

Standard Operating Procedures Clinical Protocol VI: CSF Isolation

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**** NOTE:** The following procedure is to be performed wearing laboratory coat, gloves, eye protection, and mask.

1.If an external ventricular drain (EVD) is placed as part of the routine care, fresh cerebrospinal fluid (CSF) samples will be taken at the time of placement of the EVD and at indicated time points. CSF obtained by lumbar puncture is also acceptable.

2.5mL of CSF per sample will be collected using standard sterile techniques in a 10mL red cap tube (BD cat. No. 366430)¹. (CSF that has been sitting in the collection chamber has to be discarded and cannot be used for sampling).

3.The sample has to be stored on ice immediately following collection and until processing, which should occur as soon as possible after collection.

4.The sample will be centrifuged at 5000 rpm (750 x g) for 10 minutes at 4oC.

5.CSF samples drawn from the top of the red blood cell plug after centrifuging will be divided into 5 x 1000L aliquots in properly identified tubes.

6.The samples are stored frozen at ≤ -70 C.

Notes:

1 If CSF flow through the EVD is sluggish or stops it may be impossible to obtain 5mL of CSF. After establishing the reason for the CSF flow problems as much CSF as is possible should be obtained (up to 5mL) over 5 - 10 minutes. Fluid should not be drawn out of the EVD using negative pressure since this may obstruct the tip of the catheter. CSF should be allowed to flow freely. Strict sterile technique should be used if a 3-way stopcock the closed EVD system is entered to obtain CSF samples.

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