EXPLANATION OF THE BETA ANALYTIC DENDRO-CALIBRATION PRINTOUT

CALIBRATION OF RADICARBON AGE TO CALENDAR YEARS

Variables used in the calculation of age calibration → **(Variables: C13/C12= :Delta-R= :Glob res= :lab. multi=1)**

Laboratory Number: Beta-12345

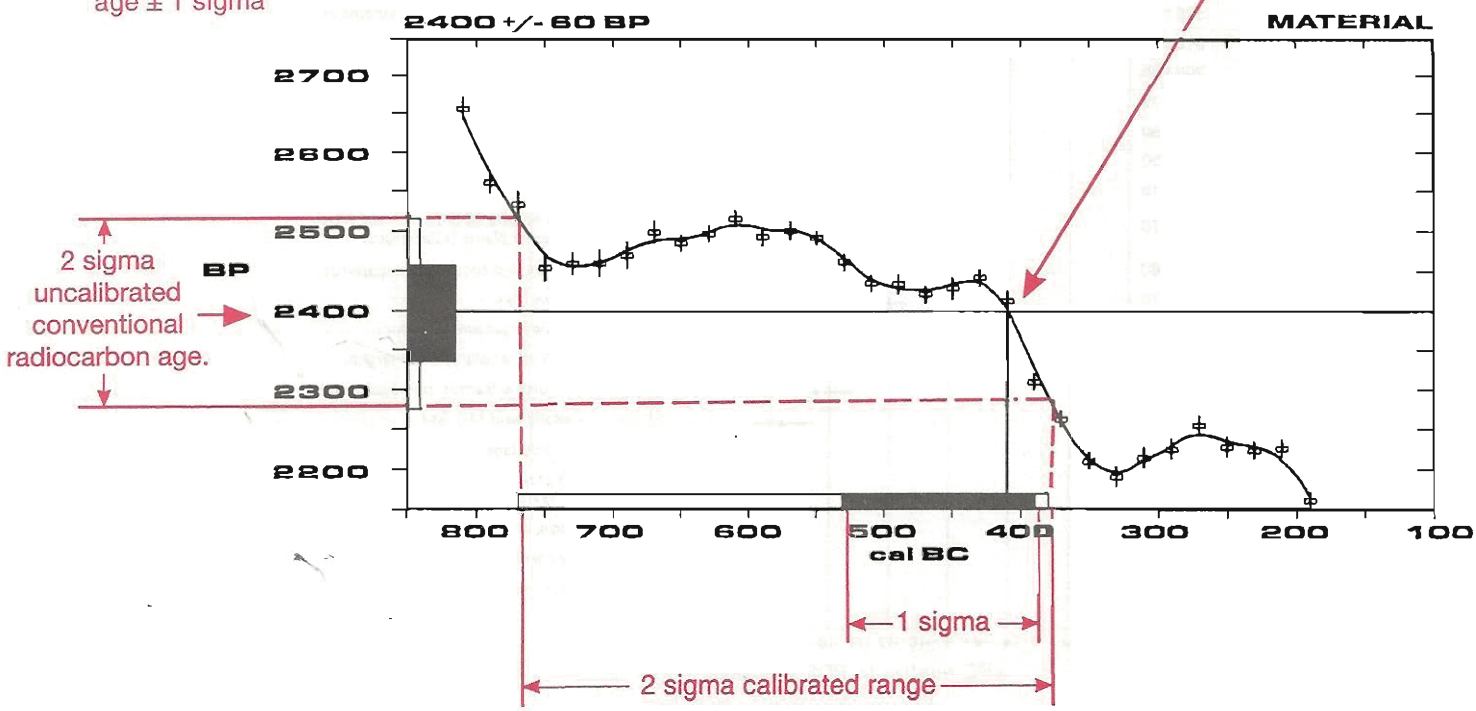
Conventional radiocarbon age: **2400 +/- 60 BP** ← The uncalibrated conventional radiocarbon age (± 1 sigma)

The recommended calibration age range to be used for interpretation → **Calibrated result: (2 sigma, 95% probability)** **cal BC 770 to 380**

Intercept data:

Intercept of conventional radiocarbon age with calibration curve: cal BC 410 ← The intercept between the conventional radiocarbon age and the calibrated calendar time scale curve.

