

THE TECHNOLOGY

Invention of a recipe for a plant-based meat analogue that mimics the flavor and texture of chicken while providing superior nutritional benefits.

KEY INFORMATION

- Unique Value Proposition
 - ✓ Plant based (vegan) meat substitute that mimics flavor and texture of chicken comprising enhanced nutritional profile in comparison to boiled chicken while being able to easily prepare for consumption.
- Technology Category
 - ✓ Food Manufacturing
 - ✓ Agriculture & Meat Industry
 - ✓ Plant-based meat
 - ✓ Alternative protein
- Technology Readiness Level
 - ✓ TRL 6 – The technology prototype demonstrated in an industrial relevant field by preparation of nuggets (formed product) from plant based analogue material.
- IP Status:
 - ✓ Trade Secret

OVERVEIW

A growing demand exists for foods that are alternative sources of protein to meat as vegetarian, vegan and flexitarian diets.. These diets are becoming popular for several reasons which include overall health, concerns about animal cruelty, in addressing climate change and deforestation, etc. Given the modern lifestyles it is imperative that potential alternatives to meat have features such as ready-to-eat and easy-to-cook with hassle free simple preparation.

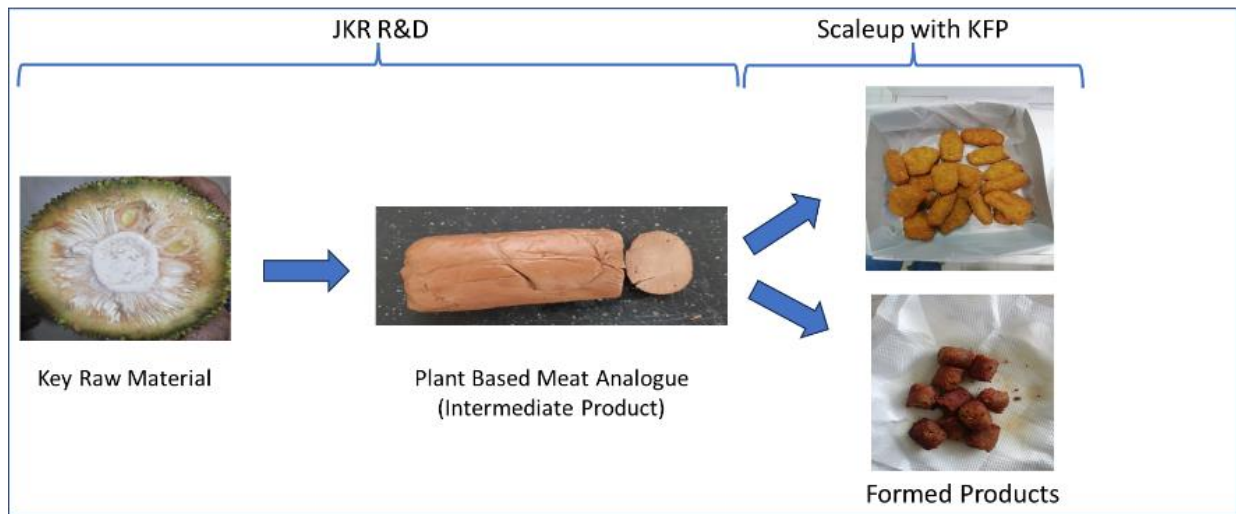
As a potential option to the growing alternative protein demand JKR has developed a plant-based meat analogue recipe using young jackfruit as the main ingredient and other plant-based proteins. This combination of ingredients sustains the meat-analogue to replicate its texture, enhance its nutritional value and provide a versatile cooking experience that are comparable to those of animal derived products.

Through our R&D we have perfected the meat analogue (intermediate product) from which a wide range of final precooked products (formed products) such as plant-based meatballs, nuggets, burger patties, shredded meat-analogues, etc. can be made. The images below show the meat analogue loaf and nuggets and plant-based meatballs which were made from the meat analogue loaf prepared through our recipe.

Following options are available for collaboration based on potential applications on either producing meat analogue or formed products.

- **Licensing arrangements** where potential partner companies can obtain a license to manufacture the meat analogue loaf to derive their own formed products into their portfolio.
- **Meat Analogue Manufacturing** where we work in partnership with our sister company **Keells Food Products PLC (KFP)**, to manufacture and supply meat analogue to potential partner companies.

- **Formed Product Manufacturing** where JKR collaborate to develop required formed product according to potential partner standards and manufacture through **Keells Food Products PLC (KFP)** and deliver final formed products to partners.



TECHNOLOGY FEATURES & SPECIFICATIONS

Following key feature are available in the Plant Based Meat Analogue that is prepared by our recipe

- Vegan (100% plant-based ingredients and meat free)
- Low Saturated Fats (60% less compared to boiled chicken breast)
- No Cholesterol
- Non-GMO
- No Preservatives Added
- No animal hormones or anti-biotics
- No artificial colors
- Minimally processed

The nutritional content of the meat analogue (intermediate product) developed by JKR compares favorably to that of estimated nutritional profile of boiled chicken breast.

Nutrients	Chicken breast (Boiled) per 100 g	Plant Based Meat Analogue per 100 g
Total fat	3.6 g	2.7 g
Saturated fat	1.0 g	0.4 g
Unsaturated fat	2.1 g*	2.3 mg
Cholesterol	85 mg	Not detected**
Sodium	74 mg	8.91 mg
Potassium	256 mg	1.49 mg

Total carbohydrates	0 g	12.6 g
Dietary fiber	0 g	-
Sugars	0 g	4.1 g
Protein	31.4 g	27.1 g

*Sum of monounsaturated fat and polyunsaturated fat | **detection limit at 2mg/100g

POTENTIAL APPLICATIONS

As demonstrated by our trials of making plant-based meatballs and nuggets, the meat analogue loaf (intermediate product) can be used to produce a wide variety of formed products as below,

- Chicken Nuggets
- Chicken Meatballs
- Chicken Sausages
- Chicken Burger Patty
- Minced Chicken
- Shredded Chicken



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