REPORT ON RADIOCARBON SAMPLE
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From the excavations of Nahal Lachish (Haruv), seven samples were submitted for radiocarbon dating. All samples were wood charcoal.
They were pretreated to remove contamination using the procedure in (*1*) and measured by Accelerator Mass Spectrometry. All samples provided enough charred remains after pre-treatment for the measurement. Based on the carbon percent (%C), provided values above 60-65% which indicate a good preserved charcoal.

The results of the measurement and pre-treatment are given in the table.
Calibrated ranges are given for ±1σ (±1standard deviation= 68.2% probability that the true age is included in the given range) and for ±2σ (±2standard deviation= 95.4% probability that the true age is included in the given range). The results of the calibrated ranges are given in the figure. Samples are ordered in chronological order.

Two samples have provided also post- bomb ages (and are not plot in the figure), meaning the wood material was formed in the last 60 years when the radiocarbon concentration in the atmosphere was above natural level due to the nuclear tests.

| RTK # | TYPE | $^{14}$C age ± 1σ year BP | Calibrated age ± 1σ year | Calibrated age ± 2σ year | Collection Site | Sample ID | $\delta^{13}$C ‰ PDB | prep% | C% |
|---|---|---|---|---|---|---|---|---|---|
| 6358 | charcoal | 30 ± 50 | 68.2% probability<br>1700AD (19.5%) 1725AD<br>1815AD (13.9%) 1835AD<br>1880AD (34.8%) 1920AD | 95.4% probability<br>1680AD (25.2%) 1735AD<br>1805AD (70.2%) 1930AD | Haruv. South area. Bottom of kiln (west) | A5722. L109 B1023 | -22.9 | 61.3 | 66.2 |
| 6361 | charcoal | post-bomb | | | Haruv. North area. Cave | A5722. L110 B1031 | -23.7 | 76 | 64.6 |
| 6359 | charcoal | post-bomb | | | Haruv. North area. 20 cm up to floor | A5722. L110 B1026 | -24.9 | 47 | 44.9 |
| 6360 | charcoal | 135 ± 50 | 68.2% probability<br>1680AD (10.4%) 1710AD<br>1720AD (17.0%) 1765AD<br>1800AD ( 9.6%) 1825AD<br>1835AD (20.9%) 1885AD<br>1915AD (10.3%) 1940AD | 95.4% probability<br>1670AD (41.0%) 1785AD<br>1800AD (54.4%) 1950AD | Haruv.North area. From the floor | A5722. L110 B1029 | -24.6 | 22.2 | 54.6 |
| 6357 | charcoal | 350 ± 50 | 68.2% probability<br>1475AD (28.3%) 1525AD<br>1560AD (39.9%) 1631AD | 95.4% probability<br>1450AD (95.4%) 1640AD | Haruv. South area. Bottom of kiln | A5722. L108 B1019 | -23.4 | 72 | 72 |
| 6362 | charcoal | 490 ± 55 | 68.2% probability<br>1330AD ( 4.7%) 1340AD<br>1395AD (63.5%) 1455AD | 95.4% probability<br>1305AD (15.8%) 1365AD<br>1385AD (77.9%) 1500AD<br>1510AD ( 0.2%) 1510AD<br>1600AD ( 1.5%) 1615AD | Haruv. Eastern area. Kiln | A5722. L112 B1033 | -23.0 | 51.1 | 67 |
| 6363 | charcoal | 100 ± 55 | 68.2% probability<br>1690AD (17.4%) 1730AD<br>1810AD (50.8%) 1925AD | 95.4% probability<br>1670AD (35.3%) 1780AD<br>1800AD (60.1%) 1940AD | Haruv. South-East area. Cave (Columbarium) | A5722. L119 B1058 | -25.1 | 71.8 | 67 |

$^{14}$C age are reported in conventional radiocarbon years (before present =1950) in accordance with international convention (*2*) .
Thus all calculated $^{14}$C ages have been corrected for the fractionation so as to refer the results to be equivalent with the standard $\delta^{13}$C value of -25‰(wood).

