

Receive, label and store routine clinical biochemistry samples – C3

Receiving samples

Nottingham City Hospital Pathology department receives biological samples for analysis from inpatients, outpatients, GP surgeries, referring hospitals or occasionally private companies. Samples arrive at Pathology Specimen Reception through the pneumatic tube system, by courier, through the porter system, by pathology transport or personal delivery. All samples are received in plastic bags to contain the specimen in the event of leakage, and are disposed of in clinical waste bags when the intact sample has been sent for analysis.

Written and printed forms accompanying samples must have at least four patient identifiers to validate the request; likewise the sample must show three identifiers on the tube. Examples of these are: correct and complete first name, surname, personal K number (hospital number) or NHS number. This is essential to reduce human error and to ensure that the specimen is from the correct named patient.

Booking in requests

Integrated Clinical Environment (ICE)

ICE requests are ordered by general practitioners, and so a barcode with the sample attached is sent. To accept the sample, the barcode must be firstly booked in onto the ICE software and then scanned in under 'Enter Lab No.' field in the Request Entry tab of Winpath. As no patient or test details are present, they are all accepted as long as the sample is intact and sufficient.

Ward-Ordered /Order Comms Requests

These requests have been ordered on the hospital wards, and again need to be checked and logged through Winpath. This is done by scanning the barcode twice under 'Request Entry': when the details appear, check the patient name and date of birth, clinician, source, the tests, sample time, and that there are no additional requests on the card. Be aware that handwritten tests may have extra laboratory numbers. Also check that the sample is the correct sample type for the test(s) requested, e.g. EDTA whole blood for a full blood count. Check the label of the sample is adequate and if not, reprint. If the OCS number is not found, the request needs to be manually booked in and the old barcode obscured.

Manual Booking In of Requests

For handwritten request forms, select next free barcode (tab, return, return), either scan the K number barcode or type in manually, F2 to search. When found, check all the details and handwritten notes and enter into the fields. There needs to be the correct clinician and source for an invoice (F7 to search clinician, source, or tests), and if none then type 'SECNCH' for secretary NCH. If noted, enter the time of sample, the type (blood, urine), or whether fasting or pregnant etc.

Cards must be scanned after the sample has been booked in for digital access on the AutoCard Viewer software.

Labelling and storage

After booking in the requested tests, each specimen received should be relabelled if required, visibly displaying the patient details and laboratory number with the barcode placed vertically for the analysers to read. The laboratory number corresponds to the sample type with a specific suffix to denote the tube type e.g. 'P' for EDTA sample. The sample can then either be placed on the relevant analyser, e.g. the OLA for routine chemistry tests, or stored for sending away or preservation in the freezer. Patient samples must be stored correctly to preserve the integrity of the specimen, for example, aliquots stored at -70°C for renin analysis. After analysis all routine samples are stored in the cold room for around five days, unless there is reason to keep longer, before they are discarded into clinical waste. Most of the biochemistry tests will be invalid anyway after this time due to their limited stability.

Health and safety

Staff should always wear appropriate personal protective equipment (PPE), for example disposable gloves, when handling samples. This is particularly important if dealing with category 2, 3, or 4 pathogens, although all samples are treated the same when analysing. If a splash does occur, refer to the appropriate health and safety SOP for guidelines. Wash the affected area with soap and water for initial first aid measures. Work areas and equipment should be wiped down with Distel wipes if a small spillage occurs to decontaminate the area. If a sample has leaked, then appropriate disinfection over the affected area and a repeat sample may need to be requested.