

Online Supplementary material

Table S1. Mean overall liking and liking of taste, appearance, and texture scores (mean ± SE) on nine-point Likert scale of the four versions of the cumin blend legume-based mezze, each being presented in different sessions, one week apart.

| | Test product | | | | | | | | |
|----------------------|-------------------|------|---------------------|------|---------------------|------|-------------------|------|-------------|
| | LS | | LSHS | | S | | SHS | | P for trend |
| | Mean | SE | Mean | SE | Mean | SE | Mean | SE | |
| Overall Liking | | | | | | | | | |
| Model 1 | 5.54 | 0.20 | 5.73 | 0.20 | 5.72 | 0.20 | 5.92 | 0.20 | 0.065 |
| Model 2 | 5.49 | 0.65 | 5.66 | 0.65 | 5.58 | 0.65 | 5.78 | 0.65 | 0.254 |
| Liking of taste | | | | | | | | | |
| Model 1 | 5.39 ^b | 0.20 | 5.56 ^{a,b} | 0.20 | 5.63 ^{a,b} | 0.20 | 5.81 ^a | 0.20 | 0.044 |
| Model 2 | 5.37 | 0.66 | 5.58 | 0.66 | 5.51 | 0.66 | 5.71 | 0.66 | 0.149 |
| Liking of texture | | | | | | | | | |
| Model 1 | 5.61 | 0.20 | 5.72 | 0.20 | 5.75 | 0.20 | 5.64 | 0.20 | 0.809 |
| Model 2 | 5.56 | 0.62 | 5.70 | 0.62 | 5.54 | 0.62 | 5.46 | 0.62 | 0.567 |
| Liking of appearance | | | | | | | | | |
| Model 1 | 5.69 | 0.19 | 5.47 | 0.19 | 5.61 | 0.19 | 5.67 | 0.19 | 0.371 |
| Model 2 | 5.57 | 0.60 | 5.33 | 0.60 | 5.37 | 0.60 | 5.44 | 0.60 | 0.388 |

Model 1 was adjusted for treatment, visit, and time.

Model 2 was further adjusted for gender, BMI, gender × treatment interaction, frequency of legume consumption, frequency of adding salt while cooking, frequency of adding herbs and spices (H&S) while cooking, score for the Salt Intake questionnaire, and score for the TFEQ Factor 1.

S, standard-salt legume-based mezze; *LS*, low-salt legume-based mezze without herbs and spices; *SHS*, standard-salt legume-based mezze with herbs and spices; *LSHS*, low-salt legume-based mezze with herbs and spices.

^{a,b,c} Mean values within a row with different superscript letters were significantly different ($p < 0.05$, ANCOVA followed by Tukey's post hoc test)

Table S2. Mean subjective appetite responses using VAS, intake of the test food items in grams, and eating behavior components over the study day after the consumption of mezzes as a starter (mean values with standard errors).

