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| **Purpose:** | To ensure information is available to all staff regarding sample type, conditions, storage, and restrictions for externally referred samples. |
| **Materials:** | N/A |
| **Safety Precautions:** | N/A |
| **Authorised By:** | Alison Griffin |
| **Associated SOP:** | CP-LF-0066, CP-LP-0068, CP-LI-0108, CP-LF-0104, CP-LI-0135, CP-LI-0112**,** CP-LF-0169 |
| **Procedure:** | |
| Sample Requirements, Special Conditions, Storage and Service Providers for Externally Referred Samples (Non Molecular).  * **MNEMONIC:** The BHIS/PIPE order code. * **TEST DESCRIPTION:**  \*\* ***The file is sorted alphabetically on this column***. \*\* * **CONDITIONS/COMMENTS/RESTRICTIONS:** Includes sampling requirements, suitability of samples and restrictions regarding shipping. * **SAMPLE:** Sample type – colour of bottle and specific requirements regarding Ice etc.   2 **MOLECULAR REQUESTS**   1. The **Label Code** is printed on all barcode labels to indicate the required tube type.  |  |  | | --- | --- | | **Label Code** | **Description** | | ORAN | Lithium Heparin | | OICE | Lithium Heparin on ice | | F.OR | Lithium Heparin in FOIL | | REDL | 4.9 mL EDTA, pink | | WHIT | Serum, white, 7.5mL, no gel | | 4.9W | Serum, White, 4.9mL, no gel | | ICEW | Serum, white, no gel, on ice | | ICEP | 4.9mL, EDTA on ice | | F.WH | White Serum ,in FOIL | | FBC / PINK | 2.7 mL EDTA | | F.PK | EDTA wrapped in FOIL | | BRWN | Serum , with a gel separator, 4.9mL | | METL | Metal Free tube & needle | | MSU | Random urine, Mid Stream Urine | | F.UR | Random urine wrapped in FOIL | | F.FA | Faecal Sample, foil wrapped. | | 24HU | 24 hour urine, plain | | 24AU | 24 hour urine, pre-acidified | | SALI | Saliva |  * **SEP or WB:** SEP = centrifuge and take off an aliquot. WB = Whole Blood required – do not centrifuge. * **URINES**: Record the 24 hour output in mL as an Order Comment, this will print on the sample request * **STORAGE:** * 4⁰C = store in CP0223, * Freeze = store in CP0224 * - 80⁰C = store in L1H9 * **PROVIDER Code**: Referral laboratory addresses are tabulated in: CP-LI-0112 * **DISPATCH CODE:** Are all in the format XD yyyzz, Where XD is the generic dispatch code, yyy is the referral laboratory code and zz is the storage condition of the sample in the laboratory. * **AB =** Ambient * **4C =** Fridge * **FR =** Frozen * **80 =** Stored in -80°C   All referred samples that are not on the automated lists must be sent out accompanied by a completed External Hospitals Request Form, CP-LP-0066 and the samples stored appropriately overnight or for weekends.  These samples are battery orders with multiple samples per request, such as an AVS, Timed C-Peptide samples, Porphyrin Screen or Saline Suppression  Samples that must not be separated – receive and reprint a copy of the barcode and attach to the sample bag and put into the XTRN box.  Samples for separation: receive, spin and when spun reprint 2 copies of the barcode for the sample, separate and store as indicated and attach 1 label to the bag,    AVS samples please use CP-LF-0104 as well, attaching the site specific labels to each section on the form to clarify the requests for Wythenshawe laboratory..  Plasma Mets use request form CP-LF-0106.  CSF PTERINS requests must be accompanied by a completed Pterin request form, see special conditions in the table below.  It is not possible to have all potentially requested assays listed here. If there is a request that is not listed here consult one of the Principal Clinical Biochemists or a senior staff member to source a suitable referral laboratory. When a suitable laboratory is identified to perform an assay not listed in this document please record the details in CP-LF-0163, New Externally Referred tests. | |
