

A first summary of the consensus values for all the VIRI samples are presented below. These results were reported at the Radiocarbon conference in Hawaii and a detailed report is being prepared for publication.

Marian Scott, July 2009

### Sample descriptions (in brief)

#### VIRI-1

4 grain samples, 2 modern, 2 archaeological

Sample A was a barley mash collected in 2001,

sample C was barley mash used in the FIRI trial as samples G & J (consensus value 110.7 pMC) and was collected in 1998.

Samples B and D were grain, the expected ages (on archaeological grounds) of samples B and D are 2800 BP and 2850-2900 BP respectively.

#### VIRI-2

5 bone samples (one for AMS labs only)

Mammoth bone (>5 half-lives) provided by Tom Higham- sample E

Horse bone (from Siberia, a Scythian site, < 1 half-life) provided by Ganna Zaitseva- sample F

Whalebone (two samples)- provided by Paula Reimer and Steinar Gulliksen (both approx 2 half-lives)-samples H and I

Human bone (approx 1000 yrs)- provided by Alex Bayliss- sample G, for AMS only.

### Consensus values for VIRI-1 and VIRI-2

Sample	Known or previous measurements	Consensus value (estimated $1\sigma$ precision)
A (pMC)	-	109.1(0.04) pMC <sup>1</sup>
B (yBP)	2800	2820(4) yBP <sup>2</sup>
C (pMC)	110.7	110.7(0.04) pMC
D(yBP)	2850-2900	2836(4) yBP
E		39305 (121)
F		2513 (5)
G	934 (12)	969 (5)
H	9565 (130)	9528 (7)
I	8335 (24)	8331 (6)

<sup>1</sup>percent modern carbon; <sup>2</sup> radiocarbon years before present where present is 1950.

### Sample descriptions for VIRI-3

12 samples distributed (1 for radiometric only, 4 for AMS only)

#### **Humic acid: samples J (AMS only), T(AMS only) and U**

Sample T: humic acid (<1 half life) from a peat deposit in Scotland.

Sample J: humic acid from a peat deposit in Siberia, provided by Prof Kh Arslanov, St Petersburg. This sample is close to background.

Sample U: humic acid from a peat deposit at St Bees, Cumbria. (2 half-lives approx)-already used as FIRI E

#### **Wood: samples K, L, M (AMS only), N and O (cellulose)**

Sample K : wood (anticipated to be background), provided by Michael Friedrich, Hohenheim.

Sample L: wood (known age) and provided by Mike Baillie, Belfast. The sample is identified as Corlea, Q5994.

Samples M, N: wood (<1 half-life), provided by Gordon Cook, SUERC. It is an oak (alder) sample from Loch Tay (a crannog site)

Sample O: cellulose (known age) from Cambridge, corresponding to 60 rings from a plateau period- previously used.

#### **Charcoal: samples P and Q (AMS only)**

Sample Q: charcoal from Iceland, provided by Dr Mike Church, University of Durham.

Sample P : charcoal from Mexico, provided by Dr L Manzanilla from the Teotihuacan archaeological site.

#### **Barley mash:**

sample S from Glengoyne distillery, 2001

#### **Shell:**

sample R : murex shell from the Tel Dor archaeological site, provided by Elisabetta Boaretto, Weizmann Institute.

### Consensus values for VIRI-3 samples

Sample	Consensus value (pMC)	1 sigma	Sample	Consensus value (pMC)	1 sigma
<b>J</b>	0.4603	0.008	<b>P</b>	80.457	0.0862
<b>K</b>	0.0576	0.0062	<b>Q</b>	92.383	0.0512
<b>L</b>	75.719	0.0395	<b>R</b>	73.338	0.0368
<b>M</b>	73.900	0.0322	<b>S</b>	109.96	0.0417
<b>N</b>	73.839	0.0392	<b>T</b>	65.821	0.0333
<b>O</b>	98.457	0.0385	<b>U</b>	23.079	0.0155