

choosing ~ eating ~ Living

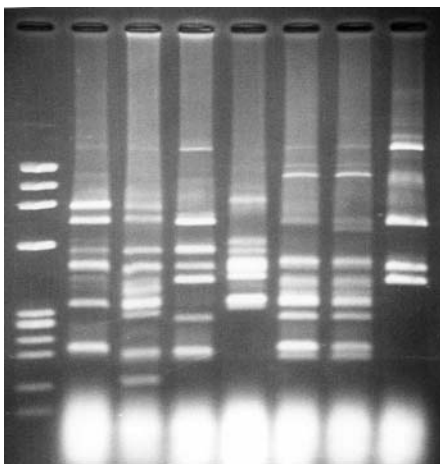
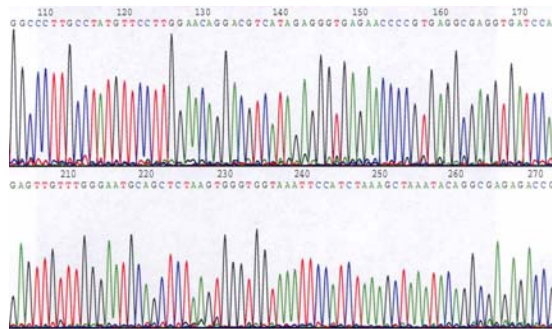


Yeast: friend or foe?

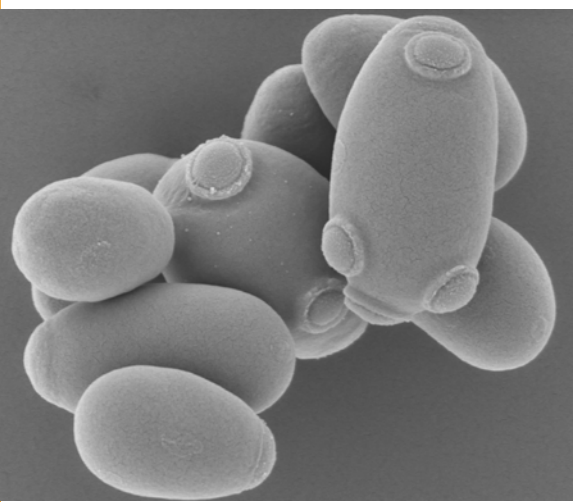
Saccharomyces cerevisiae is a yeast well known for the key role it plays in the production of both bread and alcoholic beverages such as beer and wine. However, *Saccharomyces cerevisiae* is only one of more than a thousand different yeast species which have been catalogued, not all of which have a positive impact. In fact some yeasts have the ability to cause food and beverage spoilage, while others, such as *Candida albicans*, can cause human infections.

Consequently, it is essential that unknown yeast isolates are identified quickly and accurately, so an assessment can be made regarding their potential to cause either spoilage or infection. The NCYC uses a variety of different DNA-based methods to identify yeast to the species level and to discriminate between individual strains (i.e. strain typing).

Ribosomal DNA (rDNA) sequencing is used routinely at the NCYC to identify yeast to the species level. DNA fingerprinting, which provides greater discrimination, is used for strain typing. One particular DNA fingerprinting method, developed in-house, has been specifically designed for Quality Control (QC) purposes to help brewers and bakers keep track of their valuable production strains.



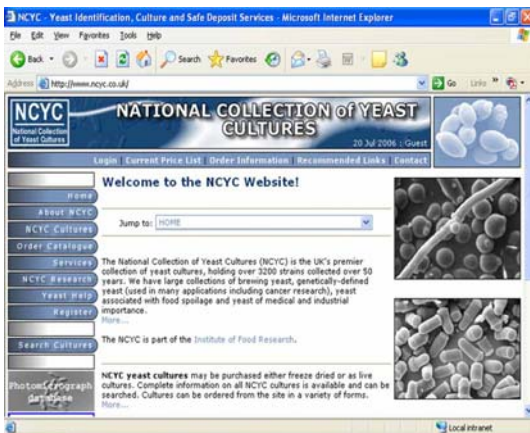
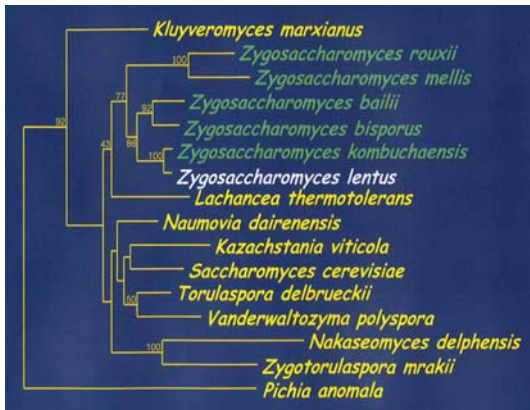
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The Role of the NCYC

The National Collection of Yeast Cultures (NCYC), based at the Institute of Food Research, is the UK's largest collection of non-pathogenic yeast cultures. Currently, the NCYC holds more than 3400 strains, and includes large collections of brewing yeast, genetically-defined yeast, yeast associated with food and beverage spoilage, and yeast of medical and industrial importance.

In addition to collecting and preserving yeast, the NCYC also identifies and characterises yeast by physiological and DNA-based methods. In fact, using DNA sequencing as a method of identification, scientists at the NCYC, in collaboration with other researchers (from academia and industry), have discovered and described a number of new species. One such example is *Zygosaccharomyces lentus*, a recently discovered food spoilage yeast of potential significance to the food and drinks industry.



To find out more about the NCYC, please visit us at www.ncyc.co.uk. The website is fully searchable, and includes information relating to the commercial and research activities carried out at the NCYC, as well as detailed strain data for most of the yeast cultures currently held in the collection.