| | Treatment | | | | | | | | P value |
|--------------------------------|-------------------|------|---------------------|-----|-------------------|-----|-------------------|-----|------------|
| | LS | | LSHS | | S | | SHS | | |
| | Mean | SE | Mean | SE | Mean | SE | Mean | SE | |
| <i>Appetite profile</i> | | | | | | | | | |
| Hunger (mm) | | | | | | | | | |
| Model 2 | 29.8 | 3.4 | 31.1 | 3.4 | 29.4 | 3.4 | 31.4 | 3.4 | 0.841 |
| Model 3 | 29.2 | 1.7 | 30.5 | 1.7 | 28.9 | 1.7 | 31.0 | 1.7 | 0.771 |
| Fullness (mm) | | | | | | | | | |
| Model 2 | 67.0 | 4.1 | 62.6 | 4.1 | 68.4 | 4.1 | 65.8 | 4.1 | 0.236 |
| Model 3 | 66.8 | 2.0 | 62.1 | 2.0 | 67.8 | 2.0 | 65.4 | 2.0 | 0.170 |
| Desire to eat (mm) | | | | | | | | | |
| Model 2 | 29.2 | 3.3 | 29.9 | 3.3 | 28.7 | 3.3 | 31.4 | 3.3 | 0.746 |
| Model 3 | 28.5 | 1.7 | 29.0 | 1.7 | 28.2 | 1.7 | 30.1 | 1.7 | 0.736 |
| Prospective intake (mm) | | | | | | | | | |
| Model 2 | 28.2 | 3.2 | 29.2 | 3.2 | 29.1 | 3.2 | 30.5 | 3.2 | 0.835 |
| Model 3 | 27.7 | 1.6 | 28.4 | 1.6 | 28.5 | 1.6 | 29.7 | 1.6 | 0.843 |
| Overall Appetite | | | | | | | | | |
| Model 2 | 29.9 | 3.22 | 31.8 | 3.2 | 29.7 | 3.2 | 31.7 | 3.2 | 0.732 |
| Model 3 | 29.6 | 1.6 | 31.4 | 1.6 | 29.4 | 1.6 | 31.4 | 1.6 | 0.707 |
| <i>Intake</i> | | | | | | | | | |
| Legume mezzes (g) | | | | | | | | | |
| Model 2 | 70.3 | 8.4 | 69.9 | 8.3 | 69.6 | 8.4 | 68.8 | 8.4 | 0.880 |
| Model 3 | 65.7 | 2.7 | 66.1 | 2.7 | 65.3 | 2.7 | 63.7 | 2.7 | 0.642 |
| Salt free crackers (g) | | | | | | | | | |
| Model 2 | 22.8 ^a | 2.6 | 21.6 ^{a,b} | 3.0 | 20.3 ^b | 3.0 | 22.3 ^a | 3.0 | 0.026 |
| Model 3 | 23.4 | 1.0 | 22.4 | 1.0 | 21.4 | 1.0 | 23.1 | 1.0 | 0.084 |
| Starter's energy (kcal) | | | | | | | | | |
| Model 2 | 253 | 26 | 247 | 26 | 241 | 26 | 247 | 26 | 0.386 |
| Model 3 | 245 | 9 | 242 | 9 | 237 | 9 | 239 | 9 | 0.645 |
| <i>Eating behavior</i> | | | | | | | | | |
| Eating rate (bites/min) | | | | | | | | | |
| Model 2 | 2.8 | 0.3 | 2.7 | 0.3 | 3.1 | 0.3 | 3.0 | 0.3 | 0.109 |
| Model 3 | 2.9 | 0.2 | 2.9 | 0.2 | 3.3 | 0.2 | 3.2 | 0.2 | 0.114 |
| Number of bites | | | | | | | | | |

| | | | | | | | | | |
|------------------------|------|-----|------|-----|------|-----|------|-----|-------|
| Model 2 | 28.6 | 3.4 | 27.2 | 3.4 | 28.1 | 3.4 | 28.5 | 3.4 | 0.667 |
| Model 3 | 26.4 | 1.6 | 26.2 | 1.7 | 26.6 | 1.6 | 27.4 | 1.6 | 0.794 |
| Number of sips | | | | | | | | | |
| Model 2 | 4.6 | 1.2 | 3.9 | 1.2 | 4.9 | 1.2 | 4.8 | 1.2 | 0.350 |
| Model 3 | 5.3 | 0.6 | 4.7 | 0.6 | 5.6 | 0.6 | 5.7 | 0.6 | 0.335 |
| Consumption time (min) | | | | | | | | | |
| Model 2 | 11.3 | 1.1 | 10.5 | 1.1 | 10.5 | 1.1 | 11.0 | 1.1 | 0.440 |
| Model 3 | 9.1 | 0.6 | 8.6 | 0.6 | 8.5 | 0.6 | 9.1 | 0.6 | 0.621 |

Model 2: adjusted for visit, test product, and time for all outcomes and additionally for the baseline values for the appetite profile variables, gender, overall liking, taste liking, BMI, gender × test product interaction, frequency of legume consumption, frequency of adding salt while cooking, frequency of adding H&S while cooking, score for the Salt Intake questionnaire, and score for the TFEQ Factor 1.

