

## T

**T4 / T8 RATIO**

See IMMUNOPHENOTYPING

**TACROLIMUS**

Specimen Required: **1 x EDTA**  
Department: Referred

**TAENIA SEROLOGY**

Specimen required: **Serum (1 x SST)**  
Department: Referred test  
See also: TAPEWORM IDENTIFICATION

**TAPEWORM IDENTIFICATION**

Specimen required: **Faeces sample.** Tapeworm proglottids are mobile when fresh. Capture 3-4 Tapeworm proglottids and preserve in sterile water in yellow topped urine jar.

Department: Microbiology

Comment: Microbiology will confirm the presence of Taenia and perform speciation. i.e. T. saginata v's T. solium as there are some extra precautions with T solium management. Taenia serology is available i.e. cysticercosis serology.

Note: Tapeworm proglottids disintegrate in faeces specimens.

**TB**

See TUBERCULOSIS

**T-CELLS**

See IMMUNOPHENOTYPING

**TACROMILUS**

See FK 506

**TAURINE**

Specimen required: **1 x Heparin NO GEL Attach process immediately sticker**  
Sample must be promptly separated and frozen.  
Transport sample frozen.

Department: Referred test

**T- CELL SUBSETS**

See IMMUNOPHENOTYPING

**TEGRETOL**

See CARBAMAZEPINE

**TESTOSTERONE – TOTAL**

Specimen required: **Serum (1 x SST)**  
Department: Biochemistry

Reference Range: Male: 9.9 - 27.8 nmol/L  
Female: 0.2 – 2.9 nmol/L

Comment: A better assessment of androgen status in females is to perform a Free Androgen Index, in which Testosterone and Sex Hormone Binding Globulin are measured and FAI is calculated. In males, calculated free testosterone is preferred (calculated from SHBG, albumin and testosterone)

**TFT**

See THYROID FUNCTION TESTS

**THALASSAEMIA**

See HAEMOGLOBINOPATHY STUDIES

**THC ( CANNABINOIDS )**

See DRUGS of ABUSE

**THEOPHYLLINE**

Specimen required: **Serum (1 x SST)**

Department: Biochemistry

Results: Therapeutic range: 10 - 20 mg/L

Peak level: 1 - 3 hours after oral administration.

Half life: 3 - 8 hours.

Note:

- (i) Dose requirements should be based on ideal body weight.
- (ii) Elimination of theophylline is decreased in chronic obstructive airways disease, congestive cardiac failure, acute pulmonary oedema and reduced hepatocellular function.
- (iii) Please note time of collection and last dose.

**THIAMINE**

See Vitamin B1

**THIOPURINE METHYL TRANSFERASE**

Specimen required: **1 x EDTA or Li Hep**

Department: Referred Test

**THIN PREP – PAP**

Specimen required: **Cervical sample in ThinPrep collection vial** (ThinPrep vials available on request from Laboratory)

Specimen Collection:

- (i) Collect the sample as normal, using a Cervex brush, available from the Laboratory
- (ii) Prepare the conventional smear by wiping, first one side of the brush on the glass slide **and** then the other. Apply fixative immediately.
- (iii) Rinse the cervex brush in a vial of preservative fluid and discard. Note: The end of the Cervex brush should not be left in the vial once rinsed.
- (iv) Label glass slide and vial with the patient's surname, first name and date of birth.
- (v) Send prepared slide and ThinPrep vial to Laboratory for analysis.

Department: Cytology

Note: Currently the split sampling technique is employed within this Laboratory, which involves the analysis of both the conventional smear and the ThinPrep sample. The ThinPrep sample is not routinely processed without a conventional slide.

See also: CYTOLOGY, CHLAMYDIA AND HUMAN PAPILLOMA VIRUS.

**THROMBIN TIME**

Specimen required: **1 x Sodium citrate tube.**

Department: Haematology

Reference Range: 12.5 - 17.5 seconds

**THROMBOPHILIA SCREEN (HALASCA SCREEN)**

Specimen Required: **Patient must be fasting**  
**2 x Sodium citrate tubes. Bunbury Pathology to collect 3 x Na Citrate**  
**1 x EDTA**  
**1 x SST**  
**1 x PPT (for HOMOCYSTEINE)**

Department: Haematology  
Comment: Screen consists of: Homocysteine  
APC Resistance  
Lupus Anticoagulant  
Antithrombin III  
Protein S  
Protein C  
Anticardiolipin Antibodies  
Prothrombin 20210 gene referred if indicated

Note: To qualify for Medicare benefits for this screen, a history of venous thromboembolism or a first-degree relative of a person who has a proven defect of any of ATIII, Prot C, S, or APC resistance, must be given in writing. Any queries can be directed to Haematology.

