

# PELLET, QUALITY AND TESTS

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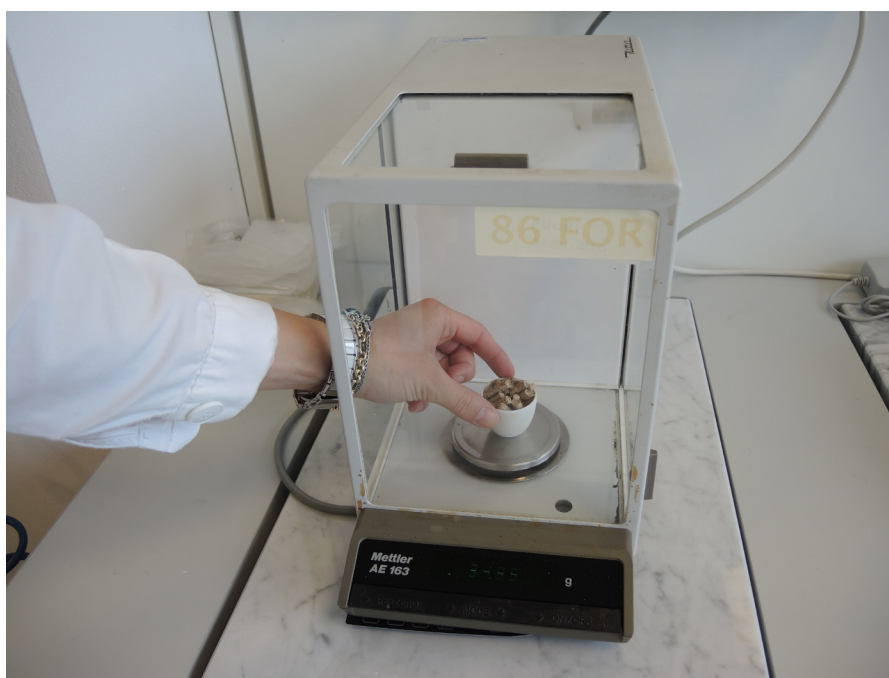


The production of pellet is based on the compacting process of powder wood materials in order to get a homogeneous product with relevant advantages such as obtaining a standard, easily preservable, stockpileable, easy transportable product that enable regular combustion with high energy yields and reduced emissions.

However, since it is a fuel, the first requisite to consider is its energy performance, by assessing its ability to produce thermal energy during the combustion process. This parameter is called “calorific value” measurable in the laboratory, in accordance with UNI EN 14918, by using an instrument known as the “adiabatic calorimeter bomb”.

Another important parameter to consider is the residual ash content at the end of the combustion process determined according to EN ISO 18122. If the ashes are too high, in addition to requiring a difficult daily cleaning of the stove or boiler, there is a significant increase in the fine particulates emissions.

Being made of fine wood particles compress together, if the process is not optimized, structural problems can be evaluated by physical-mechanical parameters such as “mechanical Durability” and “Bulk Density”.



In addition to energy performance and physical-mechanical requirement, the pellet shall not contain any elements other than those present in the starting raw material such as: Chlorine, Nitrogen, Sulfur and Heavy Metals.

The European Standard for pellet quality classes is EN 14961-2. This standard contains the reference values for three pellet quality classes: A1, A2 and B, which differ mainly from the ash content.

However it is apparent that the producer, importer or distributor who wants to offer a constant quality pellet to the market must necessarily rely on an accredited laboratory such as CATAS capable of fully assessing the final characteristics of the products as well as of following the rapid change of the technical reference standard. The laboratory should not be only the final point for products assessment, but it represents an instrument for consolidating and, if it is necessary, correcting the entire production process.