

A failed first attempt at making charcoal

Contributed by Madman

Having read a few articles on charcoal production, my cousin and I decided to try our hands at it: Here follows an account of the adventure, and how not to do it! A failed first attempt at making charcoal

The principle is that in a confined space, you create a fire of around 1500 degrees core temperature, then restrict airflow so that it burns at minimum oxygen input, and burns instead the volatile gases contained in the wood to convert the timber to carbon, with minimum moisture content remaining.

We therefore located a 50 gallon oil drum, chopped a huge pile of mainly seasoned wood of all sizes, and proceeded to create a bonfire.

This was to burn off the varnish inside the drum, and paint outside.

This was to prevent hydrocarbons finding their way into the final product which would be used to cook food.

We created airflow holes in the barrel base, using buckshot cartridges as we had no suitable tools in the wood!!

The barrel was then positioned over a trench so we could earth up the air intake at the critical moment. We built the fire up to the top of the barrel, compacted the timber in, and allowed several hours to pass as the heat intensity increased. Apparently when the smoke changes colour from white to clear, you have boiled out all the moisture, and are now running hot enough to clamp on the lid and restrict airflow.

The fire continued for two days, with regular restocking of timber. Finally, when the fire was cool enough, the lid was removed and the barrel emptied. The result was very disappointing: Enough charcoal remained only to fill two sugar packets.

Additionally, I had packed two terra cotta drainage pipes with willow wands, to see if I could produce artist's charcoal. One pipe exploded, the other, sadly, permitted most of the willow to be burnt, with only a few short bits remaining.

After this failed attempt, we shall experiment with a different design on which we have already begun, which will keep the charcoal timber in a separate container above the fire, to enable us to roast the wood without it coming in direct contact with the flames. A future article will follow!