Model 3 was the same as model 2, excluding the variables without a significant effect.

S, standard-salt legume-based mezze; *LS*, low-salt legume-based mezze without herbs and spices; *SHS*, standard-salt legume-based mezze with herbs and spices; *LSHS*, low-salt legume-based mezze with herbs and spices.

^{a,b,c} Mean values within a row with different superscript letters were significantly different ($p < 0.05$, ANCOVA followed by Tukey's post hoc test).

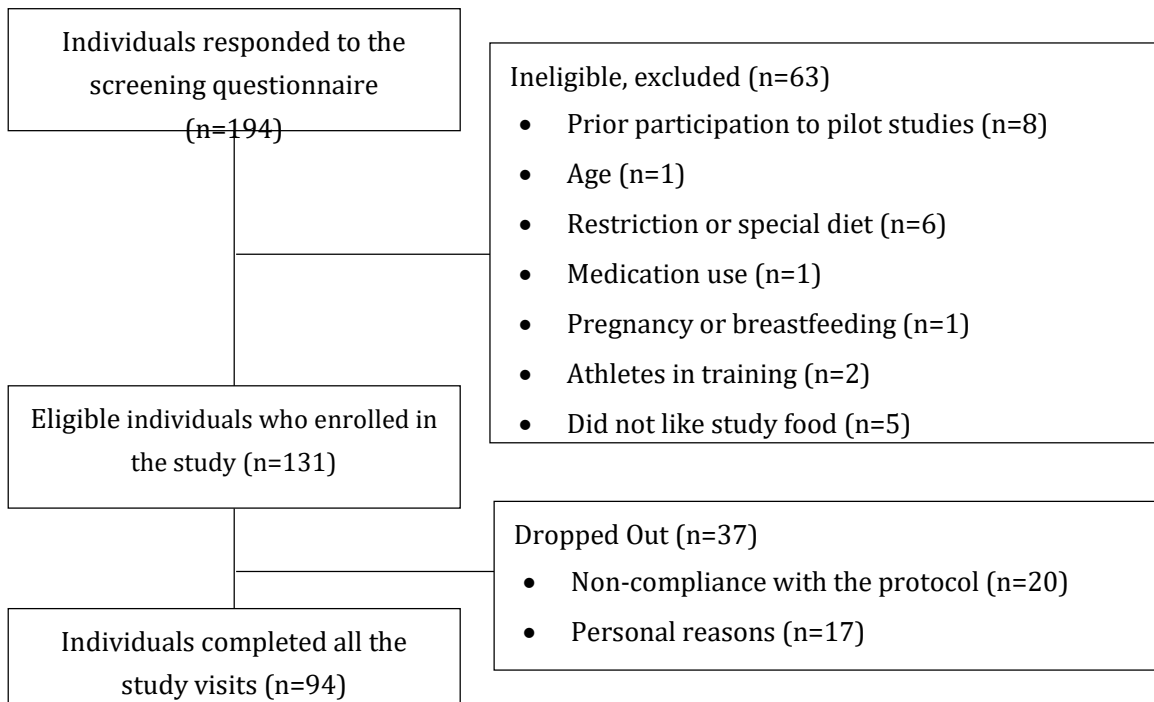


Figure S1. Participants' flow diagram of the cross-over study in phase II.