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| **Mnemonic** | **Test Description** | **Conditions/ Comments/ Restrictions** | **Sample type on BHIS label** | **SEP**  **or**  **WB** | **Storage** | **Dispatch**  **Code**  **XD yyyzz** | **Provider**  **Code**  **yyy** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 11DOC | 11-DEOXYCORTISOL | SEND SAMPLE S FROM ENDOCRINE TEAMS, OTHERWISE MUST BE CHECKED / APPROVED PRIOR TO DISPATCH. | WHIT | SEP | 2-8⁰C | XD CHC4C | CHARINGC  CHC |
| 17OHP | 17-HYDROXY PROGESTERONE | SEND SAMPLE S FROM ENDOCRINE TEAMS, OTHEWISE MUST BE CHECKED / APPROVED PRIOR TO DISPATCH. | WHIT | SEP | 2-8⁰C | XD BMN4C | CLAYMON  BMN |
|  | ACID MALTASE | SEE ALPHA GLUCOSIDASE |  |  |  |  |  |
| ACYLCARN | ACYLCARNITINE | GUTHRIE CARD  ORDER URORGAC ALSO,  FILL OUT SPECIAL CARD. KIT 2 | Card available from 2668 | N/A | AMBIENT | XD TCHAB | TEMPLE ST  TCH |
| AVS | ADRENAL VEIN SAMPLING | MULTIPLE SITE SPECIFIC SAMPLES FOR CORTISOL AND ALDOSTERONE.  REFER TO CP-LI-0108 and SEE THE TABLE AT END OF THIS SECTION SHOWING ALL THE SITE SPECIFIC SAMPLES.  THE TESTS ARE NOT SPECIFIED ON THE BARCODE LABEL – ONLY THE SAMPLING SITES.  ATTACH THE BARCODE LABELS TO: CP-LF--0104 | EDTA | SEP | 2-8⁰C | XD WYT4C | WYTHEN -SHAWE  WYT |
| EXTERNAL | ADIPONECTIN & LEPTIN |  | WHT | SPE | FREEZE | XD ADBFR | ADDENB |
|  | ALA  AMINO LAEVULINIC  ACID | ORDER PORPHYRINS, UPORPHYR FOR A KNOWN / DIAGNOSED PATIENT BEING MONITORED |  |  |  |  |  |
| PLAP | ALKALINE PHOSPHATASE (PLACENTAL) | NOT FOR CSF SEE CSFPLAP | WHIT | SEP | 2-8⁰C | XD BMN4C | CLAYMON  BMN |
| APISO | ALKALINE PHOSPHATASE ISOENZYMES | BONE / INTESTINAL / LIVER AS COMMENT.  INCLUDE ALK PHOS RESULT WITH ORDER.ENTER THE ALK PHOS RESULT AS AN ORDER COMMENT.  ONLY SENT IF ALK PHOS IS ELEVATED. CHECK WITH A SCIENTIST. | WHIT | SEP | 2-8⁰C | See CP-LI-0112 for the address. | CHARINGC  CHC |
| AGLUCO | ALPHA GLUCOSIDASE (POMPE DISEASE) | CAN ONLY BE DRAWN MON, TUE AND WED TO 2pm, or WILLDBS CAN BE DONE ANY DAY | REDL | WB | 2-8⁰C | XD WIL4C | WILLINK  WIL |
| AGALACTO | ALPHA α GALACTOSIDASE (FABRYS DISEASE) | CAN ONLY BE DRAWN MON, TUE AND WED TO 2pm, or WILLDBS CAN BE DONE ANY DAY. WILLDBS or SHIRES ASSAY MANAGED BY DAVE FARRELL, EXTN 4775, DONE ON FEMALES | REDL | WB | 2-8⁰C | XD WIL4C | WILLINK  WIL |
| AAGP | ALPHA-1-ACID GLYCOPROTEIN |  | WHIT | SEP | 2-8⁰C | XD BMN4C | CLAYMON  BMN |
| ASU | TSH ALPHA SUBUNIT |  | WHIT | SEP | 2-8⁰C | XD UHBFR | UHB  UHB |
| ALUM | ALUMINIUM | TRACE ELEMENT FREE TUBE & NEEDLE REQUIRED. TUBE NO. 3 | METL | WB | 2-8⁰C | XD PAL4C | PUBLIC ANAL PAL |
| AMACP | AMINO ACID SCREEN, PLASMA | SEND TO LABORATORY FOR IMMEDIATE PROCESSING. RELEVANT CLINICAL INFORMATION MUST BE SUPPPLIED AT TIME OF ORDER AS PER PIPE. | OICE | SEP | FREEZE | XD TCHFR | TEMPLE ST TCH |
| AMACU | AMINO ACID SCREEN, URINE | FRESH SAMPLE, SEND TO LABORATORY FOR IMMEDIATE FREEZING. RELEVANT CLINICAL INFORMATION MUST BE SUPPLIED AT TIME OF ORDER AS PER PIPE. | MSU | 50ml | FREEZE | XD TCHFR | TEMPLE ST TCH |
|  | AMINO LAEVULINIC ACID  (ALA) | ORDER PORPHYRINS, - or UPORPHYR FOR A KNOWN / DIAGNOSED PATIENT BEING MONITORED. |  |  |  | NA  BATTERY ORDER | JAMES’S |
| AMD | AMIODARONE CORDARONE |  | WHIT | SEP | 2-8⁰C | XD BMN4C | CLAYMON BMN |
| NH3 | AMMONIA (PLASMA) | .SEND TO LAB WITHIN 15 MINS FOR IMMEDIATE PROCESSING, RELEVANT CLINICAL INFORMATION MUST BE SUPPLIED AT TIME OF ORDER AS PER PIPE | OICE | SEP | FREEZE  Only stable for 48hours.  Temple street provide and 24 hr service.  Contact Biochemistry | XD TCHFR | TEMPLE ST TCH |
| AMYLISO | AMYLASE ISOENZYMES | INCLUDE AMYLASE RESULT WITH REQUEST ENTER AS AN ORDER COMMENT. | ORAN | SEP | 2-8⁰C | XD BMN4C | CLAYMON  BMN |
| EXERNAL | AMYLOID A |  | WHITE | SEP | 2-8°C | N/A | SHEFFIELD  PRS |
| AMH | ANTI MULLARIAN HORMONE |  | WHITE | SEP | FREEZE | XD BMN4C | EUROFINS BMN |
| ADN | ANDROSTENEDIONE |  | WHITE | SEP | 2-8⁰C | XD BMN4C | EUROFINS BMN |
| AVP | ARGININE VASOPRESSIN  (COPEPTIN) | SEND TO LABORATORY ON ICE FOR IMMEDIATE PROCESSING.  MINIMUM VOL. OF 2 mL PLASMA REQUIRED.  SEND OSMO RESULT WITH REQUEST | OICE | SEP | FREEZE | XD NRV80 | NEWCASTLE ROYAL VICTORIA |
| ARSENIC | ARSENIC | URINE ARSENIC MUST BE CHECKED FIRST, IF POSITIVE PLASMA WILL NOT BE TESTED – see UARSENIC below | ORAN | SEP | 2-8⁰C | XD BMN4C | CLAYMON BMN |
