

P

P1NP (BONE FORMATION MARKER)Specimen required: **Serum (1 x SST)**

Department: Referred test

P4

See PROGESTERONE

PAPP - A

See FIRST TRIMESTER SCREEN

PAP SMEAR

See CYTOLOGY (Gynaecological & Non-Gynaecological) and THIN PREP

PANCREATIC ELASTIN TEST

See ELASTASE

PANCREATIC ISLETS AUTO ANTIBODY

See ISLETS AUTO ANTIBODY

PANCREATIC LIPASE

See LIPASE

PANCREATIC POLYPEPTIDESpecimen required: **2 x SST (Serum)**

Department: Referred test

Note: This is a non-rebatable test. Patients will receive a private account from the testing laboratory.

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

Department: Referred test

Results: Refer to relevant Paracetamol Treatment Nomogram

Interpretation: For cases of overdose a time of ingestion is useful in establishing a prognosis.

PARAINFLUENZA VIRUS

See RESPIRATORY VIRUS DETECTION

PARAPROTEIN

See PROTEIN ELECTROPHORESIS

PARATHYROID HORMONE (PTH)Specimen required: **Serum (1 x SST) dedicated tube. Treat as Process Immediately specimen for special processing. Refrigerate but do not spin specimen after collection.**

Preferably fasting, but if known renal impairment, non-fasting is OK. Specimen must reach Laboratory within six hours of collection.

Department: Biochemistry

Reference range: 1.3 – 7.0 pmol/L

Interpretation: HIGH – Hyperparathyroidism
– Vitamin D deficiency
LOW – Hypoparathyroidism

PARTIAL THROMBOPLASTIN TIME (APTT, PTTK)

Specimen required: **1 x Sodium citrate**
 Department: Haematology
 Results: Reference range: Less than 34 seconds.
 Therapeutic Range: 1.5 - 2.5 times the normal control for heparin therapy monitoring.

PARVOVIRUS B19

Specimen required: **Serum (1 x SST). Dedicated tube should be collected for PCR if requested**
 Department: Serology
 Results: Reported as Detected / Not detected with appropriate interpretive comments.
 Symptoms: May include rash, arthropathy, red cell aplasia, spontaneous abortions, hydrops fetalis
 Consider also Rubella, Measles, Scarlet Fever, Ross River Virus or Barmah Forest Virus.
 Note: A PCR confirmatory test for IgM positive sera is also available if needed
 Comment: PAVOVIRUS B19 also known as ERYTHEMA INFECTOSUM - SLAPPED FACE DISEASE, FIFTH DISEASE

PATERNITY TESTING

See DNA Paternity Testing

PAUL BUNNELL

See IM SCREEN (Monospot)

PCR TESTING (POLYMERASE CHAIN REACTION)

Specimen required: Various sample types e.g. urine, sputum, swabs and blood.

1) **SWABS** Swabs should be plain dry swabs (orange top handle).
DO NOT USE SWABS WITH TRANSPORT MEDIUM (gel for transport interferes with PCR tests)
 If more than two PCR tests are being requested; **two** swabs should be sent in to ensure there is enough material to perform all tests.

2) **BLOOD** **NOTE: All PCR blood test must have dedicated tubes.**
 EBV PCR **1 x EDTA** whole blood
 CMV Viral Load **2 x EDTA**
 Parvovirus B19 **1 x EDTA** whole blood (by special arrangement only)
 HIV Provirus PCR **2 x EDTA** whole blood
 Hep C PCR **1 x 10mL SST.**

3) **FIRST VOID URINE** Chlamydia trachomatis and Neisseria gonorrhoea (See also listing for Chlamydia DNA detection)
 HSV
 Mycoplasma + Ureaplasma

Note: Please see specific infection for further information

PERHEXILINE

Specimen required: **1 x Heparin NO GEL**
 Collect blood just prior to next dose.
 Department: Referred test
 Therapeutic range: As stated on report

PERTUSSIS TESTS

Specimens required: **Perinasal Aspirate for culture, PCR and nasal IgA (Note one ml required)**
Throat swab for PCR and Serum (1 x SST) for IgA if PNA not possible
 Nasal swabs x2 are acceptable in an outbreak if no PNA.

