

Sampling Firewood from a stock pile or store

This method is based on the sampling standard BS EN ISO 18135 Solid biofuels – Sampling

The equipment needed to sample Firewood

- Heavy duty plastic bag or water tight container to put the sample
- Pin meter

Precautions

Consider health and safety – use Personal Protective Equipment, observe manual handling procedures, and assess the site for hazards from machinery, dangerous or loose stock piles etc.

Taking a representative sample

To make sure the sample is representative, random samples should be taken from around the pile/lorry/bag/sack. Avoid any bias and being drawn in to selecting obvious single compromised logs unless they are representative of the whole product available. Where there is obvious issues of poor storage, such as product stored outside, directly on the ground and not covered, collect further supporting evidence of poor storage where possible ie. Photos etc.

Note: Where a sample is being taken following a dispute, please ensure all parties witness the sample collection.

- From a stock pile of firewood, randomly select at least 4 samples from different areas of the stock. If appropriate, taking samples from different drying batches and cross species
- From a 'dumpy' bag samples will be taken from the top and the middle or as low down as practical from the bag.
- If a reference sample is to be left with the supplier, split the samples into two batches of at least 3 samples each. One to be submitted to Woodsure Test Centre and the other to be retained by the client.
- If appropriate, take a reference moisture check with the suppliers' pin meter. (This can provide feedback to the supplier on the accuracy of their pin meter, and give the auditor the opportunity to see the moisture checking procedure performed by the supplier.)

If taking directly from a kiln, ensure the product has completed its normal drying process and is cooled before bagging

If gathering samples from different drying methods ie. seasoned and Kiln Dried then two sets of samples will need collecting and bagging separately.

Note: make a note if the weather is particularly damp or wet.

Note: submitted samples can be cross referenced to pin meter testing when the readings are written on the wood samples.

Sample preparation for delivery to the Laboratory

- Place samples inside water tight containers or rubble sacks, sealed with gaffer tape. Label as per below with relevant product information. Samples should be kept in dry conditions out of direct sunlight.
- Identify the sample by labelling the bags / containers with the following as appropriate:
 - Date
 - Company or depot that produced the fuel
 - Woodfuel size and moisture specification (for example 22cm 20% moisture)

A 1 Taking a representative sample

- Site reading of moisture
- Sample reference
- Name of sampler
- Weather conditions (if appropriate)
- In the case of POS collections, supporting photos.

Labelling is very important as these samples may be sent by carrier to Woodsure for Quality Assurance testing.

Place the bag for any samples going to Woodsure into a cardboard box and address to:

Woodsure Testing Centre,
UNIT 40 HIGHFIELD BUSINESS PARK
TEWKESBURY ROAD
DEERHURST
GLOUCESTERSHIRE
GL19 4BP

- Inform Woodsure by email (info@woodsurre.co.uk) or phone (01684 278188) that you have sent the sample for testing.
- Once tested the results will be forwarded to the supplier. Where the results are positive, the sample(s) may be disposed of immediately. Samples that fail may be kept temporarily whilst results or corrective actions are considered with the supplier. The clients retained sample, or a separate sample may be requested for further testing.

Sampling Firewood from a Point of Sale

The equipment needed to sample Firewood

- Pin meter

Precautions

Consider health and safety – use Personal Protective Equipment, observe manual handling procedures, and assess the site for hazards from machinery, dangerous or loose stock piles etc.

Taking a representative sample

To make sure the sample is representative, random samples should be taken from around the pile/lorry/bag/sack. When collecting a prepacked bagged sample (grab bag) select the top bag from the pile. Where a sample is being taken following a dispute, please ensure all parties witness the sample collection.

- From a stock pile of firewood, randomly select at least 4 samples from different areas of the stock, ideally taking samples from different drying batches and cross species. If a reference sample is to be retained by the supplier, split the samples into at least two lots of 3 samples.
- When collecting a prepacked bagged sample (grab bag). Avoid any bias and being drawn in to selecting an obvious single compromised bag, unless it is representative of the whole product on sale. Where there are obvious issues of poor storage, such as product stored outside and not covered in poor weather conditions, collect further supporting evidence of poor storage where possible i.e. Photos etc.

A 1 Taking a representative sample

- Samples can be tested using the pin meter method asap after collecting the sample. Where the pin meter readings average over 18% then these should be forwarded to the lab for further analysis. Pin meter readings should be carried out by the following method: -
 1. From the selection of samples, a minimum of 3 random logs should be sub sampled for checking.
 2. Take the samples and split the log down the centre with an axe
 3. Measure the moisture by pressing the meters pins into the centre of the log, across the grain.
Record the number of measurements of each split log. Measure for at least 6 readings from the sample then calculate the average.

$$\text{AVERAGE} = \frac{\text{SUM OF ALL READING}}{\text{NUMBER OF READINGS TAKEN}}$$

Record this as the timber's average moisture content.

Note: Representative samples from the whole stock that has obviously been compromised, or have a reading from the pin meter over 18% should be sent to the lab for further testing. Following the sample preparation instructions above.

Firewood longer than 50cm.

Taking a representative sample

Selection of representative, random samples should follow the same process above. Practicalities for despatching such long samples for testing should be considered. We will accept a declared measurement of length offered by the supplier. The consequence of offering oversize logs to your end customer is obvious and shouldn't need our validation unless specifically requested. Our testing focuses on fuel moisture rather than physical characteristics of size and dimensions. When sending samples for testing please reduce the sample length to an appropriate length that can be easily handed by a courier or through the post. For example, reduce the selected logs to 30cm lengths, and then take a sub selection as a representative sample.