The calibration result of the conventional radiocarbon age ± 1 sigma → 1 sigma calibrated result: (68% probability) cal BC 530 to 390



References:

Pretoria Calibration Curve for Short Lived Samples
Vogel, J.C., Fuls, A., Visser, E. and Becker, B., 1993, Radiocarbon 35(I), p73-86

A Simplified Approach to Calibrating C14 Dates
Talma, A.S. and Vogel, J.C., 1993, Radiocarbon 35(2), p317-322

Calibration - 1993
Stuiver, M., Long, A., Kra, R.S. and Devine, J.M., 1993, Radiocarbon 35(I)

Beta Analytic, Inc., 4985 S.W. 74th Court, Miami, Florida 33155

Reporting results (recommended):

1. List the conventional radiocarbon age with its associated 1 sigma standard deviation in a table and designate it as such.
2. Discussion of ages in the text should focus on the 2 sigma calibrated range.

BETA ANALYTIC INC.

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REPORT OF RADIOCARBON DATING ANALYSES

FOR: Dr. Max Suter

Universidad Nacional Autónoma de México

DATE RECEIVED: February 26, 1997

DATE REPORTED: April 23, 1997

Sample Data	Measured C14 Age	C13/C12 Ratio	Conventional C14 Age (*)
Beta-103279	141.4 +/- 0.8 % modern	-22.1 o/oo	140.6 +/- 0.8 % modern

SAMPLE #: NT-34
ANALYSIS: AMS (LLNL)
MATERIAL/PRETREATMENT:(charred material): acid/alkali/acid
COMMENT: reported result indicates an age of post 0 BP and has been reported as a % of the modern reference standard

Beta-103280	550 +/- 60 BP	-22.7 o/oo	590 +/- 60 BP

SAMPLE #: NT-35
ANALYSIS: AMS (LLNL)
MATERIAL/PRETREATMENT:(organic sediment): acid washes

Beta-103281	560 +/- 50 BP	-22.1 o/oo	600 +/- 50 BP

SAMPLE #: NT-36
ANALYSIS: AMS (LLNL)
MATERIAL/PRETREATMENT:(organic sediment): acid washes

NOTE: It is important to read the calendar calibration information and to use the calendar calibrated results (reported separately) when interpreting these results in AD/BC terms.

Dates are reported as RCYBP (radiocarbon years before present, "present" = 1950A.D.). By international convention, the modern reference standard was 95% of the C14 content of the National Bureau of Standards' Oxalic Acid & calculated using the Libby C14 half life (5568 years). Quoted errors represent 1 standard deviation statistics (68% probability) & are based on combined measurements of the sample, background, and modern reference standards.

Measured C13/C12 ratios were calculated relative to the PDB-1 international standard and the RCYBP ages were normalized to -25 per mil. If the ratio and age are accompanied by an (*), then the C13/C12 value was estimated, based on values typical of the material type. The quoted results are NOT calibrated to calendar years. Calibration to calendar years should be calculated using the Conventional C14 age.

CALIBRATION OF RADIOCARBON AGE TO CALENDAR YEARS

(Variables:C13/C12=-22.7:lab mult.=1)

