THE GRONINGEN RADIOCARBON DATING

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All 5 samples consisted of charcoal which sieved before chemical treatment. The chemical treatment for removal of possible carbonate or organic humic contamination from more elevated layers consisted of:

1. Extraction with 4% HCl solution at 80°C during 24 hours.
2. Extraction with 1% NaOH solution at 25°C during 1 hour.
3. Extraction with 4% HCl solution at 80°C during 24 hours.

After rinsing with destilled water and drying, the samples were combusted in pure oxygen. The CO_2 was subsequently purified to remove electronegative contamination (Cl, SO_2, NO_x, O_2, H_2O).

The carbon percentages in the original charcoal appeared to vary from 65 to 69%, which is normal for this type of material.

The extremely pure CO_2 was analysed for ^{14}C activity in quartz proportional gas counters of various sizes, depending on the amount of sample available. The resulting ^{14}C ages are conventional ages, based on the NBS oxalic acid standard, on a ^{14}C half-life of 5568 years and normalized to a $\delta^{13}C$ value of $-25^{o}/_{oo}$, the latter to remove the influence of isotopic fractionation during photosynthesis of the original wood.

Tab. 8

Lab. code	Dolní Věstonice	$\delta^{13}C$ ($^{o}/_{oo}$)	conv. age ± σ
GrN-15276	Male burial	-23.72	25 570 ± 280 BP
GrN-15277	Hearth D	-24.15	25 740 ± 210 BP
GrN-15278	Hearth DE 12/13	-23.20	27 070 ± 300 BP
GrN-15279	Hearth CD 16/17	-24.70	26 920 ± 250 BP
GrN-15280	Under layer	-24.31	27 900 ± 550 BP

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