| EXTERNAL | ARSENIC, URINE  NOT PIPE ORDERABLE | 10 mL RANDOM URINE | N/A | N/A | 2-8⁰C | XD BMN4C | CLAYMON BMN |
| ASA | ARYLSULPHATASE A | CAN ONLY BE DRAWN MON, TUE AND WED TO 2pm | REDL | WB | 2-8⁰C | XD WIL4C | WILLINK  WIL |
| FL ? CSF | ASIALOTRANSFERRIN | FLUID? CSF, IN A PLAIN CONTAINER (B2TRANSFERRIN, TRANSFERRIN ISOFORMS, ALSO KNOWN AS TAU-TRANSFERRIN – NOT TO BE CONFUSED WITH TAU-PROTEIN).  Sometimes the fluid may arrive in damp tissues, seal container and send – allow the UK lab to decide on adequacy of sample. | FLUID | N/A | 2-8⁰C.  Freeze if samples require storage over a weekend. | XD NIQ4C | INST NEUR  NIQ |
| BGALACTO | BETA β GALACTOSIDASE | CAN ONLY BE DRAWN MON, TUE AND WED TO 2pm | REDL | WB | 2-8⁰C | XD WIL4C | WILLINK  WIL |
| BHYDROX | BETA-HYDROXYBUTYRATE | PART OF A HYPOSCRN ORDER.  SEND GLUCOSE RESULT WITH REQUEST & CLEARLY SPECIFY THE TIME OF DRAW AS PER LABEL – THERE MAY BE MORE THAN ONE REQUEST FOR THIS TEST – IT IS IMPORTANT TO LABEL EACH SAMPLE VERY CLEARLY. | ICEW | SEP | FREEZE | XD SUR80 | SURREY  SUR |
| UCADMIUM | CADMIUM, URINE | ACID WASHED CONTAINER REQUIRED | URIN | 50ML | 2-8⁰C | XD PAL4C | PUBLIC ANAL PAL |
| CAFF | CAFFEINE | TROUGH SAMPLE | WHIT | SEP | 2-8⁰C | XD BMN4C | CLAYMON BMN |
| CALCTN | CALCITONIN | SEND BOTH ALIQUOTS | ICEW | SEP x 2 | FREEZE | XD MTRFR | MATER  MTR |
| FCALPRO | CALPROTECTIN, FAECAL  NOT PIPE ORDERABLE | DO NOT FREEZE | N/A | N/A | 2-8⁰C | XD BHM4C | BIRMINGHAM  BHM |
| CARNITIN | CARNITINE (TOTAL & FREE). | CAN ONLY BE DRAWN MON, TUE AND WED TO 2pm | ORAN | WB | 2-8⁰C | XD WIL4C | WILLINK  WIL |
| CSTANOL | CHOLESTANOL | ONLY TO BE DRAWN MON, TUE AND WED TO 2pm | ORAN | SEP | 2-8⁰C | XD SHE4C | SHEFFIELD  SHE |
| CHESP | CHOLINESTERASE SERUM (PSEUDO) |  | WHIT | SEP | 2-8⁰C | XD SJH4C | JAMES’S  SJH |
| EXTERNAL | CHOLINESTERASE, RED CELL.  NOT PIPE ORDERABLE | INHIBITION STUDIES, PHENOTYPE AND GENOTYPE.  NOT PIPE ORDERABLE. TAKE AN ORANGE AND A LARGE EDTA. |  | SEP  THE  HEPARIN only | 2-8⁰C | NA | BRISTOL  BST |
| CR/CO | CHROMIUM &COBALT | FOR METAL-ON-METAL HIPS. USE METAL FREE TUBE AND NEEDLE. | METL | WB | 2-8⁰C | XD BMN4C | CLAYMON  BMN |
| CGRANINA | CHROMOGRANIN A | 16 HR FAST REQUIRED, SEPARATE AND FREEZE IMMEDIATELY | ICEW | SEP | FREEZE | XD SJHFR | JAMES'S  SJH |
| CLOZAPIN | CLOZAPINE | FORM 7 MUST ACCOMPANY SAMPLE | PINK | WB | 2-8⁰C | XD KNG4C | KINGS  KNG |
| CUSER | COPPER SERUM |  | WHIT | SEP | 2-8⁰C | XD PAL4C | PUBLIC ANAL  PAL |
| URCU | COPPER - URINE | ACID WASHED CONTAINER REQUIRED.  NOTE 24 HOUR VOLUME ON FORM & IN BHIS FILE. | 24HU | 50mL | 2-8⁰C | XD PAL4C | PUBLIC ANAL  PAL |
|  | COPROPORPHYRIN | COMPONENT OF FPORPHYR AND UPORPHYR ORDER PORPHYRINS |  |  |  |  |  |
| CORT MS | CORTISOL by MS | FOR PATIENTS ON METYRAPONE.  ORDERED BY ENDOCINOLOGY TEAMS | NA  WHITE OR BROWN | SEP | 2-8⁰C | XD WYT4C | WYTHEN -SHAWE  WYT |
| TBIG | CORTISOL BINDING GLOBULIN | THIS IS NOT TBG | ICEW | SEP | FREEZE | XD CHCFR | CHARINGC  CHC |
|  | CSF 5-Methyltetrahydrofolate | Included in CSF PTERINS order  Refer to CP-LI-0135 for specific instructions. |  |  |  |  |  |
| CREAT | JAFFE Method | For Paracetamol overdose with negative interference on enzymatic assay. | ORAN | SEP | 2-8⁰C | XD TCHFR | TEMPLE ST TCH |
| CSFACE | CSF ACE |  | CSF | SEP | 2-8⁰C | XD NHQ80 | NEUROMETAB  NHQ |
| CSFAFP | CSF ALPHA FETOPROTEIN |  | CSF | SEP | 2-8⁰C | XD CHC4C | CHARINGC  CHC |
| CSFBHCG | CSF bHCG |  | CSF | SEP | 2-8⁰C | XD CHC4C | CHARINGC  CHC |
| CSFDEM | CSF FOR TOTAL TAU-PROTEIN &  Ab1-42 PROTEIN | UNHAEMOLYSED CSF TAKEN INTO A **POLYPROPYLENE TUBE**. STORE IN -80⁰C, FREEZE WITHIN 2 HOURS OF COLLECTION, IN HAEMATOLOGY OFF TRACK LABORATORY PRIOR TO DISPATCH.  (SAMPLES FOR 14-3-3 ARE PROCESSED BY NEUROPATHOLOGY.  **Suitable tubes are Sarstedt: 60.613.010** | SPEC | SPIN,  SEP x2  0.5ml per tube into a  **Polypropylene**  **tube** | -80⁰C | XD NIQ80 | INST NEUR  NIQ |
| EXTERNAL | CSF LACTATE | LAB ONLY ORDER. SAMPLE MUST BE SENT TO LAB ON ICE AND SPUN & FROZEN WITHIN 1 HOUR. | CSF ON ICE | SPIN & SEP | FREEZE | XD BMNFR | CLAYMON BMN |
