

What Yeast Products are we talking about?

- **Nutritional Yeast**- Much of this comes from recycled brewers yeast. After the yeast is inoculated, it can be fortified with additional vitamins, and then dried into either flake or powder form.
- **Inactive Yeast**- After the inoculation of the yeast, the yeast is dried in its direct whole cell state.
- **Autolyzed Yeast**- The yeast proteins are simplified but the insoluble material is still present.
- **Yeast Extract**- The insoluble cell wall is separated from the extract; the soluble portion is then used. This ingredient can be labeled as:
 - **Autolyzed Yeast Extract**
 - **Bakers Yeast Extract** (That is right, bakers yeast)
- **Organic Yeast Extract**- Yes, these ingredients are available in organic certified forms as well.



Isn't this MSG?

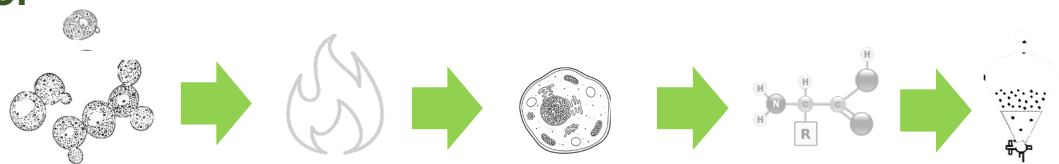
All foods that contain protein contain a variety of amino acids, one of these being glutamic. High levels of Glutamic Acid are found naturally in many foods such as mushrooms, tomatoes, parmesan cheese, human breast milk, and seaweed. Yeast extract in part utilizes the amino acid of glutamic acid to enhance flavor, along with many other essential and non-essential amino acids that carry nutritional benefits.

What is MSG? Monosodium Glutamate (MSG) is the isolated sodium salt of glutamic acid. The misconception has been in relating MSG to other ingredients which contain protein and believing that yeast extract will impart similar concentration levels and isolated forms of this compound which it does not. Yeast Extract can be thought of as another food that contains naturally occurring glutamic acid. It does not contain the isolated form of MSG. According to the FDA code of federal regulations Title 21 MSG and Yeast Extract must be labeled separately because they are two different ingredients.



How is this really made? From Fungi to Flavor

1. Culture Growth
2. Culture Inoculation
3. Cell Wall Fracturing
4. Protein Hydrolysis (Autolysis)
5. Soluble Extraction



The Food Source International, Inc
 753 Springdale Drive • Exton, PA • 19341
 484-631-2005
www.foodsourceinc.com
sales@foodsourceinc.com

Yeast What?

What are we talking about here?

Sorting through the FDA Definitions can be a challenge for a regulatory team:

Bakers Yeast Extract is the food ingredient resulting from concentration of the solubles of mechanically ruptured cells of a selected strain of yeast, *Saccharomyces cerevisiae*. It may be concentrated or dried.

Bakers Yeast Protein is the insoluble proteinaceous material remaining after the mechanical rupture of yeast cells of *Saccharomyces cerevisiae* and removal of whole cell walls by centrifugation and separation of soluble cellular materials.

Protein Hydrolysates. The common or usual name of a protein hydrolysate shall be specific to the ingredient and shall include the identity of the food source from which the protein was derived. (a) "Hydrolyzed wheat gluten," "hydrolyzed soy protein," and "**Autolyzed Yeast Extract**" are examples of acceptable names.

"Hydrolyzed casein" is also an example of an acceptable name, whereas "hydrolyzed milk protein" is not an acceptable name for this ingredient because it is not specific to the ingredient (hydrolysates can be prepared from other milk proteins). The names "hydrolyzed vegetable protein" and "hydrolyzed protein" are not acceptable because they do not identify the food source of the protein.

Sounds Too Complicated

The main purpose of using yeast based ingredients is to add savory, cheesy, and meaty flavors into the seasonings. While other ingredients may not be as effective, we do have some other options available. Please work with your sales representative on communicating what labeling restrictions or preferences that you may have. We as a team can communicate the cost, flavor, and ingredient limitations we currently have available as tools to develop the best tasting seasoning for your product.



Nutrition Can Taste So Good ...what...Umami and Kokomi?

Umami flavor (translated to pleasant taste) is the flavor that glutamic acid imparts, and is recognized as its own taste. It is one of the tastes we experience when our body is letting us know that we are consuming protein. Protein is healthy for us, so our body has a positive reaction to this taste.

Kokumi flavor (translated to hearty/rich taste) is the flavor that various protein compounds and amino acids impart (called peptides), and is also recognized as its own taste. This is another positive taste experience when our body says that we are eating healthy protein.



The Food Source International, Inc
753 Springdale Drive • Exton, PA • 19341
484-631-2005
www.foodsourceinc.com
sales@foodsourceinc.com

