

CNS-H-01 SPECIMEN PROCESSING AND STORAGE FOR THE PMT-STUDY

Phase1 In-house specimens

There are 3 different specimen types associated with Phase 1 of the PMT study:

1. Li-Heparin blood plasma free metanephrines,
2. 24-h-Urinary Collection-containers for urinary metanephrines
3. Serum for miRNA-profiling.

These specimens when received from local in-house sources should arrive in the Clinical Neurochemistry laboratory labelled with the patient's name and accompanied with a patient ordering request form (when routine tests are also ordered).

The first two specimens usually will arrive for purposes of both research and patient care (i.e., measurements of plasma free metanephrines and urinary fractionated metanephrines). For purposes of patient care standard procedures are employed and samples should be assayed and results reported as soon as possible. However, for purposes of long-term storage under the research protocol, unique identifiers must be used (see CNS-C-01). Unique identifiers are provided in the sample log and are affixed as sticky labels that must be made available before or when specimens arrive in the Laboratory.

1. Processing of blood for plasma free metanephrines

Blood for plasma free metanephrines should arrive on ice or ice packs and should be centrifuged immediately on arrival to separate the plasma. Plasma should be divided into at least 2 specimens of at least 1.2 mL each and frozen (-80°C) or assayed immediately. When collected for both routine patient care and research purposes, one sample should enter the routine system with appropriate labels and that sample disposed of according to the SOPs for routine patient care samples. One other plasma sample of at least 1.2 mL should be labelled with the unique identifier sticker which includes the handwritten date of collection. That sample is inventoried and stored at -80°C in the appropriately designated storage box as a research sample.

2. Processing of urine collections for free and deconjugated metanephrines

Urine samples collected under the protocol for metanephrines should arrive in the laboratory as complete 24-h-urinary collections. All collection boxes are immediately placed on ice once they arrive in the laboratory. The urine specimens should generally arrive in two containers, one container for collection during the day and the other for the overnight collection. These two containers should be labelled with separate start and end times and dates of the collections for the day collection sample and the overnight collection sample. Samples may also arrive as a single collection with a single start time and end time label, for which aliquoting of urine is simplified. Start and end times of collections should be noted and any discrepancies reported in the single sample receipt log.

Urine volume for both containers is measured. Volumes and dates of collections are recorded in the inventory log and on the unique patient ID labels. Two aliquots of 2 to 2.5 mL from each of the day and overnight collections are stored at -80°C in the appropriately designated storage box for purposes of research. The appropriate day and overnight labels should be used for those stored research samples. When urine is collected as single 24 hour collection, both day and overnight labels should be affixed to each tube. When urine is additionally collected for routine patient care another 10 ml sample is immediately prepared for those analyses by mixing two samples from each container in proportion to the volumes of urine in each container.

3. Processing of serum samples for miRNA

Serum blood samples (about 8 mL) are for purposes of research only. Blood tubes should sit on ice for at least 30 minutes after arrival in the laboratory. They are then centrifuged at 4°C and serum is immediately separated into 3 aliquots of 1.2 to 2 mL each, tubes are labelled with the appropriate sticky label unique patient identifiers that also include the handwritten date of collection. Samples are inventoried and stored at -80°C in the appropriately designated storage box as a research samples.