

# Yeast Extract Hydrolysate from *Saccharomyces cerevisiae* (100053) Fact Sheet

## Summary

Yeast extract hydrolysate from *Saccharomyces cerevisiae* helps to prevent bacterial and fungal diseases in treated plants. It appears to act by enhancing the plant's natural defense mechanisms. The active ingredient is approved for use on all food crops, as well as on turf and ornamental plants. Yeast extract is a common food flavoring and has a long history of use as a plant fertilizer. No risks to human health or the environment are expected from the pesticidal uses of yeast extract hydrolysate.

### I. Description of the Active Ingredient

This active ingredient consists primarily of oxidized amino acids, but also includes nutrients such as vitamins, and minerals. Brewer's (Baker's) yeast extract, from which the active ingredient is derived, is cleared by the U.S. Food and Drug Administration (FDA) as a flavor enhancer for soups, fruits, and other foods. Because yeast extract is especially rich in B vitamins, it is also used as a human nutritional supplement. The single registered end use product, "KeyPlex 350," in use for more than 20 years as a plant fertilizer, was also found to be useful also in preventing crop diseases. Yeast extract hydrolysate from *Saccharomyces cerevisiae* may act by stimulating natural defense mechanisms in plants. The end product also improves growth, yield, and shelf life of crops.

### II. Use Sites, Target Pests, and Application Methods

- **Use Sites:** All food crops; turf and ornamentals
- **Purpose:** Helps prevent certain plant diseases, such as bacterial leaf spot disease of tomatoes, and post-bloom fruit drop and greasy spot diseases of citrus. Also increases crop yield and shelf life.
- **Application Method:** Apply by spraying foliage from the ground or air, or by fertigation (low volume irrigation), every two to three weeks.

### III. Assessing Risks to Human Health

No adverse health effects are expected from approved uses of Yeast Extract Hydrolysate from *Saccharomyces cerevisiae* in pesticide products. No toxic effects were seen when the end product was tested in laboratory mammals. The active ingredient has a long history of safe use in food and agriculture, and is considered GRAS (Generally Recognized as Safe for food use) by FDA.

### IV. Assessing Risks to the Environment

No risks to the environment are expected from use of Yeast Extract Hydrolysate from *Saccharomyces cerevisiae* in pesticide products. The active ingredient is applied in small amounts and degrades naturally.

## **V. Regulatory Information**

On February 18, 2004, EPA registered two pesticide products containing Yeast Extract Hydrolysate from *Saccharomyces cerevisiae* as the active ingredient. "Yeast Hydrolysate Liquid" is a manufacturing use product (MUP); "KeyPlex 350" is an end use product (EP) that has been sold as a fertilizer ingredient for more than 20 years.

## **VI. Producer Information**

Morse Enterprises, Limited, Inc.  
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1-800-433-7017  
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## **VII. Additional Contact Information**

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