| EXTERNAL | CSF LDH |  | CSF | N/A | 2-8⁰C |  | INST NEUR |
|  | CSF Monoamine Metabolites | Included in CSF PTERINS order  Refer to CP-LI-0135 for specific instructions. |  |  |  |  |  |
| OLIGO | CSF OLIGOCLONAL IGG | MUST ORDER OLIGOSER, SEND SEP SERUM WITH CSF | CSF | N/A | 2-8⁰C | XD NIQ4C | INST NEUR |
| CSFPLAP | CSF PLAP |  | CSF | SEP | 2-8⁰C | XD CHC4C | CHARINGC  CHC |
| CSF PTER | CSF PTERINS, | Refer to CP-LI-0135 for specific instructions.  Samples must be frozen at the bedside.  The sample transported is stored in the -80 freezer.  This must be arranged in advance. Most samples originate from NDU. | CSF | N/A | -80⁰C | XD NMQ80 | NEUROMETAB  NMQ |
| EXTERNAL | CTX P1NP |  | WHT | SEP | FREEZE | XD SVHFR | VINCENTS  SVH |
| C-AMP | CYCLIC AMP (URINE) |  | 24HU | 50ml | FREEZE | XD SHEFR | SHEFFIELD  SHE |
| EXTERNAL | CYSTATIN C | DUPLICATE TO BE TAKEN AND STORED | WHITE | SEP | FREEZE | XD KNG4C | KINGS  KNG |
| WCCYST | CYSTINE, WHITE CELL, LEUCOCYTE | CAN ONLY BE DRAWN MON, TUE or WED BEFORE 2pm,  **SAMPLE MUST ARRIVE IN UK** **WITHIN 24 HOURS**.(at the end of the next working day will suffice)  DO NOT STORE IN FRIDGE.  SAMPLE **MUST** BE SENT OUT THE DAY OF DRAW AT AMBIENT.  DO NOT PUT IN FRIDGE.  **LABEL PACKET- ‘DO NOT PUT IN FRIDGE OR FREEZER’** | ORAN | WB | **MUST BE KEPT AT AMBIENT** | XD EVEAB | EVELINA  EVE |
| EDFT4 | EQUILIBRIUM DIALYSIS OF FT4 | LAB ONLY ORDER | WHIT | SER | 2-8⁰C |  | ADDENB |
|  | ERYTHROCYTE PROTOPORPHYRIN, EPP | COMPONENT OF BPORPHYR RESULT. SEE PORPHYRINS. |  |  |  |  |  |
| EG | ETHYLENE GLYCOL | In the event that Beaumont is unable to provide a service – samples can be referred out for analysis to:  Dept of Toxicology, City Hospital, Dudley , Road, Birmingham B18 7QH | WHIT | SER | FREEZE |  | BIRMINGHAM |
| EPO | ERYTHROPOIETIN |  | WHIT | SEP | 2-8⁰C | XD BMN4C | CLAYMON  BMN |
|  | FABRYS | SEE ALPHA-GALACTOSIDASE or WILLDBS or SHIRES ASSAY MANAGED BY DAVE FARRELL, EXTN 4775, DONE ON FEMALES |  |  |  |  |  |
| FELAST | FAECAL ELASTASE | Order only on a Gastroenterology Menu in PIPE | FAECES | N/A | 2-8⁰C | XD BMN4C | CLAYMON BMN |
| FEP | FREE ERYTHROCYTE PORPHYRIN | INCLUDES FREE PROTOPORPHYRIN | REDL or  F.PK | WB | 2-8⁰C | N/A  BATTERY ORDER | JAMES'S |
| FLC | FREE LIGHT CHAINS - SERUM | ONLY FOR DISEASE MONITORING.  Minimum of 0.5 mL Serum required  Must use specific SJH aliquot tubes | WHIT | SEP into  SJH tube.  55.475  (looks like an LP4 a little larger) | 2-8⁰C | XD SJH4C | JAMES'S  SJH |
| FRUC | FRUCTOSAMINE |  | EDTA | SEP | 2-8⁰C | XD COO4C | COOMBE  COO |
| GCEREBRO | GALACTOCEREBROSIDASE KRABBE | CAN ONLY BE DRAWN MON, TUE AND WED TO 2pm | REDL | WB | 2-8⁰C | XDWIL4C | WILLINK  WIL |
| GASTRIN | GASTRIN | 16 HR FAST , SEND TO LABORATORY ON ICE FOR IMMEDIATE PROCESSING | ICEW | SEP | FREEZE | XD SJHFR | JAMES'S  SJH |
| GFCPRL | GEL FILTRATION OF PROLACTIN | **LAB ONLY ORDER, BASED ON PROLACTIN RESULT MUST BE APPROVED PRIOR TO DISPATCH.** | WHIT | SEP | 2-8⁰C | XD ADB4C | ADDENB  ADB |
| GLUCAGON | GLUCAGON | 16 HR FAST , SEND TO LABORATORY ON ICE FOR IMMEDIATE PROCESSING  A minimum of 1.5 mL of plasma must be sent. | ICEP | SEP | FREEZE | XD RVPFR | RVH  RVP |
| GLGONxx | GLUCAGON TIMED SAMPLES | SEND TO LABORATORY ON ICE FOR IMMEDIATE PROCESSING.  A minimum of 1.5 mL of plasma must be sent. | ICEP | SEP | FREEZE | N/A  BATTERY ORDER | RVH |
| URORGAC | GLYCOSAMINOGLYCANS | FRESH SAMPLE, FREEZE IMMEDIATELY. CLINICAL INFORMATION ESSENTIAL | MSU | N/A | FREEZE | XD TCHFR | TEMPLE ST TCH |
| GHRH | GROWTH HORMONE RELEASING HORMONE | TUBE FROM CLAYMON, EDTA/APROTONIN. TUBE NO 1, STORED IN FRIDGE, CP0223 | SPECIAL ON ICE | SEP | FREEZE | XD BMNFR | CLAYMON BMN |
| HBAICVAR | HBAIC VARIANTS | FOR REFERRAL OF SAMPLES FOR IDENTIFICATION OF HB VARIANTS.  LAB ONLY ORDER. | FBC | WB | 2-8⁰C | XD NOT4C | NOTTINGHAM  NOT |
| HEXAMINA | HEXOSAMINIDASE A /TAY SACHS | CAN ONLY BE DRAWN MON, TUE AND WED TO 2pm | REDL | WB | 2-8⁰C | XD WIL4C | WILLINK  WIL |
