

# Aluminum

## General:

Aluminum is not considered an essential trace element. It is found in relatively small concentrations in serum by daily food intake. Increased levels are found in increased intake or insufficient elimination. Aluminum has a different affinity to the different organs. Low concentrations can be toxic for the CNS (aluminum encephalopathy). Patients on dialysis need higher doses of aluminum hydroxide in order to prevent hyperphosphatemia.

The following tests are available:

### • Aluminum in serum

Indication: Monitoring of patients on dialysis with oral aluminum therapy (aluminum hydroxide to neutralize phosphate), workers in aluminum processing industries, patients with Alzheimer's disease.

Material: 3 ml Heparin-blood

Preanalytics: standard monovettes are not recommended as results are falsely increased, often more than 100 µg (!), collection of whole blood in special tubes (trace element free heparin-monovette) is highly recommended!

TAT: 10-14 days\*

Method: AAS

Units: µg/l

Ref.- range: <7.5

Note: In impaired kidney function, the aluminum load of the tissue does not correlate directly with the serum levels.

### • Aluminum in urine

Indication: Dialysis monitoring

Material: 10 ml urine

TAT: 10-14 days\*

Method: ICPMS

Units: µg/l

Ref.- range: up to 35

For complete list of laboratory test offered at Freiburg Medical Laboratory, please visit <http://www.fml-dubai.com/parameter-listings/>