



ISO/IEC 17025:2017-Accredited Testing Laboratory

Beta Analytic, LLC
4985 SW 74th Court
Miami, FL 33155 USA
Tel: (305) 667-5167

October 8, 2026

Arqueologia

BARCELONA, 08020

Spain

Enclosed is the radiocarbon dating result for the sample recently sent to us. As usual, specifics of the analysis are listed on the report with the result and calibration data is provided where applicable. The Conventional Radiocarbon Age has been corrected for total fractionation effects and where applicable, calibration was performed using 2020 calibration databases (cited on the graph pages).

The web directory containing the table of results and PDF download also contains pictures, a cvs spreadsheet download option and a quality assurance report containing expected vs. measured values for 3-5 working standards analyzed simultaneously with your samples.

The reported result is accredited to ISO/IEC 17025:2017 Testing Accreditation PJLA #59423 standards and all pretreatments and chemistry were performed here in our laboratories and counted in our own accelerators here in Miami. Since Beta is not a teaching laboratory, only graduates trained to strict protocols of the ISO/IEC 17025:2017 Testing Accreditation PJLA #59423 program participated in the analysis.

As always Conventional Radiocarbon Ages and sigmas are rounded to the nearest 10 years per the conventions of the 1977 International Radiocarbon Conference. When counting statistics produce sigmas lower than ± 30 years, a conservative ± 30 BP is cited for the result unless otherwise requested. The reported $\delta^{13}C$ was measured separately in an IRMS (isotope ratio mass spectrometer). It is NOT the AMS $\delta^{13}C$ which would include fractionation effects from natural, chemistry and AMS induced sources.

When interpreting the result, please consider any communications you may have had with us regarding the sample. As always, your inquiries are most welcome. If you have any questions or would like further details of the analysis, please do not hesitate to contact us.

Thank you for prepaying the analysis. As always, if you have any questions or would like to discuss the results, don't hesitate to contact us.

Sincerely,

Laboratory Management Group / AMS Pretreatment Manager



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REPORT OF RADIOCARBON DATING ANALYSIS

Submitter [REDACTED]

Received Date **September 24, 2026**

Company **Arqueologia**

Report Date **October 8, 2026**

Laboratory Number **Beta-843963**

Sample Code **CC/26 UF 1**

To validate report, scan this QR code on a mobile device or go to <https://verify.betalabservices.com> and enter the requested information.



Conventional Radiocarbon Age **950 +/- 30 BP**

Ratio of Stable Isotopes

IRMS $\delta^{13}\text{C}$: -17.74 $\pm$ 0.30 o/oo

IRMS $\delta^{15}\text{N}$: 10.35 $\pm$ 0.40 o/oo

95.4% Probability Calibrated Range(s)

(95.4%) **1028 - 1162 cal AD (922 - 788 cal BP)**

Submitter Material Bone (Non-heated)

Pretreatment (Bone collagen):collagen extraction: with alkali

Analyzed Material Bone collagen

Analysis Service AMS-Standard Delivery

Percent Modern Carbon 88.85 +/- 0.33 pMC

Fraction Modern Carbon 0.8885 +/- 0.0033

$\delta^{14}\text{C}$ -111.54 +/- 3.31 o/oo

$\Delta^{14}\text{C}$ -119.67 +/- 3.31 o/oo (1950:2026)

Measured Radiocarbon Age (without $\delta^{13}\text{C}$ correction): 830 +/- 30 BP

Calibration BetaCal 5.0: High Probability Density Range Method: INTCAL20

Carbon/Nitrogen CN: 3.4 %C: 37.39 %N: 12.70

Results are ISO/IEC-17025 accredited. All work was done at Beta in-house NEC accelerator mass spectrometers and 4 Thermo IRMSs. The "Conventional Radiocarbon Age" was calculated using the Libby half-life (5568 years), is corrected for total isotopic fraction and was used for calendar calibration where applicable. The Age is rounded to the nearest 10 years and is reported as radiocarbon years before present (BP), "present" = AD 1950. Results greater than the modern reference are reported as percent modern carbon (pMC). The modern reference standard was 95% the ^{14}C signature of NIST SRM-4990C (oxalic acid). Quoted errors are 1-sigma counting statistics. Calculated sigmas less than 30BP on the Conventional Radiocarbon Age are conservatively rounded up to 30. $\delta^{13}\text{C}$ values are on the material itself (not the AMS $\delta^{13}\text{C}$). $\delta^{13}\text{C}$ and $\delta^{15}\text{N}$ values are relative to VPDB and Air-N₂ respectively. References for calendar calibrations are cited at the bottom of calibration graph pages.

