The University of Georgia

Center for Applied Isotope Studies

RADIOCARBON ANALYSIS REPORT

September 19, 2025

[redacted]
Sirius Technilogy Advanced Research, LLC
[redacted]

Dear Mrs. [redacted]

Enclosed please find the results of ^{14}C Radiocarbon AMS analyses and Stable Isotope Ratio $\delta^{13}C$ analyses for the foraminifer samples received on September 12, 2025.

UGAMS#	Sample ID	Material	$\delta^{13}C$,‰	^{14}C age years, BP	±	pMC	±
77967	BGS	resin	-28.65	12560	30	20.94	0.08

The resin sample was treated in ultrasound bathe during 30 minutes at the room Temperature. The sample was dried out and treated with1N HCl to remove possible carbonates. After that the sample was rinsed with ultrapure water and dried at 105ºC.
For accelerator mass spectrometry analysis, the cleaned samples were combusted at 900°C in evacuated/sealed ampoules in the presence of CuO.
The resulting carbon dioxide was cryogenically purified from the other reaction products and catalytically converted to graphite using the method of Vogel *et al*. (1984). Graphite $^{14}C/^{13}C$ ratios were measured using the CAIS 0.5 MeV accelerator mass spectrometer. The sample ratios were compared to the ratio measured from the Oxalic Acid I (NBS SRM 4990). The sample $^{13}C/^{12}C$ and $^{18}O/^{16}O$ ratios were measured separately using a stable isotope ratio mass spectrometer combined with gas bench and expressed as $\delta^{13}C$ with respect to PDB, with an error of less than 0.1‰
The quoted uncalibrated dates have been given in radiocarbon years before 1950 (years BP), using the ^{14}C half-life of 5568 years. The error is quoted as one standard deviation and reflects both statistical and experimental errors. The date has been corrected for isotope fractionation.

Sincerely,

[redacted]

[redacted] Ph.D.
[redacted] Research Scientist

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