| HOMOCYS | HOMOCYSTEINE BLOOD | HEPARIN SAMPLE  NOT FOR GP PATIENTS. SAMPLE MUST BE PROMPTLY SPUN AND SEPARATED, THEN STORED IN FRIDGE | ORAN | SEP | 2-8⁰C | XD BMN4C | CLAYMON BMN |
| HOMOCYSU | HOMOCYSTINE (URINE) | ORDERING DOCTOR TO CONSULT TEMPLE ST. FASTING, EARLY MORNING SAMPLE, FREEZE IN < 1 HOUR. CLINICAL INFORMATION ESSENTIAL | MSU | 50ml | FREEZE | XD TCHFR | TEMPLE ST TCH |
| HYDROXPR | HYDROXYPROLINE | SEE ORDER ITEM NOTES FOR CONDITIONS.  NOTE 24 HOUR VOLUME ON FORM & IN BHIS FILE. | 24HU | 50mL | 2-8⁰C | XD BMN4C | CLAYMON BMN |
| HYPOSCRN | HYPO GLYCAEMIA SCREEN | TIMED SAMPLES FOR:  INSULIN  C PEPTIDE  GLUCOSE  BETA-HYDROXYBUTYRATE | SEE  INDIVIDUAL  ITEMS |  |  |  |  |
| INHIBIN | INHIBIN A&B | ONLY FOR ONCOLOGY, DO NOT SEND IF HAEMOLYSED. SINGLE SAMPLE SUFFICIENT FOR A & B | ICEW | SEP | FREEZE | XD BMNFR | CLAYMON BMN |
| IGFBP3 | IGFBP3  INSULIN-LIKE GROWTH FACTOR BINDING PROTEIN-3 IGFBP3 | SEPARATE AND FREEZE WITHIN 3 HRS  ATTACH CLINICAL DATA. | ICEW | SEP | FREEZE | XD AMNFR | AMNCH  AMN |
|  | KETONES | DONE ON A METER IN THE WARD |  |  |  |  |  |
| LAMOTRIG | LAMOTRIGINE | LAMICTAL, LARIG, LAMORO | ICEW | SEP | FREEZE | XD BMNFR | CLAYMON BMN |
| LEAD | LEAD |  | ORAN | WB | 2-8⁰C | XD PAL4C | PUBLIC ANAL PAL |
| LEVETIR | LEVETIRACETAM | KEPPRA IS TRADE NAME | WHIT | SEP | FREEZE | XD BMNFR | CLAYMON BMN |
| LIPASE | LIPASE |  | WHIT | SEP | 2-8⁰C | XD BMN4C | CLAYMON BMN |
| LPa | LIPOPROTEIN (a) |  | WHIT | SEP | 2-8⁰C | XD BMN4C | CLAYMON BMN |
| MANG | MANGANESE | ONLY FOR LONG TERM TUBE FEEDING, USE METAL FREE NEEDLE | EDTA | WB | 2-8⁰C | XD PAL4C | PUBLIC ANAL PAL |
| MERCURY | MERCURY |  | REDL | WB | 2-8⁰C | XD PAL4C | PUBLIC ANAL PAL |
| METABSCR | METABOLIC SCREEN | URINE ORGANIC ACIDS & PLASMA AMINO ACIDS (URORGAC, AMACP). CLINICAL INFORMATION ESSENTIAL | SEE | SINGLE | ITEMS | N/A  BATTERY ORDER | TEMPLE ST TCH |
| METHANOL | METHANOL | In the event that Beaumont is unable to provide a service – samples can be referred out for analysis to:  Dept of Toxicology, City Hospital, Dudley , Road, Birmingham B18 7QH | WHIT | SEP | FREEZE |  | BIRMINGHAM |
|  | METHIONINE | SEE AMACP |  |  |  |  |  |
| NONE | METHOTREXATE | SAMPLES ARE REFERRED DIRECTLY TO ST JAMES’S HOSPITAL BY THE REQUESTING WARD, BY PRIOR ARRANGEMENT WITH SJH.  THE LABORATORY DOES NOT DEAL WITH METHOTREXATE LEVELS. |  |  |  |  |  |
| URORGAC | METHYL MALONIC ACID | FRESH SAMPLE, FREEZE IMMEDIATELY  ENTER METHYL MALONIC AS AN ORDER COMMENT IN BHIS.  CLINICAL INFORMATION ESSENTIAL | MSU | N/A | FREEZE | XD TCHFR | TEMPLE ST TCH |
| MITOT | MITOTANE | Samples can be stored separated in fridge for 7 days. | ORAN | SEP x2 | 2-8⁰C | XD MIT4C | MITOTANE |
| URMPS | MUCOPOLYSACCHARIDE  CONFIRMATION | ORDER URORGANIC ACIDS AS 1ST LINE SCREENING TEST | MSU | 10mL | 2-8⁰C | XD WIL4C | WILLINK  WIL |
| METABSCR | MUCOPOLYSACCHARIDES | ORDER METABSCR.- HEP & MSU REQUIRED (URORGAC, AMACP) TEMPLE STREET DO AN INITIAL MUCOPLOYSACCHARIDE SCREEN – IF POSITIVE A URINE SAMPLE FOR URMPS WILL THEN NEED TO BE SENT BY THE CLINICIAN TO WILLINK FOR URMPS.  CLINICAL INFORMATION ESSENTIAL | SEE | SINGLE | ITEMS |  | TEMPLE ST TCH |
| MATERTFT | TFT SENT TO MMUH | REQUESTED BY ENDOCRINOLOGY TEAMS ONLY. | WHIT OR ORAN | SEP | 2-8⁰C | XD MTRFR | MATER  MTR |
| MYCOP | MYCOPHENOLATE | TROUGH SAMPLE | EDTA | WB | 2-8⁰C | XD BMN4C | CLAYMON BMN |
| URORGAC | ORGANIC ACIDS - URINE | FRESH URINE SAMPLE, FREEZE IMMEDIATELY. CLINICAL INFORMATION ESSENTIAL | MSU | N/A | FREEZE | XD TCHFR | TEMPLE ST TCH |
|  | OLIGOS | SEE CSF OLIGOCLONAL  ‘OLIGO’ |  |  |  |  |  |
| URORGAC | 5-OXOPROLINE | ENTER 5-OXOPROLINE AS AN ORDER COMMENT |  |  |  |  |  |
| PROCOLL3 | P3NP | SEE PROCOLLAGEN 3 |  |  |  |  |  |
| PP/PP00/PP10 | PANCEATIC POLYPEPTIDE ZERO TIME | 16 HR FAST REQUIRED ON ICE, SEPARATE & FREEZE IMMEDIATELY | REDL | SEP | FREEZE | XD RVPFR | RVH  RVP |
| PTNF | PHENYTOIN - FREE | APPROVAL REQUIRED PRIOR TO DISPATCH | WHIT | SEP | 2-8⁰C | XD LPL4C | LIVERPOOL  LPL |
