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## Scientific Instruments for Radiocarbon Dating

*Ionplus<sup>+</sup>* covers the entire range of dedicated  $^{14}\text{C}$  laboratory equipment. Our instruments are designed for fast and efficient sample processing with a very high degree of automation. We offer fully automated graphitization systems – AGE 3, gas interface systems for unattended gas measurements of small samples – GIS, automated carbonate handling systems – CHS, and a range of peripheral devices. High-precision  $\delta^{13}\text{C}$  and  $\delta^{15}\text{N}$  values can be conveniently obtained online during graphitization and gas measurements with a newly implemented IRMS instrument.

A high degree of automation and the outstanding reliability of all *Ionplus<sup>+</sup>* instruments maximize the repeatability of sample preparation and measurements, thus helping you to improve the throughput, precision and accuracy of your radiocarbon analyses.

The *Ionplus<sup>+</sup>* mini carbon dating system – MICADAS is the world's smallest commercially available  $^{14}\text{C}$ -AMS system and offers high performance while reducing maintenance to a minimum:

- Dating of samples back to 50'000 radiocarbon years
- Negative ion currents of 50 to 150  $\mu\text{A}$  on graphite\* and 10 to 20  $\mu\text{A}$  on gas samples\*\*
- Helium stripping for a high  $^{14}\text{C}$ -transmission of 47%, fast tuning and high measurement stability
- Dimensions and weight: 3.4 m  $\times$  2.6 m  $\times$  2 m, 4500 kg
- Equipped with optional permanent magnets, MICADAS is the first energy efficient AMS system and renders expensive water cooling systems redundant.

\*With 1 mg carbon

\*\* With 10  $\mu\text{g}$  C or more

