“routine” FT4 Stony Brook is an in-house non-dialysis imuunoassay. FT4 by LC/MS must be sent out from UHSB to ARUP *update 9/21/17*

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| --- | --- | --- | --- | --- | --- |
|  | Quest | LabCorp | ARUP | Mayo | Esoterix |
| TSH  mIU/L | **Premature Infants (28-36 Weeks)** 1st Week of Life 0.20-27.90 mIU/L  **Term Infants (>37 wks)** 1-39 mIU/L  1-2 Days 3.20-34.60 mIU/L  3-4 Days 0.70-15.40 mIU/L  5d-4 Wks 1.70-9.10 mIU/L  1-11 Mo 0.80-8.20 mIU/L  1-19 Yrs 0.50-4.30 mIU/L   ≥20 Years 0.40-4.50 mIU/L | 0 - 6 d 0.700−15.200  7 d - 3 m 0.720−11.000  3m1d - 12m 0.730−8.350  1 to 5 y 0.700−5.970  6 to 10 y 0.600−4.840  >10 y 0.450−4.500 | |  |  | | --- | --- | | Cord | 2-40 | | 0-3day | 5.1-14.6 | | 4-30day | 0.43-16.1 | | 1-24 mo | 0.62-8.0 | | 2-6 yrs | 0.5-4.5 | | 7-11 yrs | 0.66-4.1 | | 12-19 yrs | 0.53-3.5 | | 20+ yrs | 0.3-4.0 | | 0-5 d 0.7-15.2  6 d-2 mo: 0.7-11.0  3-11 mo: 0.7-8.4 mIU/L  1-5 yrs: 0.7-6.0 mIU/L  6-10 yrs: 0.6-4.8 mIU/L  11-19 yr: 0.5-4.3 mIU/L  >20 yrs: 0.3-4.2 mIU/L | Premature (26 - 32w) Day 3-4: 0.8 - 6.9  Full-term Day 4:  1.3 - 16.0  1 - 11m 0.9 - 7.7  Prepub 0.6 - 5.5  Pub & adults 0.5 - 4.8 |
| T4  μg/dL | |  |  |  | | --- | --- | --- | |  | Male | Female | | <1 mo | 4.5-17.2 | 4.5-17.2 | | 1-23 mo | 5.9-13.9 | 5.9-13.9 | | 2-12 Yrs | 5.7-11.6 | 5.7-11.6 | | 13-20 Yrs | 5.1-10.3 | 5.3-11.7 | | >20 Yrs | 4.9-10.5 | 5.1-11.9 | | **no range for age provided**  “4.5-12.0” | |  |  | | --- | --- | | Cord | 6.6-17.5 | | 0-3 d | 5.3-22.4 | | 4-30 d | 5.2-23.20 | | 1-23 mo | 5.3-16.00 | | 2-6 yrs | 5.2-14.80 | | 7-11 yrs | 5.7-14.10 | | 12-19 yr | 4.7-14.60 | | 20+ yrs | 5.1-14.10 | | 0-5 d: 5.0-18.5  6 d-2 mo: 5.4-17.0  3-11 mo: 5.7-16.0  1-5 yrs: 6.0-14.7  6-10 yrs: 6.0-13.8  11-19 yrs: 5.9-13.2  20 + yrs: 4.5-11.7 | Prem 26 - 30w Day 3 – 4:  2.6 - 14.0  Term d 1-3: 8.2 - 19.9  1 week 6.0 - 15.9  1 - 11m 6.1 - 14.9  12m - 2y 6.8 - 13.5  3 - 10y 5.5 - 12.8  11 - 17y 4.9 - 13.0  Adults 4.2 - 13.0 |
| FT4  ng/dL  direct by  analog/immunoassay | by dialysis + immunoassay:  Prem 25-30 wks at 0-7 Days: 0.5-3.3  prem, 31-36 wks  at 0-7 Days: 1.3-4.7  Cord >37 wk: 1.2-2.2  0-4 Days: 2.2-5.3  2 wks-2 yrs: 0.8-2.0  3-20 yrs: 1.0-2.4 | Electrochemiluminescence immunoassay   |  |  | | --- | --- | | 0 to 3 d | 0.66−2.71 | | 4 to 30 d | 0.83−3.09 | | 31d- 12m | 0.48−2.34 | | 13 m -5 y | 0.85−1.75 | | 6 to 10 y | 0.90−1.67 | | 11 to 19 y | 0.93−1.60 | | >19 y | 0.82−1.77 | | Electrochemiluminescence immunoassay   |  |  | | --- | --- | | 0-3 d | 0.7-2.7 | | 4-30 d | 0.8-3.1 | | 1-23 mo | 0.5-2.3 | | 2-6 yrs | 0.9-1.8 | | 7-11 yrs | 0.9-1.7 | | 12-19 yrs | 0.9-1.6 | | 20+ yr | 0.8-1.7 | |  | analog immunoassay:   |  |  | | --- | --- | | <4d | 0.66 -2.71 | | 4d -1m | 0.83 -3.09 | | 1 -11m | 0.48 -2.34 | | 1 -5y | 0.85 -1.75 | | 6 -10y | 0.90 -1.67 | | 11 -19y | 0.93 -1.60 | | 20+y | 0.82 -1.77 | |
| FT4  ng/dL  by dialysisLC/MS | by dialysis/LC/MS:   |  |  | | --- | --- | | 0-7d | 2.1-6.3 ng/dL | | 8 -60 d | 1.6-4.3 ng/dL | | 61 d - 2 yrs | 1.5-3.1 ng/dL | | 3 - 17 yrs | 1.4-2.9 ng/dL | | Adults | 1.3-2.7 ng/dL | | LabCorp sends to Esoterix | by dialysis/LC/MS:  25-30 wk gest: 0.5-3.3  31-36 wks gest: 1.3-4.7  0-1 wk 2.2-5.3  2-3 wks 0.9-4.0  1-5 mo 1.1-2.2  6 mo-6 yrs 1.4-2.7  7 yrs-17 yrs 1.1-2.0  18+ yrs 1.1-2.4 |  | by dialysis/LC/MS:   |  |  | | --- | --- | | Prem0-4wk | 0.86−4.46 | | Newb | | 0 to 2 wk | 0.84−4.97 | | 2wk -12 m | 0.81−2.12 | | 1 to 11 y | 0.65−1.9 | | Pub,adults | 0.8−1.7 | |

Additional info for specific subgroups

Down Syndrome:

Health Supervision for Children With Down Syndrome, Marilyn J. Bull and the Committee on Genetics. Pediatrics August 2011, 128 (2) 393-406

“Verify results of newborn thyroid-function screen if not previously performed. Because of increased risk of acquired thyroid disease, repeat measurement of TSH at 6 and 12 months of age and then annually.”