



VIT[®]
Vellore Institute of Technology
(Deemed to be University under section 3 of UGC Act, 1956)

SCHOOL OF BIO SCIENCES AND TECHNOLOGY

VIT BIO-EXPO

The School of Bio Sciences and Technology (SBST) is pleased to organize **VIT Bio-Expo**, an event showcasing **innovative products and technologies developed through cutting-edge research at VIT**. The Expo will provide an opportunity to highlight the School's research-driven innovations and their potential applications.

The details of VIT Bio-Expo are as follows:

- **Date: 14th October 2026 (Wednesday)**
- **Time: 11:00 AM – 1:00 PM**
- **Venue: SMV Portico**

We invite you to visit the expo, explore the innovative research outcomes and projects on display, and promote a culture of innovation.

1. Brinda S - 23BBT0107

Product -1 Ragi Sticks.

2. Anushka Paul - 23BBT0085

Product -2 Chickpea cookie dough bites.

3. Aadesh M -24BBT0167

Product -3 Beetroot and Guava Wrap.

4. Kavi Shree A- 24BBT0115

Product -4 Zero Guilt Brownie.

5. Ayessha Yadav - 23BBT0179

Product -5 Cool Fuel Bites.

6. Anugraha A -23BBT0015

Product -6 Seed Cracker Pizza.

7. Sudharshan V - 23BBT0068

Product -7 Spirulina Pasta.

8. Sanjith D - 23BBT0074

Product -8 Roasted Soya Balls.

9. Vakheesh Tamilarasan -23BBT0190

Product -9 Rose Millet Cookies.

10. Janani Jalajaja- 23BBT0145.

Product -10 Guilt Free SweetPotato Chips



A CULINARY-NUTRITION STUDY

Spirulina Pasta

Ingredients, Nutritional Value & Why This Superfood Pasta Stands Out

Good Food
Better Health
Greener Future

01 UNDERSTANDING THE INGREDIENT

What Is Spirulina?

- A blue-green microalgae (cyanobacterium) that thrives in warm, alkaline lakes.
- One of the oldest life forms on Earth—present for over 3.5 billion years.
- Widely recognized (WHO, NASA research) as one of the most nutrient-dense foods known.
- Commonly sold as a dried powder or tablet; stirred into smoothies, snacks—and now, pasta dough.

3.5 Billion years of evolutionary history

Cultivated commercially since the 1970s as a sustainable, high-protein source.

02 THE RECIPE Ingredients

Spirulina Pasta — serves 2

Pasta Base	Flavour & Garnish
Durum wheat pasta (cassia)	Cherry tomatoes, halved
Spirulina powder	Parmesan cheese, grated
Extra virgin olive oil	Fresh basil leaves
Garlic cloves, minced	Salt, pepper & lemon juice

SPIRULINA PASTA | 23BBT0015

03 THE RECIPE Preparation Method

- Boil the pasta**
Cook pasta in salted water until al dente; reserve 1/4 cup of the pasta water.
- Make spirulina paste**
Dissolve spirulina powder in 2 tbsp warm water to a smooth, lump-free paste.
- Build the base**
Heat olive oil and sauté minced garlic until fragrant, about 1 minute.
- Cook the sauce**
Add cherry tomatoes, soften them, then stir in the spirulina paste off heat.
- Combine**
Toss the drained pasta into the sauce with a splash of reserved pasta water.
- Finish & serve**
Garnish with basil, parmesan, and a dash of lemon juice; serve immediately.

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04 WHY IT MATTERS Nutritional Value

Typical composition of spirulina powder, per 100g

Nutrient	Amount	Key Benefit
Protein	57–70 g	Complete plant protein with all essential amino acids
Iron	28.5 mg	Combats anaemia; supports oxygen transport
Vitamin B12	~118% RDI	Neuro function and energy metabolism
Calcium	120 mg	Bone and teeth strength
Phycocyanin	High	Powerful antioxidant, anti-inflammatory, and immunomodulatory

SPIRULINA PASTA | 23BBT0015

05 WHY IT'S PREFERRED Why Spirulina Pasta Is Preferred

- Complete Plant Protein**
Boosts the protein content of an otherwise carb-heavy staple.
- Natural Green Colour**
Colours the pasta naturally—no artificial dyes needed.
- Antioxidant Rich**
Phycocyanin fights oxidative stress and inflammation.
- Supports Satiety**
High protein & fibre help with weight management.
- Vegan & Vegetarian Friendly**
A healthy plant-based protein boost for every diet.
- Sustainable Superfood**
Grows fast in minimal land and water versus livestock protein.