Calibrated ages in calendar years have been obtained from the calibration tables in (*3, 4*) by means of OxCal v. 4.1.5 of Bronk Ramsey (2010) (*5, 6*).

References


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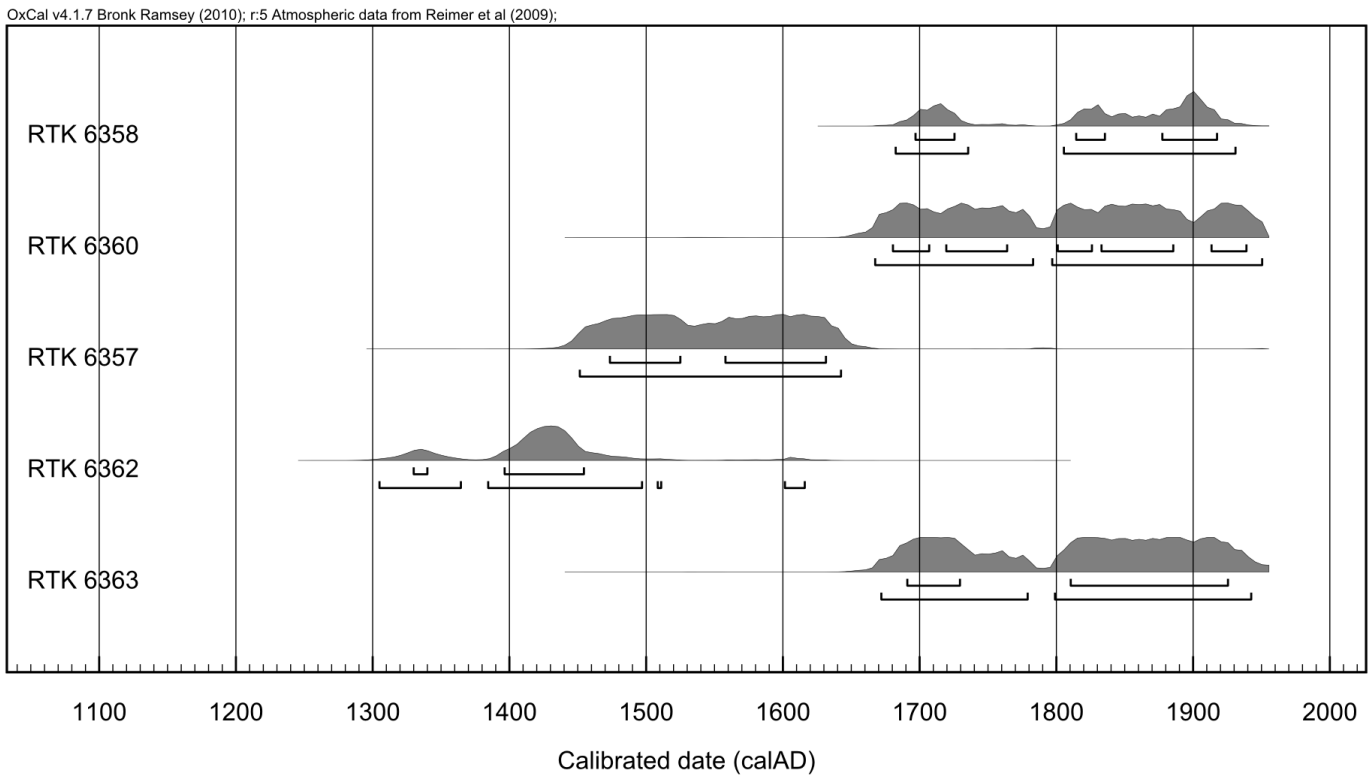


Figure : Probability distribution of the calibrated ranges for the Nahal Lachish (Haruv) samples radiocarbon dated.