

What are Single Cell Proteins?



SylPro (Torula Yeast)¹



ARBION

Sustainable production²



Controlled, indoor production in bioreactors



Use carbon from sustainable feedstocks (e.g. branches, saw dust, wood chips and straw)

*for 1 kg single cell proteins



Reduced use of land*: 0,00027m² (0,0003% compared to beef³)

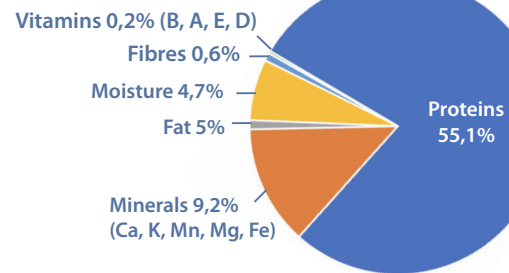


Reduced use of fresh water*: 0,29m³ (3% compared to beef³)

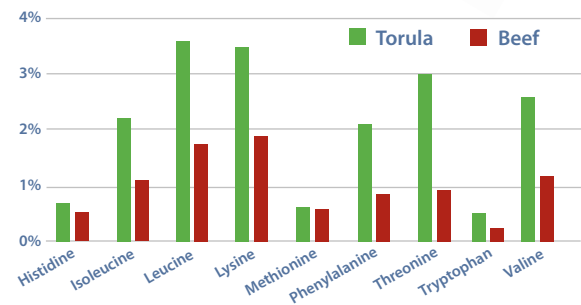


Reduced greenhouse gas emissions*: 12,3kgCO₂eq (11% compared to beef³)

Nutritional value



Content of essential amino acids compared to beef³ (g/100g)



Regulation Approved in food and feed

How does it taste? Umami/yeasty taste

Applications tested in the NextGenProteins project



Ready meals



Bakery products



Meat alternative



Food supplements



Poultry feed



Fish feed

3-15% in food

2-6% in poultry feed 5-10% in fish feed

Possible Nutrition claims^{4,5,7,8,10,11}

1. Source of vitamin B12

Possible Health claims^{4,6,7,8,10}

Vitamin B12 contributes to normal (1) energy-yielding metabolism, (2) functioning of nervous system, (3) homocysteine metabolism, (4) physiological function; (5) red blood cell formation, (6) functioning of immune system, (7) reduction of tiredness and fatigue and (8) has a role in cell division.

1 N.B. The properties below concern Arbion's SylPro, not Torula Yeast in general

2 NextGenProteins (2022) Deliverable No 6.3. Report on circular economy potential of alternative proteins available on <https://zenodo.org/communities/nextgenproteins/?page=1&size=20>

3 Disclaimers: Beef has been used as a comparison because of high protein content and high consumption around the world. NextGenProteins does not aim to discredit any protein source, but rather to inform about new sources.

4 https://ec.europa.eu/food/safety/labelling_nutrition/claims/register/public/?event=register.home

5 https://food.ec.europa.eu/safety/labelling-and-nutrition/nutrition-and-health-claims/nutrition-claims_en

6 Regulation (EU) No 432/2012 – List of permitted Health Claims.

7 Regulation No 1924/2006 on nutrition and health claims made on foods.

8 Regulation (EC) No 1169/2011 on the provision of food information to consumers

9 Council Directive 1990, 90/496/EEC on nutrition labelling for foodstuffs.

10 Regulation (EC) No 1925/2006 on the addition of vitamins and minerals and on certain other substances to foods

11 Scientific Opinion on Dietary Reference Values for cobalamin (vitamin B12) = EFSA Journal 2015;13(7):4150)