BetaCal 5.0

Calibration of Radiocarbon Age to Calendar Years
(High Probability Density Range Method: INTCAL20)(Variables: $\delta^{13}\text{C} = -17.7$ o/oo)**Beta-Laboratory Number 843963****Conventional Radiocarbon Age (BP) 950 $\pm$ 30 BP**

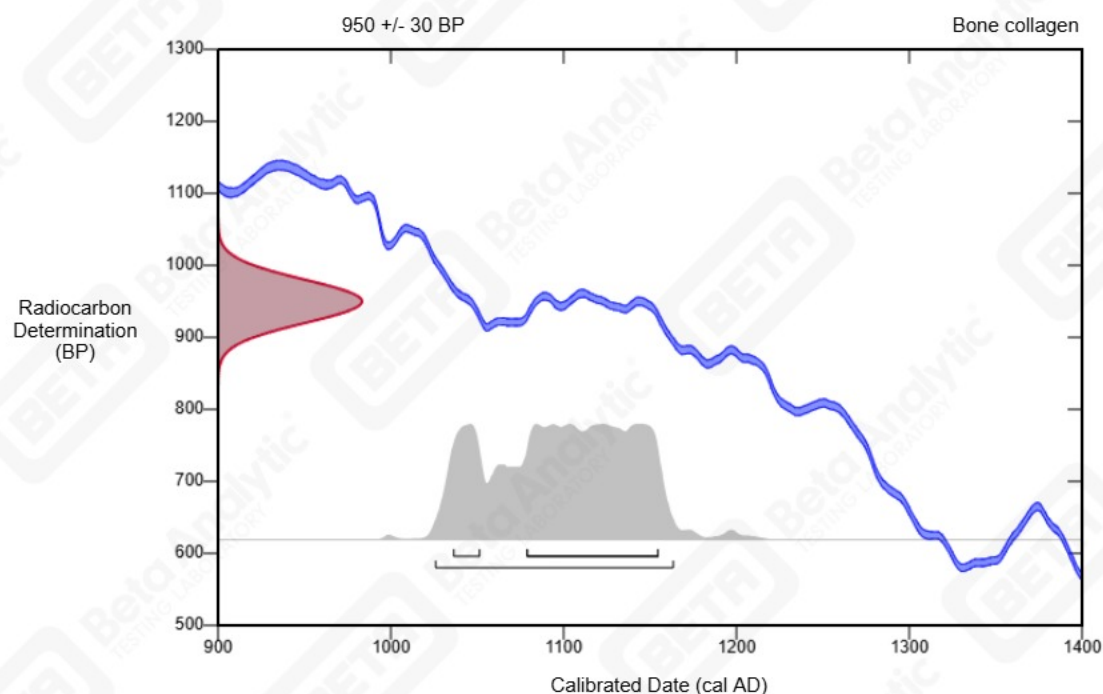
95.4% Probability Calibrated Range(s)

(95.4%) 1028 - 1162 cal AD (922 - 788 cal BP)

68.2% Probability Calibrated Range(s)

(58.8%) 1081 - 1153 cal AD (869 - 797 cal BP)

(9.4%) 1038 - 1050 cal AD (912 - 900 cal BP)

CC/26 UF 1**Database Used**

INTCAL20

References**References to Probability Method**

Bronk Ramsey, C. (2009). Bayesian analysis of radiocarbon dates. Radiocarbon, 51(1), 337-360.

References to Database INTCAL20

Reimer, et al., 2020, Radiocarbon 62(4): 725-757.



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Quality Assurance Report

This report provides the results of reference materials used to validate radiocarbon analyses prior to reporting. Known-value reference materials were analyzed quasi-simultaneously with the unknowns. Results are reported as expected values vs measured values. Reported values are calculated relative to NIST SRM-4990C and corrected for isotopic fractionation. Results are reported using the direct analytical measure percent modern carbon (pMC) with one relative standard deviation. Agreement between expected and measured values is taken as being within 2 sigma agreement (error x 2) to account for total laboratory error.

Report Date October 8, 2026

QA MEASUREMENTS

Reference 1	
Expected Value	0.42 +/- 0.05 pMC
Measured Value	0.42 +/- 0.04 pMC
Agreement	Accepted
Reference 2	
Expected Value	95.86 +/- 0.37 pMC
Measured Value	96.09 +/- 0.24 pMC
Agreement	Accepted
Reference 3	
Expected Value	110.69 +/- 0.40 pMC
Measured Value	110.33 +/- 0.27 pMC
Agreement	Accepted

Comment All measurements passed acceptance tests.

Validation

Wthia Snárez - Prieto

Date October 8, 2026