**THYROID ANTIBODIES ( THYROID PEROXIDASE & THYROGLOBULIN ANTIBODIES )**

Specimen required: **Serum (1 x SST)**  
Methodology: Immunoassay.  
Department: Biochemistry  
Reference Range: Thyroperoxidase antibodies  $\leq 5.6$  IU/ml  
Thyroglobulin antibodies  $\leq 4.1$  IU/ml

Note: Elevation of one or both is associated with autoimmune thyroid disease.

**THYROID RECEPTOR ANTIBODIES ( TRAB )**

Specimen required: **Serum (1 x SST)**  
Department: Referred test

**THYROID FUNCTION TEST ( TFT )**

Specimen required: **Serum (1 x SST)**  
Department: Biochemistry  
Interpretation: Comments are made on all results by this Laboratory.  
Note: Please indicate if patient is being treated for thyroid illness.  
Comment: Clinipath Pathology routinely performs THYROID STIMULATING HORMONE (TSH) only. If HIC approved clinical criteria are satisfied, (e.g. previous thyroid disease), then TSH and FT<sub>4</sub>/FT<sub>3</sub> can be performed.

**THYROXINE – FREE T4**

Specimen required: **Serum (1 x SST)**  
Department: Biochemistry  
Reference Range: 9 - 19 pmol/L

**THYROTROPIN – TSH**

Specimen required: **Serum (1 x SST)**  
Department: Biochemistry  
Reference Range: 0.40 - 4.0 mU/L

**TISSUE TRANSGLUTAMINASE ANTIBODIES (TTG IGA)**

Specimen required: **Serum (1 x SST)**  
Department: Serology  
Reference Range: < 7 U/mL  
Note: This test is useful in the diagnosis and monitoring of Coeliac disease.  
When the significance of a positive tTG autoantibody test is unclear, HLA DQ2/8 typing is a very sensitive exclusion test.

**TMPI (RENAL THRESHOLD PHOSPHATE)**

Specimen required: **Spot urine sample (plain bottle)**  
**Serum (1 x SST)**  
**1 x Heparin (NO GEL)**

Department: Biochemistry

Comment: Includes Urine calcium, phosphate, Serum calcium, plasma phosphate, creatinine

Reference Interval: 0.75 – 1.35 mmol/L GF

Notes: Requested by Dr Paul Glendenning

**TOBRAMYCIN**

Specimen required: **Serum (1 x SST)**  
 Usually collected as a pair of PEAK and TROUGH samples.  
 PEAK sample - 1 hour post IM dose or ½ hour post infusion.  
 TROUGH - just prior to next dose.

Department: Referred test

Therapeutic Range: TROUGH should be less than 2.0 mg/L  
 PEAK levels between 5.0 – 10.0 mg/L

See also: GENTAMICIN ASSAY/AMINOGLYCOSIDE MONITORING for once daily dosing.

**TORCH SCREEN**

See individual listings for TOXOPLASMOSIS, RUBELLA SEROLOGY, CMV, HEPATITIS B, AND HERPES

**TOXOPLASMOSIS SEROLOGY (IGG & IGM)**

Specimen required: **Serum (1 x SST)**

Department: Serology

Results: Reported as Detected / Not Detected with appropriate interpretive comments.

Symptoms: May include headache, sore throat, lymphadenopathy and is an important cause of congenital infections. Can cause severe infections in the immunosuppressed.  
 Consider also EBV or CMV.

Comment: Additional Testing can include, Avidity test - High avidity IgG antibody suggests infection >3mths before. Usually requested in pregnant females with IgM + and after discussion with microbiologist

**TPHA/TPPA**

TREPONEMA PALLIDUM HAEM-AGGLUTINATION  
 TREPONEMA PALLIDUM PARTICLE AGGLUTINATION

See SYPHILIS SEROLOGY

**TPMT**

See THIOPURINE METHYL TRANSFERASE

**TRANSFERRIN**

Specimen required: **Serum (1 x SST)**

Department: Biochemistry

Reference Range: 25 - 45 µmol/L

Comment: Used in the calculation of Iron Saturation.

Interpretation: LOW - Chronic diseases, malnutrition, malabsorption.  
 HIGH - Oestrogen therapy, liver disease.  
 SATURATION LOW - Iron deficiency anaemia.  
 SATURATION HIGH - Haemochromatosis, iron therapy

**TRBA**

See THYROID RECEPTOR ANTIBODIES

**TREPONEMA PALLIDUM ANTIBODIES**

See SYPHILIS SEROLOGY

**TREPONEMA PALLIDUM (SYPHILIS)**

Specimen required: **Dry swab of ulcer/chancere for PCR**  
 Department: Referred test  
 See also: ULCER PCR

**TRIGLYCERIDES ( TRIGS )**

Specimen required: **Serum (1 x SST) Patient fasting preferably.**  
 Department: Biochemistry  
 Reference Range: < 1.8 mmol/L  
 Interpretation: High levels seen in primary (familial) and secondary (eg diabetes, obesity, alcoholism, pancreatitis) hyperlipidaemias.

