

Protocol number 2.1

Collecting serum, plasma, and blood for the Network

The following protocol is prepared solely for the basic neurochemistry routines of the Competence Network Dementias. Additional research protocols that are designed for the improved determination of novel neurochemical dementia markers will be provided separately. Overall, collection of blood for routine analysis should be performed according to your well established internal protocol.

It is mandatory that CSF and blood from a patient is collected and processed on the same day.

The patient should be in the fasting state, and the blood should be collected in the morning (8-11 AM) by venipuncture.

1. Prepare a container with wet ice (0-2°C).
2. Collect 2 x 10 mL of blood into serum-monovettes, 2 x 10 mL of blood into a citrate-monovettes, and 2 x 10 mL of blood into a EDTA-monovettes.
3. Before centrifugation, pipette 4 x 500 µL of full blood from one EDTA-monovette into four Matrix-vials.
4. Centrifuge the EDTA blood and citrate blood (1,600 x g, room temperature, 15 min.) to generate plasma. Collect 6 x 1000 µL of EDTA-plasma into 6 Matrix-vials, mark the caps with **RED** color; collect 6 x 1000 µL of citrate plasma into 6 Matrix-vials, mark the caps with **BLUE** color. Place the filled Matrix-vials on wet ice till the preparation of serum has been completed (see next item).
5. After the blood has clotted for 1 h at room temperature, centrifuge it (1,600 x g, room temperature, 15 min.), and pipette 8 x 1000µL of serum into 8 Matrix-vials. **DO NOT** mark the caps with any color. Place the vials on wet ice.
6. Close to the site of the -80°C freezer, put the vials stored on wet ice into Matrix-box in the following order (see the enclosed diagram):
 - the vials with **full blood**, positions 3A – 3D (for the first patient) and 9A – 9D (for the second patient) of the Matrix box.
 - the vials with **EDTA-plasma**, positions 3E-3H and 4A-4B (for the first patient) and 9E-9H and 10A-10B (for the second patient) of the Matrix box.
 - the vials with **citrate-plasma**, positions 4C-4H (for the first patient) and 10C-10H (for the second patient) of the Matrix box.
 - the vials with **serum**, positions, 5A-5H (for the first patient) and 11A-11H (for the second patient) of the Matrix box.

The positions 6A-6H and 12A-12H should remain empty for forthcoming projects.

6. Freeze at -80 °C immediately until shipment on dry ice. **Never** allow the samples to thaw in between. If less material has been obtained, leave appropriate positions for each sample species of the Matrix box empty – do not put there any vials!