

# Corn Protein in Cold Processed Pourable Dressing



Protein ingredients can be added to reduced fat dressing systems to encourage viscosity and texture development. These ingredients also have emulsification properties, which can lead to cost savings opportunities and the development of vegan/vegetarian products by replacement of animal protein ingredients.

Corn protein was produced by Cargill with at least 85 wt% corn protein (dry basis) and less than about 1.5 wt% oil (dry basis), as described in patent application WO20161544CPI. The formula could be adapted to use corn protein with a minimum of 65 wt% protein and less than 3 wt% oil (dry basis) and anticipate the same finding.

The functionality of corn protein was examined in a reduced-fat, pourable cold-processed salad dressing. Pourable dressings with and without the addition of corn protein were prepared using the formula and process procedures listed. In this example, the corn protein replaced a portion of the canola oil.

## FORMULA

Ingredients	Control (%)	Test (%)
Water	47.78	47.78
Canola Oil	35	25
Corn Protein	0	10
Vinegar	8	8
Sugar	3	3
Salt	1.7	1.7
HiForm™ 12754	1.6	1.6
Egg Yolk Powder	1.5	1.5
Ground Mustard	0.5	0.5
Powdered Garlic	0.25	0.25
Powdered Onion	0.25	0.25
Xanthan Gum	0.2	0.2
Potassium Sorbate	0.12	0.12
Black Pepper	0.1	0.1

## PROCESSING PROCEDURE

---

1. The dry ingredients were lightly mixed together, then added to a Cusinart food processor. The entire amount of water was added. The processor was turned on and the system mixed for 2 minutes.
2. The food processor was turned off, and the container sides were scraped to ensure complete and even mixing. Mixed for an additional 3 minutes. Bowl was scraped again.
3. While mixer was running, oil was added in a slow and steady stream. Once all oil was added, system allowed to mix for 5 minutes.
4. Added vinegar and allowed to mix for 1 minute.

## RESULTS

---

The control and test differed in color, as the test was more yellow in color. Both control and test performed well in viscosity development, although the test was thicker than the control.

Sample	Bostwick Measurement (30 seconds)
Control	7 cm
Test	5.5 cm



*10% Corn Protein Isolate (left) vs Control (right)*

## CONCLUSION

---

Corn protein can be used in a formula to pourable dressing comparable to a control without added protein.