Department: Microbiology
 Note: Prefer PNA for acute symptoms and Serum IgA for chronic symptoms (2-4 weeks)
 IgA can also be done on PNA if the volume is >1mL, usually paediatric only
 See also: Respiratory viruses as tests are often combined

PESTICIDE SCREEN (ORGANOCHLORINES)

Specimen required: **1 x Heparin NO GEL**
 Department: Referred test
 Reference range: As stated on report.
 Note: For ORGANOPHOSPHATE Pesticides please see CHOLINESTERASE.
 Specimens referred to a reference laboratory. Please list pesticides in contact if known.
 Medicare rebate available only if applicable. Patient may receive a private account.

PHENOBARBITONE

Specimen required: **Serum (1 x SST)**
 Department: Biochemistry
 Therapeutic range: 10 - 30 umol/L
 Peak level: 6 - 18 hours after oral administration,
 1.5 hours after IM injection
 Half life: 2 - 6 days.
 Note: (i) Due to phenobarbitone's long half life sampling time is unimportant. However, when making comparative measurements sampling time should be consistent. Please note down time of last dose and collection.
 (ii) Valproate may potentiate the effects of phenobarbitone.

PHENYLALANINE

Specimen required: **1 x Heparin NO GEL**
 Department: Referred test

PHENYTOIN (DILANTIN)

Specimen required: **Serum (1 x SST). Trough levels, just prior to next dose.**
(Peak levels are only used if toxicity is suspected)
 Department: Biochemistry
 Results: Therapeutic range: 10 - 20 mg/L
 Peak level: 3 - 8 hours after oral administration.

PHOSPHATE (INORGANIC) – SERUM

Specimen required: **Serum (1 x SST)**
 Department: Biochemistry
 Reference range: 0.70 - 1.50 mmol/L
 Interpretation: LOW – Hyperparathyroidism, osteomalacia, Fanconi's syndrome
 HIGH – Vitamin D excess, hypoparathyroidism, renal insufficiency
 FALSE HIGH – Haemolysed specimen

PHOSPHATE (INORGANIC) – URINARY

Specimen required: **Urine - 24 hour collection with NO PRESERVATIVE.**
 Department: Biochemistry
 Reference range: 10 - 45 mmol/day
 Interpretation: HIGH – Hyperparathyroidism, renal tubular damage
 LOW – Hypoparathyroidism, parathyroidectomy

PHOSPHOLIPID ANTIBODIES

See ANTI CARDIOLIPIN ANTIBODIES

PLASMA VISCOSITY

See WHOLE BLOOD VISCOSITY

PLASMA FREE METADRENALINES

See METANEPHRINES - PLASMA

PLATELET AGGREGATION STUDIES

Specimen required: **4 x Sodium Citrate tubes - Please send patient to Clinipath Pathology Main Laboratory. Must arrive at RPH within 2 hours of collection AND before 2:00pm Monday-Thursday, Note: On Fridays sample must arrive before 12:00 noon.**

Department: Referred test

Reference range: As stated on report.

PLATELET ANTIBODIES

See ANTI PLATELET ANTIBODIES

PLATELET FUNCTION TEST

Specimen required: **1 x Sodium Citrate do not spin. Process immediately sticker. Must be at Main Laboratory within 4 hours of collection. Do not refrigerate**

Department: Haematology

Reference range: As stated on report.

Note: NOT part of a Coagulation Profile and MUST be specifically requested

PLATELET SEROTONIN

See SEROTONIN

PNA

See POST NASAL ASPIRATE

PNEUMOCOCCAL ANTIBODIES

Specimen required: **Serum (1 x SST)**
Test is used in the investigation of immune response to Pneumovax vaccination. Pre and 2 - 4 week post vaccination samples are taken. **NOT** to be used as a diagnostic test in pneumonia infections.

Department: Referred test

PNEUMOCYSTIS

Specimen required: **Bronchial lavage, sputum.**

Department: Referred test

Comment: Cause of pneumonia in immunocompromised patients, particularly in HIV patients.

