

The University of Waikato
Radiocarbon Dating Laboratory



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Head: Dr Alan Hogg

Report on Radiocarbon Age Determination for Wk- 16398

(AMS measurement by IGNS [NZA-22349])

Submitter S.J Cronin
Submitter's Code AZ05-D01
Site & Location Okaweu Stream, coastal section, Taranaki, New Zealand
Sample Material Wood
Physical Pretreatment Surfaces scraped clean. The wood was milled.
Chemical Pretreatment Treated with Sodium Chlorite to leave holocellulose. Treated with Sodium Hydroxide (5%W/V) rinsed, washed with 10%HCl, rinsed and dried.

| | | |
|-------------------------|---|---|
| $\delta^{14}\text{C}$ | -920.8 ± 0.5 | ‰ |
| $\delta^{13}\text{C}$ | -23.3 ± 0.2 | ‰ |
| D^{14}C | -924.7 ± 1.6 | ‰ |
| % Modern | 7.5 ± 0.2 | % |
| Result | $20,776 \pm 170 \text{ BP}$ | |

Comments

Alan Hogg

22/8/05

- Result is *Conventional Age or % Modern* as per Stuiver and Polach, 1977, Radiocarbon 19, 355-363. This is based on the Libby half-life of 5568 yr with correction for isotopic fractionation applied. This age is normally quoted in publications and must include the appropriate error term and Wk number.
- Quoted errors are 1 standard deviation due to counting statistics multiplied by an experimentally determined Laboratory Error Multiplier of 1.
- The isotopic fractionation, $\delta^{13}\text{C}$, is expressed as ‰ wrt PDB.
- Results are reported as % Modern when the conventional age is younger than 200 yr BP.

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Report on Radiocarbon Age Determination for Wk- 16399

(AMS measurement by IGNS [NZA-22350])

Submitter S.J Cronin
Submitter's Code AZ05-D04
Site & Location Okaweu Stream, coastal section, Taranaki, New Zealand
Sample Material Wood
Physical Pretreatment Surfaces scraped clean. The wood was milled.
Chemical Pretreatment Treated with Sodium Chlorite to leave holocellulose. Treated with Sodium Hydroxide (5%W/V) rinsed, washed with 10%HCl, rinsed and dried.

| | | |
|-------------------------|------------------------|---|
| $\delta^{14}\text{C}$ | -940.8 ± 0.5 | ‰ |
| $\delta^{13}\text{C}$ | -24.2 ± 0.2 | ‰ |
| D^{14}C | -944.5 ± 1.6 | ‰ |
| % Modern | 5.5 ± 0.2 | % |
| Result | 23,230 ± 232 BP | |

Comments

Alan Hogg

22/8/05

- Result is *Conventional Age or % Modern* as per Stuiver and Polach, 1977, Radiocarbon 19, 355-363. This is based on the Libby half-life of 5568 yr with correction for isotopic fractionation applied. This age is normally quoted in publications and must include the appropriate error term and Wk number.
- Quoted errors are 1 standard deviation due to counting statistics multiplied by an experimentally determined Laboratory Error Multiplier of 1.
- The isotopic fractionation, $\delta^{13}\text{C}$, is expressed as ‰ wrt PDB.
- Results are reported as % Modern when the conventional age is younger than 200 yr BP.

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Report on Radiocarbon Age Determination for Wk- 16400

(AMS measurement by IGNS [NZA-22187])

Submitter S.J Cronin

Submitter's Code AZ05-D07

Site & Location Okaweu Stream, coastal section, Taranaki, New Zealand

Sample Material Peat

Physical Pretreatment Visible contaminants removed.

