



## Guidelines toward a unified protocol for handling of CSF and plasma for neurodegenerative protein biomarkers

### CSF collection & treatment



- Lumbar puncture (LP) at level L3/L4 or L4/L5
- **Discard the first 2ml of CSF**



- **Collect at least 2x 1ml-1,5ml CSF directly into 1,5ml polypropylene (PP) Low Bind (LoB) tubes\***.

*Note: If no PP LoB tubes are available, please be aware to still use PP tubes with an according volume to the sampling. Sparsely filled tubes, use of double volume sized+ tubes, or decanting into secondary tubes leads to aberrations.*

- Centrifugation and transfer into new PP LoB tubes of CSF after LP is not necessary if erythrocyte count is <1000/µl or no visible blood contamination.



- Freeze PP tubes instantly if fresh CSF is not sent & received within 7 days at 4°C or within 48h at 22°C maximum.

### EDTA plasma collection & treatment (optional)



- EDTA plasma, mirrored to the CSF sampling, needs to be prepared in the clinical lab within 2h after blood draw.



- **Decant at least 2x 1ml-1,5ml Plasma directly into 1,5ml LoB PP tubes\***.

*Note: If no PP LoB tubes are available, please use PP tubes with an according volume to the sampling. Sparsely filled tubes, use of double volume sized+ tubes, or decanting into secondary tubes leads to aberrations.*

- Freeze PP tubes instantly at -80°C and always send on dry ice. This can be done batchwise if no immediate clinical timeframe. If not sent together with CSF, please add sampling date.



*Note: To accelerate scientific research into the diagnosis of these neurodegenerative disorders we would like to ask a blood sample (plasma sample) in addition to your CSF sample. This appended plasma sample will be stored in the IBB Biobank like CSF samples.*

### Direct shipment or storage for batch shipment



- Include 2 forms: our Biomarker request sheet which includes an informed consent and a request for relevant clinical data; your lab subcontracting form.
- **Ship fresh CSF within 7 days (max 4°C) or 48h (max 22°C); Frozen CSF must be kept in frozen condition while shipping.**



- **Ship plasma always frozen, preferably at -80°C**

**Sample receipt: Labo klinische biologie UZA, route 169**

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**Analysis / interpretation: Labo Neuro/Neurobiobank IBB-UA**

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### \*Polypropylene LoB tube references validated for direct testing\*

**Low protein Binding screw cap tubes**

**\*Order nr 72.703.600 - 1,5ml micro tube**

**SARSTEDT AG & Co. KG**

*(Order nr 62.610.018 (10ml) for 5-8 ml volumes - use only in upright position)*

#### References:

The Alzheimer's Association international guidelines for handling of cerebrospinal fluid for routine clinical measurements of amyloid β and tau, Hansson et al, Alzheimer's Dement., 2021.

Guidelines for the standardization of preanalytic variables for blood-based biomarker studies in Alzheimer's disease research, O'Bryant et al, Alzheimers Dement., 2016.

Toward a unified protocol for handling of CSF before β-amyloid measurements, Janelidze et al., Alzheimer's research & Therapy, 2019.