Laboratory Number: Beta-103280

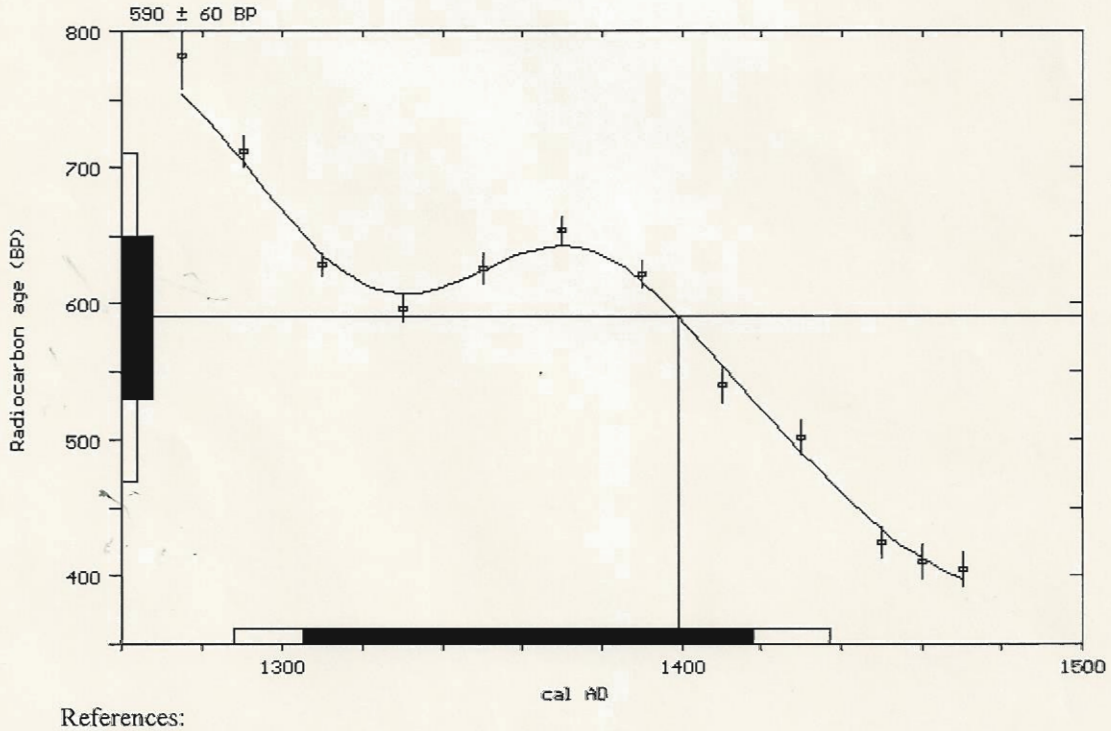
Conventional radiocarbon age: **590 ± 60 BP**

Calibrated results: **cal AD 1290 to 1435**
(2 sigma, 95% probability)

Intercept data:

Intercept of radiocarbon age with calibration curve: cal AD 1400

1 sigma calibrated results: cal AD 1305 to 1420
(68% probability)



References:

Pretoria Calibration Curve for Short Lived Samples
Vogel, J. C., Fuls, A., Visser, E. and Becker, B., 1993, Radiocarbon 35(1), p73-86

A Simplified Approach to Calibrating C14 Dates
Talma, A. S. and Vogel, J. C., 1993, Radiocarbon 35(2), p317-322

Calibration - 1993
Stuiver, M., Long, A., Kra, R. S. and Devine, J. M., 1993, Radiocarbon 35(1)

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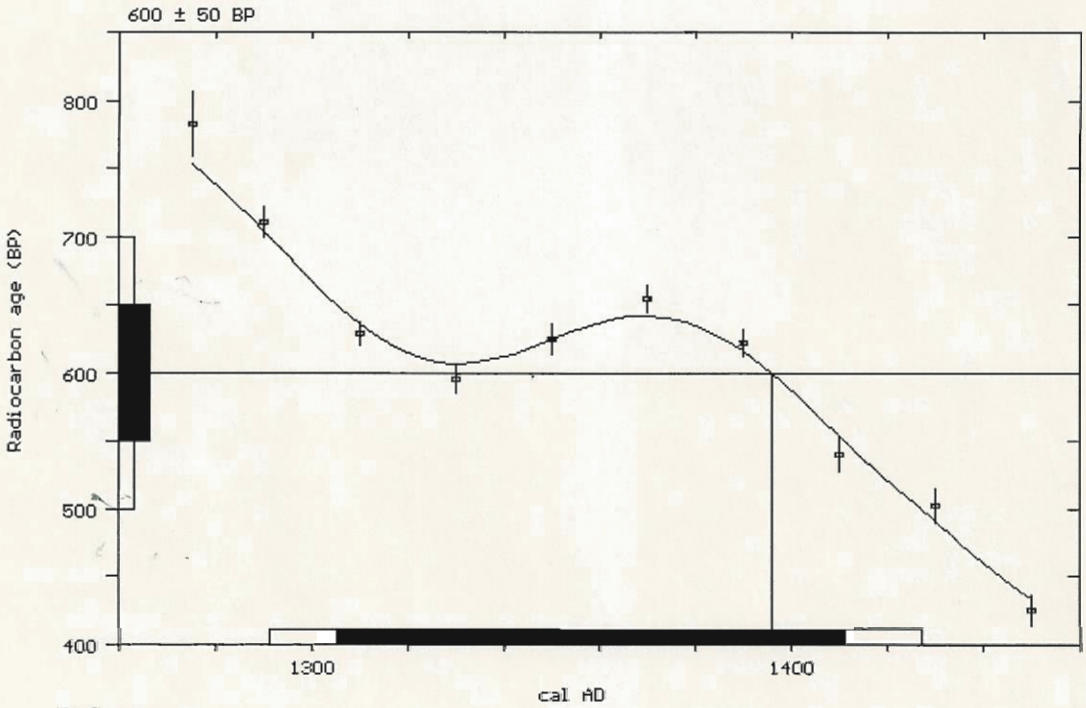
CALIBRATION OF RADIOCARBON AGE TO CALENDAR YEARS