| PHYTANIC | PHYTANIC ACID | ALSO INCLUDES PRISTANIC ACID. | REDL | WB if fresh Mon to Wed.  All other days - .spin separate and freeze | 2-8⁰C | XD WIL4C | WILLINK  WIL |
|  | POMPE | SEE ALPHA GLUCOSIDASE or WILLDBS |  |  |  |  |  |
|  | PORPHOBILINOGEN, PBG | COMPONENT OF UPORPHYR PROFILE, SEE PORPHYRINS. |  |  |  |  |  |
| PORPHYRI | PORPHYRINS | 4 SAMPLES, HEPARIN, EDTA, URINE, FAECES, ALL MUST BE FOIL WRAPPED before filling.  Refer to the individual items:   * BPORPHYR – Whole Blood- EDTA * PPORPHYR – Plasma – Li Hep * UPORPHYR – Urine 24hr or MSU * FPORPHYR – Faecal Sample   Send the PCV result from a recent FBC on the request form. If no FBC ask Haematology to run a PCV on the EDTA sample prior to freezing | SEE | SINGLE | ITEMS  FREEZE ALL SAMPLES IF NOT BEING SENT THE NEXT DAY | NA  BATTERY  ORDER | JAMES'S |
| PPORPHYR | PLASMA PORPHYRIN | PART OF A FULL PORPHYRIN SCREEN, FOIL WRAP before filling. DO NOT SEND HAEMOLYSED SAMPLES | F.OR | SEP/FOIL | 2-8⁰C  FREEZE PLASMA IF NOT BEING SENT THE NEXT DAY |  | JAMES'S |
| BPORPHYR | BLOOD PORPHYRIN | PART OF A FULL PORPHYRIN SCREEN, FOIL WRAP before filling.  Send the PCV result from a recent FBC on the request form. If no FBC ask Haematology to run a PCV on the EDTA sample prior to freezing | F.PK | WB/FOIL | 2-8⁰C  FREEZE IF NOT BEING SENT THE NEXT DAY | NA  BATTERY  ORDER | JAMES'S |
| UPORPHYR | URINE PORPHYRIN | PART OF A FULL PORPHYRIN SCREEN, FOIL WRAP before filling, FREEZE IF DELAY- PARTICULARLY AT WEEKEND – if not being sent the next day.  NOTE 24 HOUR VOLUME ON FORM & IN BHIS FILE.  MSU WILL BE SUFFICIENT FOR SCREENING – AL the volume to ‘MSU’ | 24HU/FOIL  Or F.UR | 50ML in FOIL | FREEZE IF NOT BEING SENT THE NEXT DAY | NA  BATTERY  ORDER | JAMES'S |
| FPORPHYR | FAECAL PORPHYRIN | PART OF A FULL PORPHYRIN SCREEN, FOIL WRAP before filling. | FAECES  / FOIL  F.FA | N/A | 2-8⁰C  FREEZE IF NOT BEING SENT THE NEXT DAY | NA  BATTERY  ORDER | JAMES'S |
| PREALB | PRE-ALBUMIN |  | WHIT | SEP | 2-8⁰C | XD BMN4C | CLAYMON BMN |
|  | PRISTANATE  PRISTANIC ACID | PART OF PHYTANIC ACID ORDER |  |  |  |  |  |
| PROCAMID | PROCAINAMIDE |  | WHIT | SEP | 2-8⁰C | XD BMN4C | CLAYMON BMN |
| PROCOLL | PROCOLLAGEN 111 | SENT IN BATCHES MONTHLY.  Send the batches on the 2nd Monday of each month. | ICEW | SEP | FREEZE | XD MCHFR | MANCHESTER  MCH |
| PROINS | PROINSULIN | SEND TO LABORATORY ON ICE FOR IMMEDIATE PROCESSING | ICEW | SEP | FREEZE | XD SURFR | SURREY  SUR |
| AMACU | PROLIDASE | Send a urine to Temple Street for Urine Amino Acids, AMACU, giving the appropriate information.  ENTER Prolidase AS ORDER COMMENT IN BHIS |  |  |  |  |  |
| EXTERNAL | PTH-RP, PTH RELATED PEPTIDE. | EDTA/APROTONIN. TUBE NO 1, IN CP0223 TUBES AVAILABLE FROM CLAYMON  LAB ONLY ORDER | SPECIAL TUBE ON ICE | SEP | FREEZE | XD BMNFR | CLAYMON BMN |
| PYRU | PYRUVATE | LACTATE MUST BE DONE FIRST  NO ASSAY AVAILABLE |  |  |  |  |  |
| RCALC | RENAL CALCULUS / STONE ANALYSIS | SAMPLES DO NOT REQUIRE REFRIGERATION. | MICR | N/A | AMBIENT | XD BMN4C | CLAYMON BMN |
| VIT A&E | RETINOL | SEE VITAMIN A | F.WH | SEP/FOIL | FREEZE | XD SJHFR | JAMES'S  SJH |
| RBP | RETINOL BINDING PROTEIN |  | WHIT | SEP | 2-8⁰C | XD BMN4C | CLAYMON BMN |
| SALCORT | SALIVARY CORTISOL | CONTACT END LAB, 2684, FOR SPECIAL TUBE (NO. 5).  ON SHELF IN BIOCHEMISTRY LAB | SALI | SEP | 2-8⁰C freeze over a weekend | XD WYT4C | WYTHENSHAWE  WYT |
| SELENIUM | SELENIUM LEVEL |  | WHIT | SEP | 2-8⁰C | XD PAL4C | PUBLIC ANAL PAL |
| SIR | SIROLIMUS |  | FBC | WB | 2-8⁰C | XD MTR4C | MATER MTR |
| SULPH | SULPHONYLUREA SCREEN SERUM | PAST OF HYPOGLYCAEMIA SCREEN | WHIT | SEP | FREEZE | XD SURFR | SURREY  SUR |
| URSULPH | SULPHONYLUREA | NOTE 24 HOUR VOLUME IN BHIS FILE AS AN ORDER COMMENT | 24HU | 20ML | 2-8⁰C | XD BMN4C | CLAYMON BMN |
|  | TEP, TOTAL ERYTHROCYTE PORPHYRINS | COMPONENT OF BPORPHYR RESULT – SEE PORPHYRINS REQUEST |  |  |  |  |  |
| TPMT | THIOPURINE METHYLTRANSFERASE | ONLY STABLE FOR 10 DAYS | EDTA | WB | 2-8⁰C | XD STH4C | THOMAS'S  STH |
| TT4 | TT4 | TOTAL T4 | WHIT | SEP | 2-8⁰C | XD SJH4C | JAMES'S  SJH |