POLIO SEROLOGY

Test not available

PORPHYRINS SCREEN

Specimen required: **1 x Heparin NO GEL and a Spot Urine.**
Specimens must be protected from the light at all times (wrap in aluminium foil).

Department: Referred test

Reference range: Qualitative tests are initially performed.

Interpretation: Laboratory will assist, if required.

POST NASAL ASPIRATE (PNA) FOR BORDETELLA CULTURE (also other pathogens such as influenza, RSV and Human Metapneumovirus)

Specimen collection: **A post nasal aspirate (PNA)** is the preferred specimen for diagnosis of pertussis, although a posterior nasal swab can also be used, although special flexible wire swabs will be needed optimally for this to be performed, (available from the Laboratory if required.)

Department: Serology / Microbiology

Comment: Tests performed include:
 (i) Bordetella culture - requires at least 7 days for final result. Posterior nasal SWABS for culture should be placed in Amies transport medium.
 (ii) Bordetella PCR on aspirate. If a posterior nasal SWAB is collected for PCR, an orange capped wire transported dry in the sheath is the nearest available sampling swab, if flexible wire not available. (Flexible wire swabs available from the Laboratory on request.)

Note: **Collection of PNA is only available at selected collection centres. Please contact Main Laboratory for advice.**

See also: BORDETELLA SEROLOGY.

POST PRANDIAL 2 HR

Sample Required: **1 x Fluoride Oxalate. Collected 2hrs after patient has consumed food**

Department: Biochemistry

Reference Interval: As stated on report

POTASSIUM (K+)

Specimen required: **Serum (1 x SST) - DO NOT refrigerate specimen.**
 The specimen MUST NOT be haemolysed.
If Whole Blood or Red Cell Potassium requested - Heparin NO GEL.

Department: Biochemistry

Reference range: 3.5 - 5.4 mmol/L

Interpretation: HIGH - Increased intake, renal failure, Addison's disease, uncontrolled diabetes
 Low - Insulin therapy, renal loss (especially diuretics), gastrointestinal loss
 FALSE HIGH - Haemolysed specimen or overnight, unseparated specimen.

Note: Refrigeration speeds up the release of potassium from red cells. Store at room temperature.

POX VIRUS

See OFR virus PCR

PREGNANCY PATHOLOGY ASSESSMENT (PPA)

See Antenatal Basic Screening Test

PREGNELONONE

Sample Required: **Serum (1 x SST)**

Department: Referred test

Reference Interval: As stated on report

Comment: Patient will receive a private account from the testing laboratory

PR – 3

See ANTI NEUTROPHIL CYTOPLASM ANTIBODY

PRIMIDONE

See PHENOBARBITONE.

Specimen required: **Serum (1 x SST). Trough specimen.**

Department: Biochemistry

Peak level: 3 hours after oral dose.

Half life: 8 hours.

Comment: Primidone is measured via its main metabolite, Phenobarbitone, which accumulates in the body (Half Life 2-6 days).

PRO - BNP

See BRAIN NATRIURETIC PEPTIDE

PROCALCITONIN

Specimen required: **Hep no Gel, frozen**
Department: Referred test

PROGESTERONE (P4)

Specimen required: **Serum (1 x SST)**
Department: Biochemistry
Reference range: Female:
Follicular < 1.0 nmol/L
Luteal 3.8 - 50.0 nmol/L
Menopausal < 0.6 nmol/L
Pregnancy (1st trimester) > 40.0 nmol/L consistent with viability.
Male: < 0.6 nmol/L
Also see: SALIVARY HORMONES

17- OH PROGESTERONE

Specimen required: **Serum (1 x SST)**
Department: Referred test
Reference range: Gender specific as stated on report.
Interpretation: HIGH – Congenital adrenal hyperplasia

PROLACTIN (PROL)

Specimen required: **Serum (1 x SST)**
Department: Biochemistry
Note: A **Resting prolactin** may be requested to rule out stress elevation. Patient must rest for 30 minutes prior to taking the sample.
Reference range: Female: 25 - 628 mIU/L
Male: 54 - 380 mIU/L
Interpretation: High in pituitary tumours, hypothalamic disorders, hypothyroidism, stress, some drugs (e.g.phenothiazines), macroprolactin

PROSTATIC MASSAGE

Specimen required: **Urine for differential culture before and after massage +/- MSU**
Department: Microbiology
Note: Deliver to Laboratory within 2 hours or refrigerate

PROSTATE SPECIFIC ANTIGEN - FREE (FPSA)

Specimen required: **Serum (1 x SST)**
Department: Biochemistry
Note: Only recommended when the total PSA falls between 2.0 and 10.0 µg/L.
The test is useful in discriminating between benign prostatic hyperplasia and cancer of the prostate. Due to the stability of free PSA, this test cannot be added on more than 24hrs after collection.