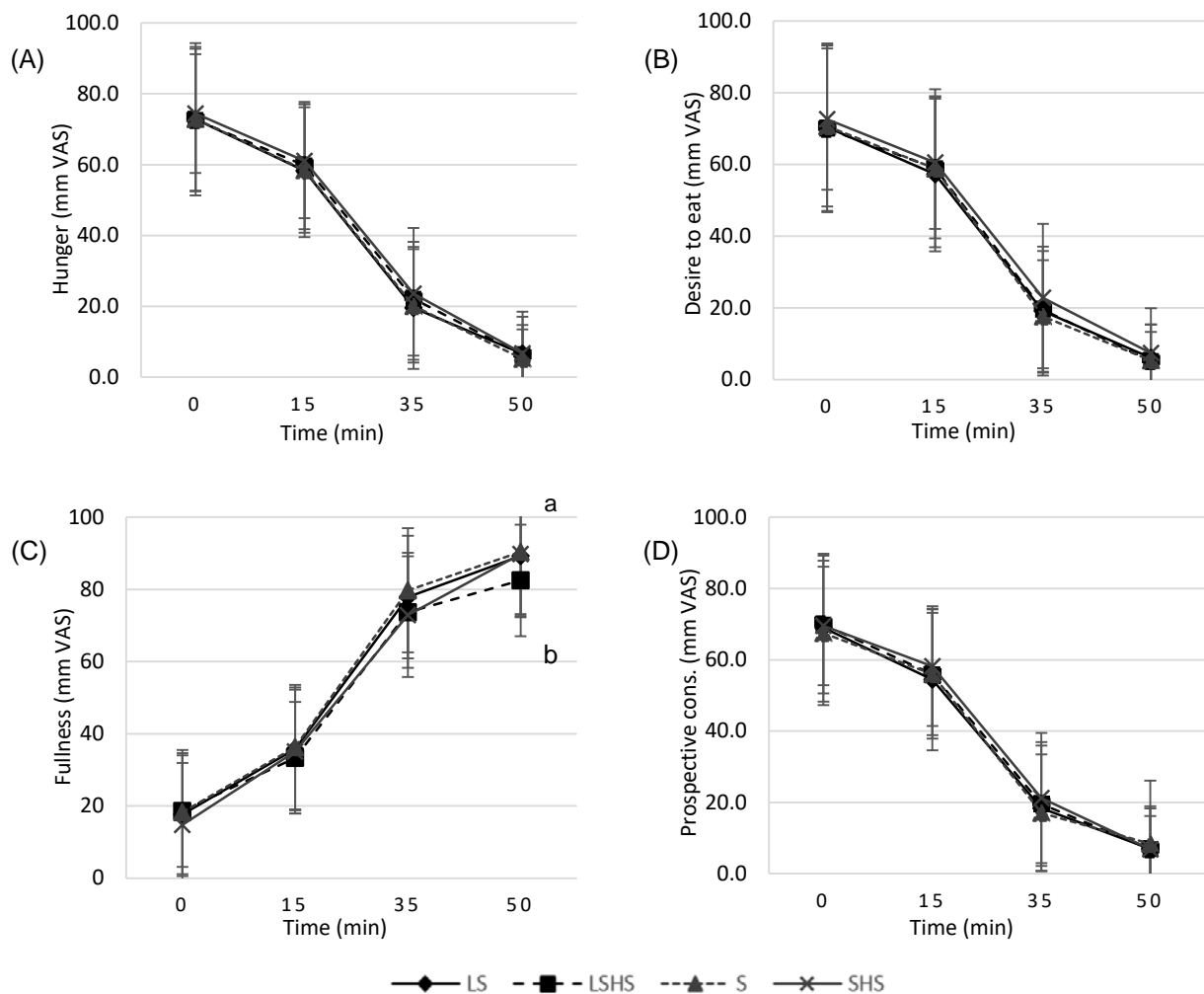


Figure S2. Subjective visual analogue scale (VAS) ratings in mm for (A) hunger, (B) desire to eat, (C) fullness, and (D) prospective food consumption throughout the study following the intake of the four versions of the cumin blend legume-based mezze, each being presented in different sessions, one week apart. S, standard-salt legume-based mezze; LS, low-salt legume-based mezze without herbs and spices; SHS, standard-salt legume-based mezze with herbs and spices; LSHS, low-salt legume-based mezze with herbs and spices. Mean values (with their standard deviation represented by vertical bars) with different superscript letters at each time point were significantly different ($p < 0.05$, ANCOVA followed by Tukey's post hoc test).