| 6TGN | 6-THIOGUANINE NUCLEOTIDE or  6TGN | ONLY STABLE FOR 10 DAYS | EDTA | WB | 2-8⁰C |  | THOMAS'S  STH |
| TYG | THYROGLOBULIN | SEND ONE ALIQUOT AND KEEP SECOND SAMPLE.  Can defrost in transit to UK | WHIT | SEP x2 | FREEZE | XD NRVFR | NEWCASTLE  NRV |
| TBG | THYROID BINDING GLOBULIN | SEND TO LABORATORY FOR IMMEDIATE PROCESSING | WHIT | SEP | FREEZE | XD BMNFR | CLAYMON BMN |
| ASU | TSH ALPHA SUBUNIT |  | WHIT | SEP | FREEZE | XD UHBFR | UHB  UHB |
| UFC | URINARY FREE CORTISOL | MUST BE REFRIGERATED. NOTE 24 HOUR TOTAL VOLUME IN BHIS FILE.AS ON ORDER COMMENT | 24HU | 20ML | 2-8⁰C | XD MTR4C | MATER  MTR |
| URCIT | URINE CITRATE | pH < 7  NOTE 24 HOUR VOLUME ON FORM & IN BHIS FILE AS AN ORDER COMMENT | 24HU | 20ML | FREEZE | XD BMNFR | CLAYMON BMN |
| URCU | URINE COPPER | ACID WASHED CONTAINER REQUIRED.  NOTE 24 HOUR VOLUME IN BHIS FILE AS AN ORDER COMMENT | 24HU | 50mL | 2-8⁰C | XD PAL4C | PUBLIC ANAL PAL |
| URSP | URINE CORTISOL METABOLITES  Or  URINE STEROID PROFILE | Note 24hour volume in BHIS AS AN ORDER COMMENT and on referral form | 24 HU | 50mL | 2-8⁰C, but freeze if being stored, can thaw in transit |  | UCLH |
|  | URINE STEROID METABOLITES.  APPROVAL PRIOR TO DISPATCH. | RESEARCH SAMPLES MAY BE SPECIFICALLY REQUESTED TO BE SENT TO BIRMINGHAM FOR URINE CORTISOL METABOLITES.  TAKE AN ALIQUOT TO SEND TO UCLH AS WELL | 24 HR URINE | 50 ml | FREEZE  CAN THAW IN TRANSIT |  | STEROID MET |
| UCYS | URINE CYSTINE | FREEZE IF DELAY., OVER A W/END. WRITE ' ? RENAL CALCULUS' ON FORM AS CLINICAL INFORMATION | MSU | 10ML | 2-8⁰C | XD TCH4C | TEMPLE ST TCH |
| URLEAD | URINE LEAD | NOTE 24 HOUR VOLUME IN BHIS FILE AS AN ORDER COMMENT | 24HU | 20ML | 2-8⁰C | XD PAL4C | PUBLIC ANAL PAL |
| URMPS | URINE MUCOPOLYSACCHARIDE | FRESH URINE – FREEZE IMMEDIATELY | MSU | 20mL | FREEZE | XD WILFR | WILLINK  WIL |
| URORGAC | URINE ORGANIC ACIDS | FRESH SAMPLE, FREEZE IMMEDIATELY. CLINICAL INFORMATION ESSENTIAL | MSU | N/A | FREEZE | XD TCHFR | TEMPLE ST TCH |
| UOX | URINE OXALATE, | ACIDIFY THE PLAIN COLLECTION AS PER BIOMNIS PROTOCOL.  CN14015, June 2014  acidify the 24-hour collection with 12N hydrochloric acid until the pH is between 2 and 3. Refrigerate.  ENTER THE 24 HR VOLUME AS AN ORDER COMMENT | 24 AU | 50mL | 2-8⁰C | XD BMN4C | CLAYMON BMN |
| VIP | VASOACTIVE INTEST. POLYPEPTIDE. | 16 HR FAST REQUIRED, ON ICE, SEPARATE AND FREEZE IMMEDIATELY | REDL | SEP | FREEZE | XD RVPFR | RVH  RVP |
| VLCFACID | VERY LONG CHAIN FATTY ACIDS | DO NOT SENT HAEMOLYSED SAMPLES | REDL | SEP | 2-8⁰C | XD WIL4C | WILLINK  WIL |
| VIT A&E | VITAMIN A (SERUM RETINOL) | SAMPLE MUST BE FOIL WRAPPED ,ORDER CRP ALSO.  SINGLE SAMPLE SUFFICENT FOR VITS A&E | F.WH | SEP/FOIL | FREEZE | XD SJHFR | JAMES'S  SJH |
| VITB1 | VITAMIN B1 (THIAMINE) | SAMPLE MUST BE FOIL WRAPPED – FREEZE WITHIN 4 HOURS | EDTA IN FOIL  ON ICE | WB | FREEZE | XD BMNFR | CLAYMON BMN |
| EXTERNAL | VITAMIN B2 | FREEZE WITHIN 1 HOUR | ICEP | WB | FREEZE | XD BMNFR | CLAYMON BMN |
| VITB6 | VITAMIN B6 (PYRIDOXINE) | SAMPLE MUST BE FOIL WRAPPED – FREEZE WITHIN 4 HOURS | EDTA IN FOIL  ON ICE | WB | FREEZE | XD BMNFR | CLAYMON BMN |
| EXTERNAL | 1,25 Di Hydroxy VIT D | Not BHIS orderable |  | SEP |  | NA | CLAYMON BMN |
| VIT A&E | VITAMIN E (ALPHATOCOPHEROL) | SAMPLE MUST BE FOIL WRAPPED. SINGLE SAMPLE SUFFICENT FOR VITS A&E | F.WH | SEP/FOIL | FREEZE | XDSJHFR | JAMES'S  SJH |
| WCE | WHITE CELL ENZYMES | ONLY MON TUE, WED TO 2PM.  SAMPLE MUST REACH THE UK LAB WITHIN 72 HOURS OF DRAW. | REDL | WB | 2-8⁰C | XD WIL4C | WILLINK  WIL |
| WILLDBS | WILLINK DRIED BLOOD SPOTS | FOR FABRY OR POMPE DISEASE, SPECIAL PACK, IN LABORATORY  KIT NO. 1. PACKS SUPPLIED BY GENZYME. | N/A | N/A | AMBIENT | XD WILAB | WILLINK  WIL |
| ZINCRC | ZINC - RED CELL |  | ORAN | WB | 2-8⁰C | XD BMN4C | CLAYMON BMN |
| ZINCPP | ZINC PROTOPORPHYRIN |  | ORAN | WB | 2-8⁰C | XD BMN4C | CLAYMON BMN |
| ZINC | ZINC, SERUM |  | WHIT | SEP | 2-8⁰C | XD PAL4C | PUBLIC ANAL PAL |

TESTxx INDICATES THAT THERE ARE MANY SAMPLES WITH VARIOUS TIMES OF DRAW – A LABEL WILL PRINT FOR EACH SPECIFIC TIME.

