent 24 hours. Iodine and displaced bromide and fluoride are measured in the urine and the results for each element are reported as µg/gm creatinine and µg/24 hours. Iodine status is assessed by evaluation of the percentage of the ingested dose that is excreted. Low iodine excretion is suggestive of greater bodily retention and need. The specific halides are analyzed in urine using the most accurate methodology available for each element. Iodine and bromine are measured by ICP-MS as is used by the CDC. Fluoride is measured by ion selective electrode (ISE).