

Beer production

This year my class is involved in a new project called “HANDS ON / Saper(e) consumare”. The project is about the production of sustainable food; beer and bread are in the first phase of the project which is to continue with the production of flavoured salt, dried meat, yoghurt, soap and vegetable stock cubes.

On 24th January we dealt only with the first two products: bread and beer.

I took care of the brewing process. The production of beer includes the following standard phases: milling the grain, mash conversion, lautering, the boil, wort separation and cooling, fermentation, maturation, filtration and cellaring.

I took care of the following phases: washing tools, milling the barley, mash conversion, filtration and cellaring.



The first phase was washing the utensils, which is a very thorny process, in fact you must first rinse with water, then wash with detergent and finally give a wash with potassium metabisulphite to make bottles and pots sterilised.

The milling of the barley was a simple phase; the only thing to pay attention is calibrating the distance of the grinding parts well.

The mash conversion. During this phase, the barley is brought into a mash tun, inside of which water was added (30L of water and 10Kg of malt/volume of the mash tun: 50L). Then you need to start heating the tank, following different temperature steps to activate the different enzymes, which will attack the starch chains present in the malt, breaking them and producing simpler sugar molecules, at the end you will get a thick and pasty liquid. This type of mashing is called infusion.



The temperature steps:

50°C (x 15min.): Phytase enzyme, beta glucanase and protease

65°C (x 25min.): alpha amylase

75°C (x 10min.): beta amylase

The filtration phase was completed by a cold filtration system, also causing the fluid to cool down.

After the remaining phases, the fermentation process lasted about three weeks, at the end of which there was bottling.

Furthermore, together with my classmates Matteo M. and Sara T., I was one of the workers in charge of moving the kegs of beer in the basement, in a locked room. Before the drink comes to fruition, about another four weeks will have to pass.



