



Nutritional yeast

Nutritional yeast (also known as **nooch**^[2]) is a deactivated yeast, often a strain of *Saccharomyces cerevisiae*, that is sold commercially as a food product. It is sold in the form of yellow flakes, granules, or powder and can be found in the bulk aisle of most natural food stores. It is popular with vegans and vegetarians and may be used as an ingredient in recipes or as a condiment.^[3]

It is a significant source of some B-complex vitamins and contains trace amounts of several other vitamins and minerals.^[4] Sometimes nutritional yeast is fortified with vitamin B₁₂, another reason it is popular with vegans.

Nutritional yeast has a strong flavor that is described as nutty or cheesy, which makes it popular as an ingredient in cheese substitutes. It is often used by vegans in place of cheese^[5] in, for example, mashed and fried potatoes or scrambled tofu, or as a topping for popcorn.^[6]

In Australia, it is sometimes sold as "savoury yeast flakes". In New Zealand, it has long been known as Brufax. Though "nutritional yeast" usually refers to commercial products, inadequately fed prisoners of war have used "home-grown" yeast to prevent vitamin deficiency.^[7] Nutritional yeast is a whole-cell inactive yeast that contains both soluble and insoluble parts, which is different from yeast extract. Yeast extract is made by centrifuging inactive nutritional yeast and concentrating the water-soluble yeast cell proteins which are rich in glutamic acid, nucleotides, and peptides, the flavor compounds responsible for umami taste.

Commercial production

Nutritional yeast is produced by culturing yeast in a nutrient medium for several days. The primary ingredient in the growth medium is glucose, often from either sugarcane or beet molasses. When the yeast is ready, it is killed with heat and then harvested, washed, dried and packaged. The species of yeast used is often a strain of *Saccharomyces cerevisiae*.^[8] The strains are cultured



Nutritional yeast flakes



Some theatres offer visitors nutritional yeast for popcorn seasoning.

Large-flake nutritional yeast (fortified)

Nutritional value per 15 g		
Energy	250 kJ (60 kcal)	
Carbohydrates	5 g	
Sugars	0 g	
Dietary fibre	3 g	
Fat	0.5 g	
Protein	8 g	
Vitamins	Quantity	
		%DV [†]
Thiamine (B ₁)	11.9 mg	1035%
Riboflavin (B ₂)	9.7 mg	808%

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and selected for desirable characteristics and often exhibit a different phenotype from strains of *S. cerevisiae* used in baking and brewing.

Nutrition

Nutritional values for nutritional yeast vary from one manufacturer to another. On average, two tablespoons (about 30 ml) provides 60 calories with five grams of carbohydrates and four grams of fiber. A serving also provides 9 grams of protein, which is complete protein, providing all nine amino acids the human body cannot produce.^[9] Nutritional yeast can be classified into fortified and unfortified. While both kinds provide iron, fortified yeast provides 20 percent of the recommended daily value, while unfortified yeast provides only 5 percent. Unfortified nutritional yeast provides from 35 to 100 percent of vitamins B1 and B2.^[10]

Since nutritional yeast is often used by vegans who may be interested in supplementing their diets with vitamin B₁₂, there has been confusion about the source of the B₁₂ in nutritional yeast. Yeast cannot produce B₁₂, which is naturally produced only by some bacteria.^[11] Some brands of nutritional yeast, though not all, are fortified with vitamin B₁₂. When it is fortified, the vitamin B₁₂ (commonly cyanocobalamin) is produced separately and then added to the yeast.^{[12][13]}

Niacin (B ₃)	46 mg	307%
Vitamin B ₆	5.9 mg	454%
Vitamin B ₁₂	17.6 µg	733%
Minerals	Quantity	%DV[†]
Calcium	6 mg	1%
Iron	1 mg	8%
Potassium	25 mg	1%
Sodium	25 mg	2%
Other constituents	Quantity	
Cholesterol	0 mg	
Bob's Red Mill brand, manufacturer reported values. ^[1] See also SR LEGACY data for yeast (active dry #1103594) (https://fdc.nal.usda.gov/fdc-app.html#/food-details/1103594/nutrients) for an idea about pre-fortification values and nutrients not reported above. SR surveys are performed by unbiased USDA personnel.		
Units µg = <u>micrograms</u> • mg = <u>milligrams</u> IU = <u>International units</u>		
[†] Percentages are roughly approximated using <u>US recommendations</u> for adults.		