(Variables:C13/C12=-22.1:lab mult.=1)

Laboratory Number:	Beta-103281
Conventional radiocarbon age:	**600 ± 50 BP**
Calibrated results: (2 sigma, 95% probability)	**cal AD 1290 to 1425**

Intercept data:

Intercept of radiocarbon age with calibration curve:	cal AD 1395
1 sigma calibrated results: (68% probability)	cal AD 1305 to 1410



References:

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REPORT OF RADIOCARBON DATING ANALYSES

Dr. Max Suter

Report Date: 7/29/02

UNAM

Material Received: 6/25/02

Sample Data	Measured Radiocarbon Age	13C/12C Ratio	Conventional Radiocarbon Age(*)
Beta - 168417	430 +/- 40 BP	-19.2 o/oo	530 +/- 40 BP
SAMPLE : MOMO1			
ANALYSIS : AMS-Standard delivery			
MATERIAL/PRETREATMENT : (organic sediment): acid washes			
2 SIGMA CALIBRATION : Cal AD 1320 to 1350 (Cal BP 630 to 600) AND Cal AD 1390 to 1440 (Cal BP 560 to 510)			
Beta - 168418	148.5 +/- 0.5 pMC	-24.9 o/oo	148.5 +/- 0.5 pMC
SAMPLE : MOMO3			
ANALYSIS : AMS-Standard delivery			
MATERIAL/PRETREATMENT : (charred material): acid/alkali/acid			
COMMENT: reported result indicates an age of post 0 BP and has been reported as a % of the modern reference standard, indicating the material was living within the last 50 years.			
Beta - 168419	1440 +/- 40 BP	-17.1 o/oo	1570 +/- 40 BP
SAMPLE : MOMO5			
ANALYSIS : AMS-Standard delivery			
MATERIAL/PRETREATMENT : (organic sediment): acid washes			
2 SIGMA CALIBRATION : Cal AD 410 to 580 (Cal BP 1540 to 1360)			
Beta - 168420	1390 +/- 60 BP	-18.1 o/oo	1500 +/- 60 BP
SAMPLE : NT-41			
ANALYSIS : Radiometric-Standard delivery (bulk low carbon analysis on sediment)			
MATERIAL/PRETREATMENT : (organic sediment): acid washes			
2 SIGMA CALIBRATION : Cal AD 420 to 660 (Cal BP 1530 to 1290)			

Dates are reported as RCYBP (radiocarbon years before present, "present" = 1950A.D.). By International convention, the modern reference standard was 95% of the C14 content of the National Bureau of Standards' Oxalic Acid & calculated using the Libby C14 half life (5568 years). Quoted errors represent 1 standard deviation statistics (68% probability) & are based on combined measurements of the sample, background, and modern reference standards.

Measured C13/C12 ratios were calculated relative to the PDB-1 international standard and the RCYBP ages were normalized to -25 per mil. If the ratio and age are accompanied by an (*), then the C13/C12 value was estimated, based on values typical of the material type. The quoted results are NOT calibrated to calendar years. Calibration to calendar years should be calculated using the Conventional C14 age.

