

Yeasts

Another microorganism of importance to food preservation/spoilage is yeast. Yeasts are single cell, microscopic living bodies, usually egg-shaped. They are smaller than molds, but larger than bacteria. Their greatest thickness is about 1/2,000 of an inch. Yeasts reproduce mainly by budding. A small bud forms on the parent yeast cell and gradually enlarges and breaks off into another yeast cell. A few varieties reproduce by forming spores within a special cell; later these spores may form new yeast cells.

Yeasts are widely found in nature and are particularly associated with liquid foods containing sugars and acids. They are quite adaptive to adverse conditions such as acidity and dehydration. Like molds, yeasts are more tolerant to cold than to heat. Compared to bacterial spores, yeasts and their spores possess little resistance to heat. Most yeast forms are destroyed on heating to 170°F (77°C). Spoilage may result from the presence of yeast in canned food, but if this happens, gross under-processing or leakage must be suspected. Usually the growth of yeasts results in the production of alcohol and large amounts of carbon dioxide gas, which swells the container.

Yeast growth in processed foods does not present a public health problem.