

sample handling instructions

1. AMS ¹⁴C dating

general: for standard analysis, 2 milligram of C (graphite, after all treatments) is recommended. This amount will give the most reliable dates.

The table below is based on this number and is conservative. The table shows corresponding numbers in milligrams of amount of sample material, required for submission. The AAA (Acid/Alkali/Acid) treatment is the standard procedure.

Material	%C	treatment			
		<i>none</i>	<i>A only</i>	<i>AAA</i>	<i>special</i>
wood	50	8	10	16	
charcoal	70	8	10	14	
peat (wet)	5	80	100	160	
peat (dry)	50	8	10	16	
humic soil	0-5	160	200	480	
bone	0-5	-	-	-	200
charred bone	0-5	-	-	-	160
cremated bone	<1	-	-	-	2000
carbonates	12	40	60	-	
deep sea cores	0-5	160	200	-	
tooth enamel	0.6	-	150	-	
biofuels	*				

small AMS samples: these are in the range 10-500 microgram of C (graphite). These follow a special protocol in the laboratory and are measured in batches with standards and backgrounds with a varying mass range. This means longer processing time. Arrangements concerning standards and backgrounds need to be made beforehand.

requirements for CO₂ gas in breakseals:

length, min. 15 cm, max. 21 cm; outer diameter, max. 7 mm.

gas pressure < 1 atm (needs to be guaranteed by customer in writing)

sample size: regular samples 0.5-2.0 mg C; small samples see above