

**Title** Preliminary prospection of the yeast biodiversity on apple and pear surfaces from Northern Italy orchards

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### Abstract

Apples and pears of four different cultivars from nine companies located in northern Italy have been submitted to the isolation of the blastomycetic flora before and after industrial washing, in order to individuate and isolate the resident yeasts, particularly those resistant to the industrial washing. Cultures of the following species were isolated: *Aureobasidium pullulans*, *Candida oleophila*, *Debaryomyces hansenii*, *Hanseniaspora uvarum*, *Metschnikowia fructicola*, *Metschnikowia pulcherrima*, *Wickerhamomyces anomalus*, *Meyerozyma guilliermondii*, *Pichia kluyveri* and *Rhodotorula glutinis*. The most diffuse species was *M. guilliermondii*, found on all cultivars after washing. Species of the *Metschnikowia* gender and *A. pullulans* were also very common. Identification through rDNA 26 S and FTIR characterization made it possible to trace some strains and to establish that these were resistant to the washing treatment. The presence and distribution of superficial microbiota on apples was also shown by scanning electronic microscopy. This preliminary study has shown that the yeast cultures on the surfaces can be differentiated for their resistance to industrial treatments and that an increase of the yeast flora can be easily obtained.

<http://www.springerlink.com/content/980v66543821g776/fulltext.pdf>