

The invention relates to a process for converting a biomass into at least one biochar, comprising the following steps: (a) a ground and dried biomass is provided, said biomass containing at least 30 % of a lignocellulosic biomass, by mass relative to the dry mass of the ground and dried biomass; (b) this biomass is gradually heated at a temperature above 140 °C and below 350 °C, in an oxygen-free gas stream, under a pressure of between 1 and 40 bar; (c) the reaction is left to take place by maintaining the temperature within the range of 300-700 °C and the pressure within the range of 1-40 bar; (d) the biomass resulting from (c) is cooled to a temperature of at most 100 °C in an oxygen-free gas stream; and (e) the biochar is recovered. The invention also relates to the biochar thus obtained.