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06 HEAD TO HEAD Spirulina Pasta vs. Regular Pasta

BASELINE Regular Pasta	UPGRADE Spirulina Pasta
• Mostly refined carbohydrates	• Added complete plant protein
• Low in protein and fibre	• Extra vitamins, iron & calcium
• No meaningful antioxidant content	• High antioxidant (phycocyanin) content
• Pale colour from wheat alone	• Vibrant green colour—naturally

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07 CONCLUSION A Superfood Worth Plating

Spirulina pasta blends everyday comfort food with exceptional nutrition—extra protein, antioxidants, and micronutrients that regular pasta simply cannot offer. It stands out as a practical, tasty step toward more functional, health-forward eating.

Thank You

SPIRULINA PASTA | 23BBT0015

SEED CRACKER PIZZA

A crisp, protein-cracker pizza with no cooking, and no compromise.

Vegetarian • Dairy-free • Gluten-free • ~265 kcal

THE HERO STATS

- ~265 kcal per serving
- ~9g protein • ~8g fibre
- 80+ mg Vitamin C

WHY IT'S A FUNCTIONAL FOOD

- Protein-rich base**—from sprouted lentils and millet, not refined flour
- Antioxidant shield**—lycopene, vitamin C, carotenoids, polyphenols
- Heart-smart fats**—mostly unsaturated, from olive and sesame oil
- Food synergy**—oil boosts lycopene, vit C boosts iron, pepper boosts nutrient absorption

WHAT IT'S MADE OF

- Base:** Protein crackers (sprouted moong, urad dal, jowar, jowar, rice)
- Sauce:** Tomato paste
- Toppings:** Capsicum, sweet corn, tomatoes
- Seasoning & Finishers:** Oregano, chilli flakes, garlic powder, olive oil, nutritional yeast, lemon juice

PRESENTED BY: Sudharshan V
REGISTRATION NO.: 23BBT0015
SUBMITTED TO: Dr. Sneha V — Yellare

Anugraha A | Reg No: 23BBT0015 | Date: 14th October 2026

ZERO-GUILT BROWNIE

Now you can indulge but without guilt

MADE OF BLACK RICE

NUTRITIONAL BENEFITS

- HIGH FIBRE**
Supports digestion, keeps you full for longer and helps with better gut health.
- RICH IN ANTIOXIDANTS**
Black rice contains anthocyanins that help fight oxidative stress and support overall wellness.
- GOOD FOR HEART**
Naturally contains plant compounds that may support heart health and healthy cholesterol levels.
- NATURALLY NUTRIENT-RICH**
Provides essential minerals like magnesium, iron and B vitamins.
- LOWER GLYCEMIC IMPACT**
Compared to refined flours, black rice offers a slower release of energy.

By: Kavi Shree A
24BBT0115

Date: 14th October 2026

Available at SMV Portico from 11 am - 1 pm

BEETROOT & GUAVA WRAP

Freshly wrapped. Naturally wholesome.

A vibrant, nutrient-rich wrap combining beetroot and guava with crisp fresh vegetables and a wholesome wrap base.

- PLANT-BASED
- RICH IN ANTIOXIDANTS
- HIGH DIETARY FIBRE

VIT BIOEXPO – SBST

SMV PORTICO | 14 OCTOBER 2026 (WEDNESDAY)

Name: Aadesh M | Registration Number: 24BBT0167

COOL FUEL BITES

Healthy Energy in Every Bite



INGREDIENTS

- Sattu (roasted chana flour)
- Ghee
- Jaggery
- Mixed seeds (pumpkin, sunflower)
- Pinch of cumin

BENEFITS

- HIGH IN PROTEIN & FIBRE**
keeps you full
- COOLING FOR DIGESTION**
gentle on the gut
- SUSTAINED ENERGY**
steady release
- QUICK SNACKING**
ready in 10 minutes

How to make

1. Mix all ingredients into a dough.
2. Roll into small balls.
3. Ready in 10 minutes, no cooking needed!

Allergens: milk (ghee); legumes (chana). Contains seeds.

