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KOJI FERMENTATION

The term "fermentation" refers to a process where a microorganism is given nutrients and a hospitable environment where it can either reproduce or convert one ingredient (e.g., glucose) into something more desirable (e.g., xanthan gum). In most of the world, the microorganism is diluted into vat liquified nutrients, а of and fermentation occurs in that vat. In that case, if the nutrients are non-kosher, dairy, or *chametz*, the finished product has that same status. Koji fermentation, commonly practiced in Japan, works differently. The microorganism is sprayed or sprinkled onto a bed of wheat bran or rice, and it reproduces or grows on the bran or rice substrate. When the fermentation is

completed, the growth is separated from the substrate.

lt is generally assumed that anv fermentation created on a substrate of chametz (bran) or kitnios (rice), is itself forbidden on *Pesach*. One popular example of this is lactase enzyme, the active ingredient in Lactaid, which some companies produce via Koji fermentation. To avoid the consumption of *chametz* (or kitnios), it is recommended that people avoid edible forms of lactase enzyme (e.g., chewable Lactaid pill, Lactaid drops that one adds to milk) unless they are known to be acceptable for use on Pesach.

> <u>מראה מקומות</u> שולחן ערוך סימן תנ"א סעיף כ"ג