**TRICYCLIC ANTIDEPRESSANTS ( TOTAL )**

Specimen required: **Serum (1 x SST)**  
 Department: Referred test  
 Therapeutic Range: As stated on report.  
 See also: Specific Tricyclic Antidepressants  
 AMITRIPTYLINE  
 CLOMIPRAMINE  
 DOTHIEPIN  
 DOXEPIN  
 IMIPRAMINE

**TRI-IODOTHYRONINE – FREE T3**

Specimen required: **Serum (1 x SST)**  
 Department: Biochemistry  
 Reference Range: 2.6 – 5.7 pmol/L  
 Interpretation: Thyroid results are generally interpreted when reported.

**TRIPLE TEST / MATERNAL SERUM SCREEN (MSS)**

TEST REPLACED BY FIRST (9 – 13 weeks 6 days) & SECOND (14 – 17 weeks) TRIMESTER SCREENING  
 Comment: Screening test for Down's Syndrome and Neural Tube Defect

**TROPONIN I (BUNBURY PATHOLOGY ONLY)**

Specimen required: **1 x Lithium Heparin. Treat as Urganrt**  
 Department: Bunbury

**TROPONIN T**

Specimen required: **Serum (1 x SST) TREAT AS URGENT**  
 Department: Biochemistry  
 Reference Range: < 0.03 ug/L Negative  
 0.03-0.10 ug/L Minor myocardial damage, recently redefined as M.I.  
 0.10-3.00 ug/L Myocardial infarction  
 >3.00 ug/L Massive myocardial damage detected.  
 Interpretation: Troponin T is the preferred bio-marker in the diagnosis of myocardial infarction. Troponin T will usually be detected within 6 hours following myocardial infarction and may remain elevated for up to 2 weeks.

**TRYPANOSOMIASIS (CHAGAS DISEASE)**Specimen required: **Serum (1 x SST)**

Department: Referred test

**TRYPTOPHAN**Specimen required: **1 x Heparin NO GEL.****Special pick up required as specimen is promptly separated on arrival at the Main Laboratory**

Department: Referred test

**TSH RECEPTOR ABS**

See THYROID RECEPTOR ANTIBODIES

**TUBERCULOSIS / ACID FAST BACILLI**

- Specimen required:
- (a) **Sputum:** Three (3) consecutive early morning specimens which should be delivered to the Laboratory daily.
  - (b) **Urine:** Three (3) early morning specimens are required. This should be the full specimen, not a midstream specimen. Special sterile jars are available from the Laboratory.
  - (c) **Skin and other tissue:** The specimen should be sent dry, in a sterile container.
  - (d) **Early morning gastric aspirates:** These may be used if sputum cannot be obtained. The gastric acid must be neutralised if the specimen cannot be processed within 1/2 hour, and suitable containers with buffer are available from the Laboratory as required.
  - (e) **Blood cultures-** should be collected in a special Bacterial Blood Culture bottle available from the microbiology Laboratory.
  - (f) **Sterile aliquot of bone marrow aspirate.-** Contact Clinical Microbiologist

Department: Referred test

Comment: The results of direct microscopy are reported. Culture may take up to 12 weeks to complete. For positive microscopy specimens an interim rapid molecular test is usually performed and available 2-3 days after microscopy. This test detects mycobacterium TB complex.

**TUMOUR MARKERS**

See Individual Markers

<b><i>Tumour Marker</i></b>	<b><i>Primary Cancer Site</i></b>
ADH (Antidiuretic Hormone)	Small cell lung cancer, adenocarcinoma
AFP (Alpha-feto protein)	Liver, germ cell tumour of ovaries or testes
CA 15-3 (carbohydrate antigen 15-3)	Breast
CA 19-9	Pancreas, colorectal
CA 125	Ovarian
Calcitonin	Thyroid medullary carcinoma
CEA (Carcinoembryonic antigen)	Colon, lung
HCG (Human chorionic gonadotrophin)	Trophoblastic disease
LDH (Lactic dehydrogenase)	Lymphoma, seminoma, acute leukaemia, metastatic carcinoma.
NSE (Neuron-specific enolase)	Neuroblastoma, small cell lung cancer
PSA (Prostate specific antigen)	Prostate

**TYPHOID SEROLOGY**

See WIDAL AGGLUTININS, Salmonella Typhi

**TYPHUS SEROLOGY**

See Rickettsia

**TYROSINE**Specimen required: **1 x Heparin (no Gel)**

Department: Referred test