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## Chemical Analysis with Neutrons at MLZ

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At MLZ, various methods are available for chemical analysis with neutrons which enable highly sensitive determination of the element composition in a wide range of sample matrices. The classic methods of prompt gamma activation analysis and instrumental neutron activation analysis are available at the PGAA and NAA instruments. In addition, setups for neutron depth profiling (NDP), in-beam neutron activation analysis (iB-NAA) and prompt gamma-ray activation imaging in combination with neutron tomography (PGAI-NT) have been successfully established in recent years. Further approaches are under development, such as in-beam liquid scintillation counting (iB-LSC) and cyclic in-beam neutron activation analysis (ciB-NAA). We present the current and future possibilities of the methods.

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