Chemical Pretreatment Acid washed using 10% conc. HCl, rinsed. Washed in hot 1% NaOH, then acid washed in 10% conc. HCL, rinsed and dried. The base insoluble fraction was selected for dating.

| | | |
|-------------------------|---|---|
| $\delta^{14}\text{C}$ | -928.7 ± 0.6 | ‰ |
| $\delta^{13}\text{C}$ | -30.2 ± 0.2 | ‰ |
| D^{14}C | -932.3 ± 1.6 | ‰ |
| % Modern | 6.8 ± 0.2 | % |
| Result | $21,629 \pm 194 \text{ BP}$ | |

Comments

22/8/05

- Result is *Conventional Age or % Modern* as per Stuiver and Polach, 1977, Radiocarbon 19, 355-363. This is based on the Libby half-life of 5568 yr with correction for isotopic fractionation applied. This age is normally quoted in publications and must include the appropriate error term and Wk number.
- Quoted errors are 1 standard deviation due to counting statistics multiplied by an experimentally determined Laboratory Error Multiplier of 1.
- The isotopic fractionation, $\delta^{13}\text{C}$, is expressed as ‰ wrt PDB.
- Results are reported as % Modern when the conventional age is younger than 200 yr BP.

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Report on Radiocarbon Age Determination for Wk-

16401

Submitter S.J Cronin
Submitter's Code AZ05-D11
Site & Location Okaweu Stream, coastal section, Taranaki, New Zealand
Sample Material Peat
Physical Pretreatment Visible contaminants removed.

Chemical Pretreatment Acid washed using 10% conc. HCl, rinsed. Washed in hot 1% NaOH, then acid washed in 10% conc. HCL, rinsed and dried. The base insoluble fraction was selected for dating.

| | | |
|-------------------------|---|---|
| $\delta^{14}\text{C}$ | -956.9 ± 0.9 | ‰ |
| $\delta^{13}\text{C}$ | -29.2 ± 0.2 | ‰ |
| D^{14}C | -956.6 ± 0.9 | ‰ |
| % Modern | 4.3 ± 0.1 | % |
| Result | $25,198 \pm 167 \text{ BP}$ | |

Comments

Alan Hogg

22/8/05

- Result is *Conventional Age or % Modern* as per Stuiver and Polach, 1977, Radiocarbon 19, 355-363. This is based on the Libby half-life of 5568 yr with correction for isotopic fractionation applied. This age is normally quoted in publications and must include the appropriate error term and Wk number.
- Quoted errors are 1 standard deviation due to counting statistics multiplied by an experimentally determined Laboratory Error Multiplier of 1.
- The isotopic fractionation, $\delta^{13}\text{C}$, is expressed as ‰ wrt PDB.
- Results are reported as % Modern when the conventional age is younger than 200 yr BP.

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Report on Radiocarbon Age Determination for Wk- 16402

(AMS measurement by [NZA-22895])

Submitter S.J Cronin
Submitter's Code AZ05-D14B
Site & Location Te Namu Pa, coastal section, Taranaki, New Zealand
Sample Material Wood
Physical Pretreatment Surfaces scraped clean. The wood was chopped up into small splinters and milled. Washed in demineralized water and dried.
Chemical Pretreatment Treated with Sodium Chlorite to leave holocellulose. Treated with Sodium Hydroxide (5%W/V) rinsed, washed with 10%HCl, rinsed and dried.

| | | |
|-------------------------|------------------------|---|
| $\delta^{14}\text{C}$ | -968.9 ± 0.5 | ‰ |
| $\delta^{13}\text{C}$ | -23.4 ± 0.2 | ‰ |
| D^{14}C | -973.2 ± 1.3 | ‰ |
| % Modern | 2.7 ± 0.1 | % |
| Result | 29,074 ± 399 BP | |

Comments

Alan Hogg

22/8/05

- Result is *Conventional Age or % Modern* as per Stuiver and Polach, 1977, Radiocarbon 19, 355-363. This is based on the Libby half-life of 5568 yr with correction for isotopic fractionation applied. This age is normally quoted in publications and must include the appropriate error term and Wk number.
- Quoted errors are 1 standard deviation due to counting statistics multiplied by an experimentally determined Laboratory Error Multiplier of 1.
- The isotopic fractionation, $\delta^{13}\text{C}$, is expressed as ‰ wrt PDB.
- Results are reported as % Modern when the conventional age is younger than 200 yr BP.