GUIDELINE RECIPE

REDUCED FAT (45%) MAYONNAISE – STARCH OPTIONS

with Clean Label or Modified Starches from Emsland Group

- **Fat reduction**
- **Cost optimisation**
- **Clean labelling**

Starches are the ubiquitous thickener for many applications, giving good texture and structure to liquid sauces, condiments, soups etc. Their universal appeal and range of raw material bases and starch types allows for a wide range of cost-effective thickeners to be available to manufacturers. Here we have demonstrated two potato starches, Empure® KJEL 200 and Emjel® EP 300 in a 45% fat-reduced mayonnaise. Both achieve the same result in taste and texture, differentiated only by labelling status and cost.

Recipe	Clean Label Starch	Modified Starch
Ingredients / Raw Materials	%	%
Water	34.00	35.00
Vegetable Oil	45.00	45.00
Egg Yolk	6.00	6.00
Spirit Vinegar 12%	4.00	4.00
Empure® KJEL 200	4.50	
Emjel® EP 300		3.50
White Sugar	2.50	2.50
Lemon Juice	2.00	2.00
Dijon Mustard	1.00	1.00
*Saltwell® ***	0.50	0.50
*4308 X-Tra Guard™ S GF***	0.50	0.50
TOTAL	100.00	100.00

Processing Steps:

1. Premix the starches / gums into a small portion of the oil
2. Add the water to the vessel
3. Add the dry powders into the water and stir to disperse / wet out
4. With high shear on introduce the oil suspended starches / gums
5. Continue to add the rest of the oil
6. When 3/4 oil has been added, add the vinegars, mustard, lemon juice
7. Continue to add the rest of the oil
8. When all in shear to ensure fully mixed then decant into the container

Benefits and Characteristics:

From Emsland Group, Europe's largest processor of functional potato and pea derivatives:

- Empure® KJEL 100 (Clean-Label Potato Starch)
- Emjel® EP 300 (Modified Potato Starch)

The choice of starch is dependent on the desired texture, functionality, labelling and cost requirements of your application.

Application Photo:



Emjel® EP 300



Empure® KJEL 100

Email: info@healy-group.com

This recipe is for development use only. Due to difference in materials and processing, we recommend testing in your own setting following consultation with our team.

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HEALY GROUP

Indicative Ingredient Declaration:

Ingredient Declaration - Clean Label Starch:

Vegetable Oil, Water, **Egg** Yolk, Potato Starch, Spirit Vinegar, Sugar, Lemon Juice, Dijon **Mustard**, Sea Salt or Salt, Rowan Berry Extract

Ingredient Declaration - Modified Starch:

Vegetable Oil, Water, **Egg** Yolk, Spirit Vinegar, Modified Potato Starch, Sugar, Lemon Juice, Dijon **Mustard**, Sea Salt or Salt, Rowan Berry Extract

*Allergens in **bold**

Nutrition:

Nutritional Data: /100g (Calculated)	Clean Label Starch	Modified Starch
Energy kJ	1,883	1,866
Energy k Cal	457	453
Fat	47.0	46.9
Of which saturates	3.5	3.5
Carbohydrates	7.3	6.3
Of which Sugar	2.6	2.6
Fibre	0.0	0.0
Protein	1.1	1.1
Sodium	0.133	0.141
Equivalent as Salt	0.342	0.361
UK HFSS Score	9	9



Notes:

*** Also from The Healy Group:*
Saltwell® – naturally reduced sodium sea salt – Salt or Sea Salt
X-Tra Guard™ – X-Tra Guard™ – natural shelf-life extender – Rowan Berry Extract

Enquire with our team for more details.

***X-Tra Guard™ is an extract of rowan berries that is naturally high in organic acids. As a result, care should be taken when determining the right level in the recipe by fully assessing the dosage. The levels in this recipe are a suggested starting point (recommended dosage from 2500 ppm to 5000 ppm on total recipe) for initial guidance only and manufacturers should satisfy themselves in their own developments to achieve the desired effects.*

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