## AVS Sample label descriptions:

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| **LABEL CODE** | **FULL DESCRIPTION** |
| R RENL | RIGHT RENAL ALDOSTERONE / CORTISOL |
| R PERI | R PERIPHERAL ALDOSTERONE / CORTISOL |
| L PROX | LEFT RENAL PROXIMAL ALDOSTERONE /CORTISOL |
| LOWIVC | LOW IVC ALDOSTERONE / CORTISOL |
| L ADR | LEFT ADRENAL ALDOSTERONE / CORTISOL |
| HEPAT | HEPATIC ALDOSTERONE / CORTISOL |
| R ATR | RIGHT ATRIUM ALDOSTERONE / CORTISOL |
| R ADR | RIGHT ADRENAL ALDOSTERONE / CORTISOL |
| L DIST | LEFT RENAL DISTAL ALDOSTERONE / CORTISOL |
| L PERI | L PERIPHERAL ALDOSTERONE / CORTISOL |
| HI IVC | HIGH IVC ALDOSTERONE / CORTISOL |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
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| . Sample Requirements, Special Conditions, Storage and Service Providers for Externally Referred Molecular Samples. Karyotyping samples (CHROMOSO) are labile, store in fridge, and are only accepted Monday to Wednesday as Claymon must ship the samples to France for analysis.  All other molecular samples are stable, store in fridge.  Place an EXTMOLEC order, except for a Karyotype, where the order is CHROMOSO.  Enter the details of the genetic screen as an order comment, OC.  Attach the barcode label to the patient consent form and attach a copy of the barcode to a CP-LF-0169.  Check the samples and paperwork against CP-LF-0169, sign what you check and give to another staff member to check also.  DO NOT place barcode label on the sample and do not delete or block any of the demographic details on either the samples or paperwork.  If there are any discrepancies noted on the samples and/or paperwork, contact the team and get them to come to the laboratory and correct the mismatches and sign that they have corrected the discrepancy.  **Do not send out any samples where there is any discrepancy in the demographics**.  \*\*\*\* IF THE REQUESTOR SPECIFIES A REFERRAL LABORATORY – SEND THE SAMPLE THERE DIRECTLY, HAVING REQUESTED AN ‘EXTMOLEC’ ORDER. Enter the laboratory address as an order comment also.     |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | **Mnemonic** | **Test Description** | **Conditions / Requirements** | **Sample** | **WB** | **Provider** | | AF508 | A F 508 GENE MUTATION FOR C.F. | SIGNED CONSENT REQUIRED & REQUEST FORM, FORM 2, FORM 3 AND FORM 5 | REDL | WB | NCMG | | CHROMOSO | CHROMOSOME KARYOTYPING | SIGNED CONSENT REQUIRED, CAN ONLY BE SENT MON- THURSDAY AS THE SAMPLES ARE LABILE, FORM 6 | HEPARIN / ORANGE | WB | CLAYMON | | FHC | FAMILIAL HYPERCHOLESTEROLAEMIA | SJH CONSENT FORM REQUIRED.  FORM AVAILABLE ON THE INTRANET PAGE | REDL | WB | SJH | | EXTMOLEC | MICROARRAY | GUYS CYTOGENETICS REQUEST FORM REQUIRED | REDL | WB | GUYS | | EXTMOLEC | MEN TYPE 1 GENETIC SCREEN | SIGNED CONSENT REQUIRED & REQUEST FORM , FORM 2 AND FORM 3 | REDL | WB | EXETER | | EXTMOLEC | THYROID RESISTANCE SYNDROME | SIGNED CONSENT REQUIRED & REQUEST FORM , FORM 2 AND FORM 3 | REDL | WB | ADDENB | | EXTMOLEC | CALCIUM CHANNEL | SIGNED CONSENT REQUIRED & REQUEST FORM, FORM 2 AND FORM 3 | REDL | WB | NGQS | | EXTMOLEC | HUNTINGDON'S DISEASE | HD SPECIFIC SIGNED CONSENT REQUIRED & REQUEST FORM , FORM 4 AND FORM 3 | REDL | WB | NCMG | | EXTMOLEC | VON HIPPEL LINDAU | SIGNED CONSENT REQUIRED & REQUEST FORM, FORM 2 AND FORM 3 | REDL | WB | NCMG | | EXTMOLEC | FSHD,  FACIO –SCAPULO-HUMERAL-DYSTROPHY | SAMPLES MUST BE SENT DIRECTLY TO THE BRISTOL GENETICS LABORATORY | REDL | WB | BRISTOLGENETICS | |

## Assays Carried out in Beaumont Molecular Laboratory.

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| **Assay Carried out in Beaumont Molecular Laboratory.** |  |
| Pearsons, |  |
| MELAS (m.3243A>G) |  |
| mtDNA Rearrangement / Deletion |  |
| mtDNA Depletion |  |
| *POLG* mutation disorders |  |
| MERRF (Myoclonic Epilepsy with Ragged Red Fibers) |  |
| Leigh syndrome / MILS (Maternally inherited Leigh syndrome) |  |
| LHON (Leber's hereditary optic neuropathy) |  |
| NARP( Neuropathy, ataxia, retinitis pigmentosa) |  |
| Alpers’ Syndrome |  |

Refer any requests for any of these assays to Molecular / Neuropathology, Extension 2706

## Assays Carried out in or Referred out by Beaumont Haematology Laboratory.

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| G20210A mutation (Prothrombin/factor II): | Increased risk of a Venous Thromboembolism (VTE) |
| G1691A mutation (Factor V Leiden mutation) | Increased risk of a Venous Thromboembolism (VTE) |
| JAK 2 |  |
|  |  |
|  |  |