Amino Acid Geochronology Lab

The Amino Acid Geochronology lab uses reverse-phase liquid chromatography to measure amino acid racemization and amino acid concentrations from a variety of sample types, primarily biogenic minerals. The lab maintains Agilent 1100 and 1200 high performance liquid chromatographs (HPLC), each with a quaternary pump and degasser, automated injector, fluorescence detector, and data-analysis and module-control software (ChemStation). The systems are capable of highly reproducible (better than 2% precision) quantification of enantiomeric amino acid abundance. The analytical procedure is optimized for the separation and detection of 12 different DL amino acids. Additional resources include a 5 ft Airstream vertical flow clean bench, a Welch acid resistant vacuum pump, a Dynac benchtop centrifuge, and an Orion 290A pH meter with probe. In conjunction with the Sedimentary Records of Environmental Lab, AAGL houses a freeze dryer, two binocular microscopes, a Motic Cam digital microscope camera with software, three VWR temperature-stable ovens with precision temperature probe, a muffle furnace, an ultrasonic bath and probe, and several Dell computers with printers.

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