

Louisiana Office of Public Health Laboratories	
Test Name	Neonatal Thyroxine
PHL Location	Central Laboratory 1209 Leesville Avenue Baton Rouge, Louisiana 70802
CPT Code	84443
Synonyms	T4
Brief Description of Test	The quantitative determination of human thyroxine (T4) in blood specimens dried on filter paper as an aid in screening newborns for congenital (neonatal) hypothyroidism.
Possible Results	Normal; Abnormal
Reference Range	≤48 Hrs Old >6µg/dL or >48 Hrs old >4 µg/dL
Specimen Type	Neonatal Dried Blood Spot
Specimen Container(s):	Standard letter size manila envelopes can be used for shipping
Minimum volume accepted:	Minimum of 2 completely filled blood spot circles
Collection Instructions	Blood specimens should be taken directly from a heel prick onto filter paper. See webaddress below http://www.lidh.louisiana.gov/index.cfm/page/488
Storage and Transport Instructions	Allow the blood specimen to air-dry in a horizontal position for at least 3 hours at ambient temperature (+18 to +25 °C), not in direct light. Do not heat or stack the specimens during the drying process. Transport or mail the specimen to the laboratory within 24 hours after collection, unless otherwise directed by the screening laboratory.
Causes for Rejection	Specimen > 14 days old, clotted or layered, serum rings, scratched or abraded, insufficient quantity for testing, not completely dry before mailing, blood applied to both sides of the filter paper, diluted discolored or contaminated, collection using capillary tubes containing EDTA, >12 months old, circles not completely filled.
Limitations of the Procedure	sample spot not uniformly saturated with blood - sample spots punched too close to the edge of the blood spot - poorly collected and improperly dried specimens - non-eluting blood spot due to deterioration of sample caused by exposure to heat and humidity - contamination of blood spot filter paper with fecal material Heterophilic antibodies in the sample may interfere with the assay Hematocrit values in the blood sample may affect the measured thyroxine concentration
Interfering Substances	Icteric (unconjugated bilirubin ≤ 342 µmol/L, equivalent to 20 mg/dL in serum, and conjugated bilirubin ≤ 237 µmol/L, equivalent to 20 mg/dL in serum) samples do not interfere with the assay. Lipemic samples (Intralipid ⁶ ≤ 15 mg/mL in serum) do not interfere with the assay. Added hemoglobin up to 15 g/L does not interfere with the assay.
References	GSP Neonatal Thyroxine (T4) Package Insert 3302-001U
Additional Information	NA
Release Date	05/2018

Warning: If you have printed a copy of this information please be advised that the Louisiana Office of Public Health Laboratories website and methods are updated on a regular basis. Please check the on-line version of this document to ensure you are relying on the most recent release.

LO.FM.GEN.043 V2

04 2013