

Procedures

Diagnostic lumbar puncture for CSF collection may be performed any time of day and fasting is not required.

1. A volume of CSF is first collected into standard diagnostic tubes for routine biochemical and microscopic assessments. In addition, a minimum of 2 ml (preferably up to 5 ml) is then collected directly into a **polypropylene tube** (see suggestions below),¹ and stored in the same tube for transportation. Collection into other type of plastic tubes will result in partial loss of the amyloid1-42 protein². The container must not contain any additives and must be labelled with patient identifier. For samples with RBC counts between 500-5000/ul or WBC>10/ul, centrifuge the sample at 2000g for 10min within 2 hours of collection and freeze the tube standing UPRIGHT for the sample to be suitable for testing. DO NOT TRANSFER to another tube.
2. A copy of the referring doctor's request form, the referral laboratory request form and the specimen data sheet (download from the website) must accompany the sample. Please provide billing details with the accompanying documentation.
3. Courier the CSF sample, doubly contained, ensuring that the sample arrives at the NDDL within 24 hours from sampling. Cooling of the sample is not required during transport but it is important to avoid high temperature exposure during summer months. The referring laboratory is responsible for organizing a courier service to collect and deliver the sample to the NDDL. If the CSF sample cannot be delivered within 24 hours, freeze the sample and store at -20°C and then send the sample batched with other samples on dry ice within 2 months of lumbar puncture.
4. Please provide routine cell counts and biochemistry results as soon as possible to facilitate interpretation of the assay results and also avoid testing unsuitable CSF samples.
5. **Please notify the NDDL that the CSF sample is being sent.**

Information about the test

1. The CSF samples will be tested in batches to minimise costs. Current estimates are a fortnightly turn around time, except insufficient samples
2. **Unsuitable samples:** CSF samples may be unsuitable for testing if they display any of the following³: Elevated protein levels (>1g/L); Evidence of pleocytosis; Significant blood contamination (>5000 RBCs/ul or 500-5000 RBCs/μl unspun), macroscopically haemorrhagic; or if there is greater than 24 hours delay between lumbar puncture and receipt of the specimen with the sample not being stored according to the sampling protocol. The referring laboratory/clinician will be contacted upon receipt of such samples and advised.
3. **Fees:** Please check the website for current fee <https://www.florey.edu.au/national-dementia-diagnostics-laboratory>. Costing is based on batching of samples. Testing may be possible prior to routine batching however the costs will increase. If required contact the laboratory for a quotation.

Reporting Results

Result will be distributed by email and/or mail to the referring laboratory and medical practitioner.

Contact/Courier details:

National Dementia Diagnostics Laboratory, The Florey Institute of Neuroscience and Mental Health, Kenneth Myer Building (Melbourne Brain Centre), 30 Royal Parade (corner of Genetics Lane), Gate 11, Rear loading dock, The University of Melbourne, Parkville, VIC 3010, email: enquiries-nddl@unimelb.edu.au, Phone: (03) 9035 7243, Facsimile: (03) 9035 8768.

¹ Disclaimer: Other polypropylene tubes are available and the choice of product is at the discretion of the consumer, eg Starstedt yellow cap, sterile (62.9924.284 PP, 63.9921.816 PP, 62.610.201 PP), or 15ml polypropylene, graduated, conical bottom, blue screw cap tube (Greiner Bio-One188271 Cellstar centrifuge tubes, sterile). Tubes that are not suitable include polystyrene or glass tubes.

²Vanderstichele et al. Alzheimer's and Dementia 2012; 8:65–73.