CALIBRATION OF RADIOCARBON AGE TO CALENDAR YEARS

(Variables: C13/C12=-18.1:lab. mult=1)

Laboratory number: **Beta-168420**

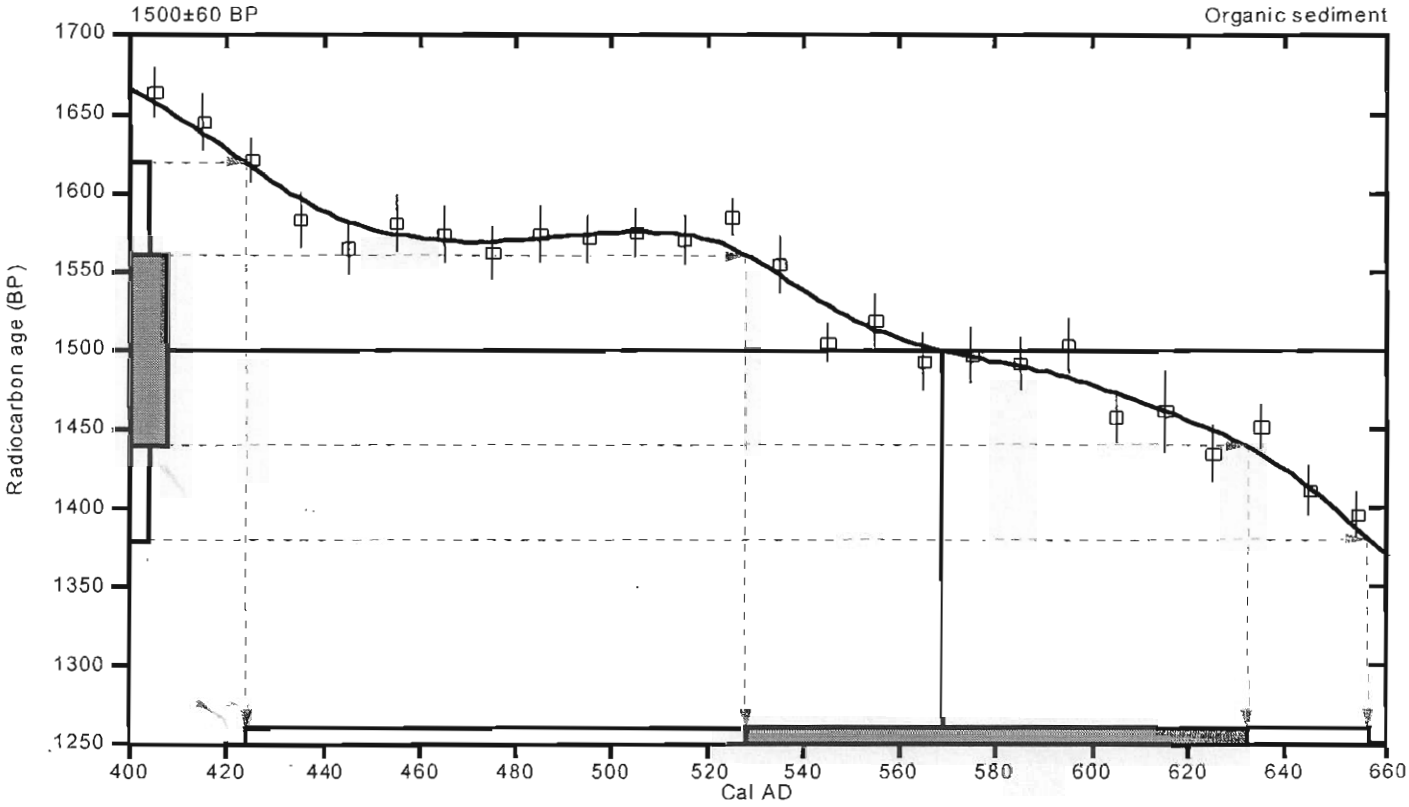
Conventional radiocarbon age: **1500±60 BP**

2 Sigma calibrated result: (95% probability) **Cal AD 420 to 660 (Cal BP 1530 to 1290)**

Intercept data

Intercept of radiocarbon age with calibration curve: Cal AD 570 (Cal BP 1380)

1 Sigma calibrated result: (68% probability) Cal AD 530 to 630 (Cal BP 1420 to 1320)



References:

Database used

Calibration Database
Editorial Comment
Stuiver, M., van der Plicht, H., 1998, Radiocarbon 40(3), pxii-xiii
INTCAL98 Radiocarbon Age Calibration
Stuiver, M., et. al., 1998, Radiocarbon 40(3), p1041-1083
Mathematics
A Simplified Approach to Calibrating C14 Dates
Talma, A. S., Vogel, J. C., 1993, Radiocarbon 35(2), p317-322

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