See also

- Marmite
- Vegan cheese
- Vegemite



References

1. "FoodData Central #1946780" (<https://fdc.nal.usda.gov/fdc-app.html#/food-details/1946780/nutrients>). *fdc.nal.usda.gov*.

2. Hughes, Becky (8 May 2020). "Nutritional Yeast Is for Hippies. 'Nooch' Is for Everyone" (<https://www.nytimes.com/2020/05/08/dining/nutritional-yeast-nooch.html>). *The New York Times*. Retrieved 3 October 2022.

3. Brown, Elizabeth (25 April 2009). "Singing the praises of nutritional yeast" (<http://www.smdp.com/singing-the-praisesof-nutritional-yeast/74196>). *Santa Monica Daily Press*. Retrieved 7 October 2012.

4. "Large flake nutritional yeast" (<https://ndb.nal.usda.gov/ndb/foods/show/45360902?fgcd=&manu=&format=&count=&max=25&offset=&sort=default&order=asc&qlookup=yeast&ds=&qt=&qp=&qa=&qn=&q=&ing=>). *USDA Branded Food Products Database*. United States Department of Agriculture. Retrieved 26 September 2018.
5. Stepaniak, Joanne (2003). *The Ultimate Uncheese Cookbook* (https://books.google.com/books?id=6rTPI_JTVrUC&q=%22nutritional%20yeast%22&pg=PT35) (10th ed.). Summertown, Tenn.: Book Pub. Co. p. 32. ISBN 978-1-57067-151-7.
6. Wasserman, Debra (1997). *Conveniently Vegan* (<https://books.google.com/books?id=turX6K-4QFoC&q=%22nutritional%20yeast%22%20popcorn&pg=PA29>) (Revised. ed.). Baltimore, Md.: Vegetarian Resource Group. p. 29. ISBN 978-0-931411-18-2.
7. J G Lee HARUKOE (HARUKU) (<https://www.cofepow.org.uk/armed-forces-stories-list/harukoe-haruku>)
8. *Industrial Exploitation Of Microorganisms* (<https://books.google.com/books?id=eqaMzycRTmgC&q=%22nutritional%20yeast%22%20Saccharomyces%20cerevisiae&pg=PA6>). New Delhi: I.K. International Pub. House. 2010. p. 6. ISBN 9789380026534.
9. Prater, Danny (27 January 2016). "What Is Nutritional Yeast? How Will It Change You?" (<https://www.peta.org/living/food/nutritional-yeast-only-sounds-gross/>). People for the Ethical Treatment of Animals. Retrieved 27 July 2019.
10. *Diet, microbiome and health* (<https://www.worldcat.org/oclc/1018307483>). Alexandru Mihai Grumezescu, Alina Maria Holban. London, United Kingdom. 2018. ISBN 978-0-12-811492-6. OCLC 1018307483 (<https://www.worldcat.org/oclc/1018307483>).
11. Fang, Huan; Kang, Jie; Zhang, Dawei (30 January 2017). "Microbial production of vitamin B12: a review and future perspectives" (<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5282855>). *Microbial Cell Factories*. **16** (1): 15. doi:10.1186/s12934-017-0631-y (<https://doi.org/10.1186/s12934-017-0631-y>). ISSN 1475-2859 (<https://www.worldcat.org/issn/1475-2859>). PMC 5282855 (<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5282855>). PMID 28137297 (<https://pubmed.ncbi.nlm.nih.gov/28137297>).
12. "Nutritional Yeast" (http://www.bestnaturalfoods.com/nutritional_yeast.html). bestnaturalfoods.com. Retrieved 14 December 2011.
13. "THE 5 STEPS IN MANUFACTURING NUTRITIONAL YEAST" (<http://lesaffre-yeast.com/five-steps.html>). Lessafre Human Care. Retrieved 14 December 2011.

External links

- Environmental rules for the manufacture of nutritional yeast (<https://www.epa.gov/stationary-sources-air-pollution/manufacturing-nutritional-yeast-national-emission-standards>)

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