Why you'll love it

- ✓ Enjoy anytime
- ✓ No cooking needed
- ✓ Ready in 10 minutes
- ✓ Perfect for quick snacking

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SMV PORTICO | 14 OCTOBER 2026

By: Ayessha Yadav
23BBT0179

CHICKPEA COOKIE DOUGH BITES

No-bake. Naturally sweet. No guilt.



INGREDIENTS

- Chickpeas
- Banana
- Vanilla extract
- Pinch of salt
- Peanut butter
- Stevia
- Dark choco chips

BENEFITS

- PLANT-BASED PROTEIN**
from chickpeas
- SWEETENED WITH STEVIA**
zero refined sugar
- RICH IN FIBRE**
good for digestion
- NO-BAKE**
ready in under 20 min

How it's made

1. Blend chickpeas, peanut butter, banana, vanilla.
2. Stir in stevia and salt; fold in chocolate chips.
3. Chill 20–30 min, roll into bites, serve cold.

Allergens: peanuts; legumes. Chips may contain milk or soy, so check the label. Keeps 1 week chilled, 3 months frozen.

Why you'll love it

- ✓ No refined sugar
- ✓ Bite-sized snack
- ✓ Satisfies sweet cravings
- ✓ No oven needed

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SMV PORTICO | 14 OCTOBER 2026

By: Anushka Paul
23BBT0085

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Guilt-Free Sweet Potato Chips

A crispy, wholesome snack made with sweet potato, seeds and spices

Why Sweet Potato?

- Rich in beta-carotene (provitamin A)**
- Good source of fibre and complex carbohydrates**
- Sesame and flax seeds add healthy fats and plant nutrients**
- Air-fried – lower in oil compared to deep-frying**

Ingredients

- 450 g sweet potato
- 10 g butter
- 4 tbsp rice flour
- 8–10 cloves garlic (minced)
- 1/2 tbsp white sesame seeds
- 1/2 tbsp black sesame seeds
- 1 tbsp flax seeds
- Chilli flakes to taste
- Salt & black pepper to taste

Preparation Method

1. Steam sweet potato until soft and mash well.
2. Mix in butter, rice flour, garlic, sesame seeds, flax seeds, chilli flakes and black pepper to form a smooth dough. Let rest for 20 minutes.
3. Roll small balls, place on an oiled baking sheet, cover with another oiled baking paper, and press flat using a glass or bowl.
4. Air fry at 180°C for 15–18 minutes until golden and crispy.
5. Cool completely and store in an airtight container with a pinch of rice flour or corn flour to absorb moisture.

Nutritional Information
(per serving – 1/4 recipe)

130 kcal	2.5 g Protein	24 g Carbohydrates	4 g Fat	4 g Fibre
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Key Takeaways

- Made with whole food ingredients
- High in fibre
- Contains healthy fats from seeds
- Naturally delicious & nutritious

Crunchy Healthy Easy to make No deep frying!

Prepared by: Janani Jalajaja
Date: 14/10/2026
Location: SMV Portico

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Ragi Sticks

Functional Food

Good Food Better You

Ingredients

- Ragi Flour**
Rich in fibre, calcium and complex carbohydrates.
- Ghee**
Adds natural flavour and healthy fats.
- Cashew Nuts**
Rich in protein, healthy fats, vitamins and minerals.
- Jaggery**
Natural sweetener rich in iron, minerals and antioxidants.
- Baking Powder**
Helps in making the sticks light, crispy and easy to digest.

Health Benefits

- Stronger Bones**
Ragi is an excellent source of calcium, helping in bone health and teeth strength.
- Improves Digestion**
High in dietary fibre, which supports gut health and prevents constipation.
- Boosts Immunity**
Rich in antioxidants, vitamins and minerals that help the body fight infections.
- Provides Sustained Energy**
Complex carbohydrates and natural sugars keep you energised for longer.
- Supports Heart Health**
Good fats from ghee and cashews, along with fibre, help maintain healthy cholesterol levels.
- Good for Brain Health**
Contains essential nutrients like magnesium, iron and healthy fats that support memory and focus.

Small Sticks... Big Nutrition!

A Crunchy Bite of Goodness

Made with Natural Ingredients

- No Preservatives
- No Artificial Colours

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