



Universidade de Brasília

Impact of torrefaction processes on Brazilian biomasses storage



DE FREITAS HOMEN DE FARIA B. ^{1,2}, ROUSSET P. ^{2,3}, DE CASSIA OLIVEIRA CARNEIRO A. ¹, CALDEIRA-PIRES A. ⁴, CANDELIER K. ²

Biomasses

Sugar cane



Pine



Coffee bark



Eucalyptus



D 10

Leachings



Adapted from the directives of
the NFX 41-569 (2014)

**Thanks to the
CNPQ-Brazil for
the financial
support**

Fungal degradations

Adapted from XP CEN/TS 15083-1 (2006)

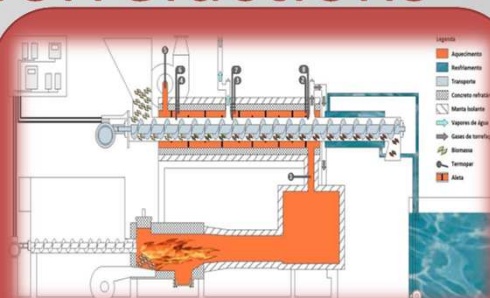
*Trametes
versicolor*

*Coniophora
puteana*



Durations: 2, 4, 8, 12 and 16 weeks

Torrefactions



Endless screw type reactor
Semi-continuous flow.
T°C = 290 °C
Durations = 10 to 20 min

Characterizations

- ML % du to thermal degradation
- ML % due to leaching process
- WL % due to fungal degradation
- Calorific power (HHV)
- Elementary composition (C; H; N)
- NIRS – Chemical composition
- Mechanical properties