PROSTATE SPECIFIC ANTIGEN – TOTAL (PSA)

Specimen required: **Serum (1 x SST)**
 Department: Biochemistry
 Reference range: Age Related
 40 - 49 years < 2.5 ug/L
 50 - 59 years < 3.5 ug/L
 60 - 69 years < 4.5 ug/L
 ≥ 70 years < 6.5 ug/L
 Interpretation: HIGH - Prostatic cancer, benign prostatic hyperplasia.
 Note: Medicare rebatable for 1 episode in a 12 month period in the absence of prostatic disease

PROTEIN C

Specimen Required: **1 x Sodium Citrate. Bunbury Pathology to collect 3 x Na Citrate**
 Department: Haematology
 Reference range: 70 – 150%

PROTEIN ELECTROPHORESIS (QEP, EPP, EPG)

Specimen required: **Serum (1 x SST) Plasma NOT suitable.**
 Department: Biochemistry
 Interpretation: Quantitative assessment of serum proteins. Screen for paraproteinaemia/myeloma.

PROTEIN S

Specimen Required: **1 x Sodium Citrate**
 Department: Haematology
 Reference range: 50 – 150%

PROTEIN – TOTAL

Specimen required: **Serum (1 x SST)**
 Department: Biochemistry
 Reference range: 63 - 83 g/L
 Interpretation: LOW - Over hydration, nephrotic syndrome, malabsorption
 HIGH - Dehydration, chronic diseases, paraproteinaemias

PROTEIN – URINE

Specimen required: **Urine – 24 hour collection – NO PRESERVATIVE
 OR Spot urine sample**
 Department: Biochemistry
 Reference range: 24 hour collection Less than 0.15 g/day
 Spot sample 0.5 – 11.5 mg/mmol creatinine
 Interpretation: HIGH - Renal disease, UTI, pre-eclampsia, etc.
 Comment: Normal persons may show trace proteinuria with dipstick testing. See also Microalbumin.

PROTHIADIN

See DOTHIEPIN

PROTHROMBIN 20210

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

PROTHROMBIN TIME (PT/INR)Specimen required: **1 x Sodium citrate tube.**

Department: Haematology

Note: Specimen must be "Full Draw" to the required level. Finger prick specimens are **not** suitable.

Comment: All results are routinely FAXED to the requesting practitioner.

Reference range: 9 - 13 seconds for non-warfarinised patients.

Therapeutic Range:

INR	Condition	Length of Treatment
1.5 - 2.5	Atrial fibrillation	Long term.
2.0 - 3.0	Bioprosthetic valve	3 months
2.0 - 3.0	Acute MI	3 months (> if AF)
2.0 - 3.0	Cardioembolic CVA, Rec.DVT/PE and dilated cardiomyopathy	Long term
2.0 - 3.0	Venous thrombosis & PE	3 - 6 months
2.5 - 3.5	Mechanical heart valve	Long term

PSA

See PROSTATE SPECIFIC ANTIGEN

PSEUDOCHELINESTERASE

See CHOLINESTERASE

PSITTACOSIS SEROLOGYSpecimen required: **Serum (1 x SST)**

Department: Referred test

Symptoms: Infection of the lower respiratory tract caused by the organism Chlamydothila psittaci.

See also: Chlamydia pneumoniae Serology

PTTK

See PARTIAL THROMBOPLASTIN TIME

PYRIDOXAL

See VITAMIN B6

PYRUVATESpecimen required: **Special Collection is required - Please refer patient directly to Main Laboratory or contact the Duty Manager at Clinipath Pathology.**

Department: Referred test