

Plant-Based Cheddar Cheese

Function – build structure, smooth texture, water and oil binding, natural yellow colour

As the demand for Vegan cheese grows, so does consumer demand for improvements in their nutritional content from many of the earlier product offerings. Boosting vegan cheese with protein often comes with its own set of challenges however, particularly around colour, flavour and texture.

Lupin protein has key advantages over competitor products with a neutral taste, warm yellow colour, high gel and solubility and an enhanced eating experience. It works beautifully in hard cheeses, soft cheese, halloumi and tofu.

To demonstrate this the following prototype recipe makes a smooth and creamy cheddar style vegan cheese. It has a protein content of over 10% and grates, slices and melts beautifully. Initial fermentation allows for ‘cheesy’ top-notes to develop, and a range of natural flavours can be customised to specific end products, as well as stabiliser systems and oil depending on the finish required.



Ingredient	Quantity [g]
Stage 1 - Lupin Curd	
Water	950
lupin protein – BP80F	50
pre-gelatinised rice starch	7.5
Glucano delta lactone (GDL)	2.5
Yield approx 140g	
Stage 2 - Cheese	
lupin curd (above)	130
nutritional yeast	6
cheddar flavour (FCL 1131D)	6
milk flavour (FCL 300418L)	3
onion powder	0.3
garlic powder	0.2
mustard powder	0.2
stabiliser system - Simplistica	13.5
modified potato starch - Precisa	12.5
salt	5.4
lemon juice	2
coconut oil	74
water	32

Method

Stage 1 – Lupin Curd

- Add lupin protein to water in Thermomix. Mix 3 min/Speed 3
- Mix 5 min/60°C /Speed 3
- Add starch and GDL . Mix 1 min/60°C /Speed 3
- Hold for 25 mins/90°C/Speed 1 (minimum setting)
- Transfer Thermomix bowl to fridge and cool curds to 30-35°C (approx 1 hour)
- Place clean cheesecloth on a sieve and pour on the curds. Squeeze out excess water with cheesecloth.
- Transfer to cheese press and hold for 1 hour to a target moisture content of 65%.

Stage 2 - Cheese

- Place curds (above), dry ingredients, water and lemon juice in Thermomix bowl. Heat 5 min/50°C/Speed 3.
- Gradually add the melted coconut oil while mixing. Heat 7 min/90°C/Speed 3. Check and mix again if needed - 2 min/60°C/ Speed 3.5.
- Pour into 3 x 100g molds and refrigerate overnight.
- Remove cheese samples from molds and place into labelled vac packs for 5-7 days prior to sampling to allow it to firm up.

NUTRITION INFORMATION

Servings per package: 160

Serving size: 40 g

	Average Quantity per Serving	Average Quantity per 100 g
Energy	611 kJ	1530 kJ
Protein	5.5 g	13.8 g
Fat, total	12.6 g	31.6 g
- saturated	10.2 g	25.4 g
Carbohydrate	4.7 g	11.9 g
- sugars	0.2 g	0.5 g
Sodium	410 mg	1020 mg

