Researchers identify additional inoculation source for lambic beer production

November 2 2018

Researchers in Belgium have identified an additional inoculation source—the wooden casks or foeders—for producing lambic beers. Traditional lambic beer production takes place through wort inoculation with environmental air and fermentation and maturation in wooden barrels. Up to now, these lambic barrels have only been examined with culture-dependent techniques, missing a part of the microorganisms present. The research is published in the journal *Applied and Environmental Microbiology*.

To be able to clarify the role of casks and foeders as additional microbial inoculation source, the researchers determined the influence of the barrel characteristics and the cleaning procedures on the microbial communities of the interior barrel surfaces. The researchers plated and sequenced the swab samples obtained from the interior surfaces of different wooden casks and foeders used for traditional lambic beer production in Belgium. The samples revealed that the microbial compositions of these surfaces differed statistically throughout the barrel cleaning procedures applied. This helped to understand the complex spontaneous lambic beer fermentation and maturation process.

The microbial compositions of the interior barrel surfaces also differed statistically based on the barrel type, possibly reflecting different characteristics of the lambic barrels in terms of age, wood thickness, and wood porosity. This research will contribute to the continued optimization of the lambic beer production process as well as the wooden barrel cleaning procedures.

Provided by American Society for Microbiology