

Dried Vegetables as Potential Clean-Label Phosphate Substitutes in Cooked Sausage Meat

Ingrid Weigel ¹, Sarah Nistler ², Rohtraud Pichner ³, Silvia Budday ² and Sabrina Gensberger-Reigl ^{1,*}

¹ Food Chemistry, Department of Chemistry and Pharmacy, Faculty of Sciences, Friedrich-Alexander-Universität Erlangen-Nürnberg (FAU), Nikolaus-Fiebiger-Str. 10, 91058 Erlangen, Germany

² Institute of Applied Mechanics, Department of Mechanical Engineering, Faculty of Engineering, Friedrich-Alexander-Universität Erlangen-Nürnberg (FAU), Egerlandstr. 5, 91058 Erlangen, Germany

³ Department of Nutritional, Food and Consumer Sciences, University of Applied Sciences, Leipziger Str. 123, 36037 Fulda, Germany

* Correspondence: sabrina.gensberger@fau.de; Tel.: +49-9131-8565600

Table S1 Sample formulations for the preparation of sausage meat samples as described in section 2.5.

Sample	Minced meat (g)	Sodium chloride solution (mL) ¹	Phosphates solution (mL) ²	Freeze-dried vegetables (mg)	Ice-cold water (mL)
Negative control	5	1	-	-	4
Positive control	5	1	1	-	3
4.0%	5	1	-	200	4
3.4%	5	1	-	170	4
2.8%	5	1	-	140	4
2.2%	5	1	-	110	4
1.6%	5	1	-	80	4
1.0%	5	1	-	50	4

¹concentration: 50 mg/mL

²concentration: 30 mg/mL

Table S2 Attributes that were provided to panelists to indicate their score of acceptance and their translation into LAM values.

Attribute	Value
Greatest imaginable liking	100.00
Like extremely	87.11
Like very much	78.06
Like moderately	68.12
Like slightly	55.62
Neither like or dislike	50.00
Dislike slightly	44.69
Dislike moderately	34.06
Dislike very much	22.25
Dislike extremely	12.25
Greatest imaginable dislike	0.00

Table S3 pH Value in sausage meat containing 4–1% (w/w) freeze-dried Brussels sprouts, Red Kuri squash, or sweet corn (mean \pm standard deviation).

	Brussels sprouts		Red Kuri squash		Sweet corn	
	Mean pH	SD*	Mean pH	SD	Mean pH	SD
Negative control	5.79	± 0.03	5.78	± 0.05	5.79	± 0.04
Positive control	5.88	± 0.01	5.87	± 0.03	5.88	± 0.02
4.0%	5.81	± 0.02	5.82	± 0.03	5.84	± 0.04
3.4%	5.81	± 0.02	5.81	± 0.04	5.83	± 0.04
2.8%	5.81	± 0.02	5.81	± 0.04	5.82	± 0.04
2.2%	5.80	± 0.03	5.81	± 0.04	5.82	± 0.04
1.6%	5.80	± 0.03	5.80	± 0.03	5.81	± 0.04
1.0%	5.80	± 0.03	5.80	± 0.04	5.80	± 0.04

*SD, standard deviation

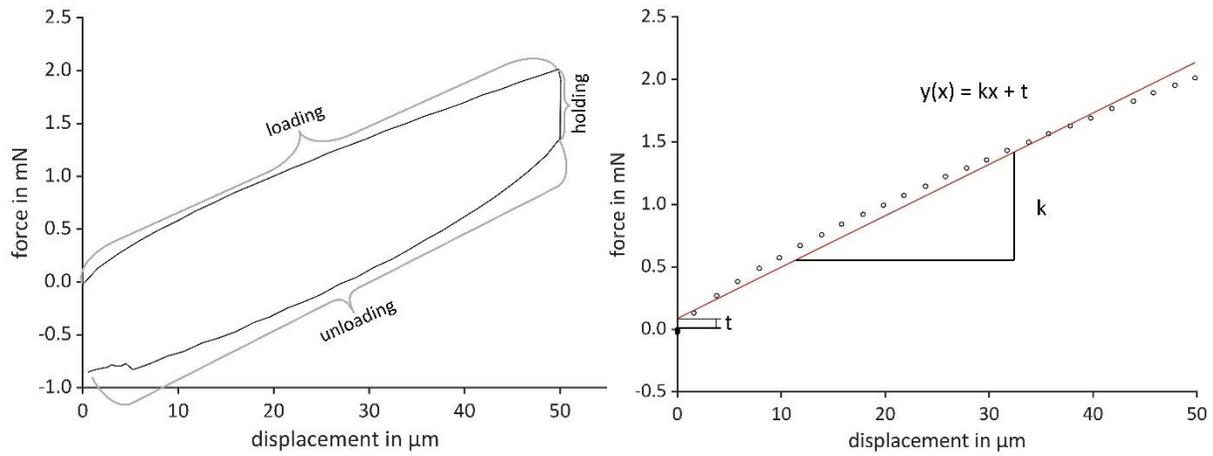


Figure S1 (a) Resulting curve for indentation test with marked loading-, holding- and unloading phase for a sample containing 4.0% (w/w) Brussels sprouts. (b) Calculated linear regression (red) in loading phase to determine the slope k that is needed for the calculation of the effective modulus.

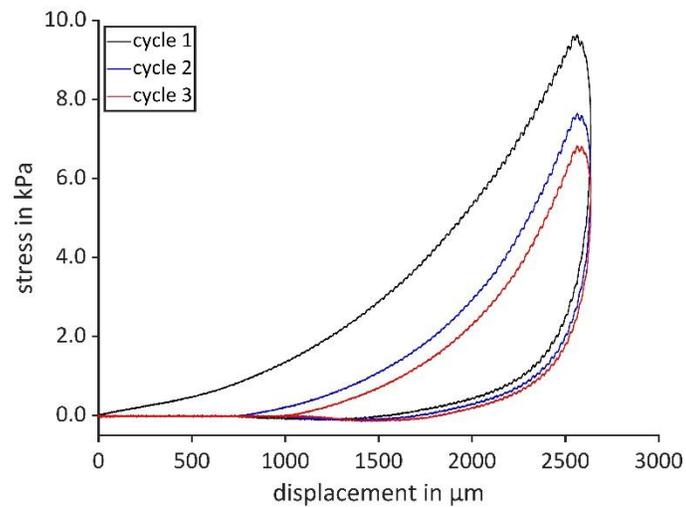


Figure S2 Typical cyclic compression curves for a sample containing 4.0% (w/w) Brussels sprouts. Three cycles were analyzed: black (first cycle), blue (second cycle), and red (third cycle).

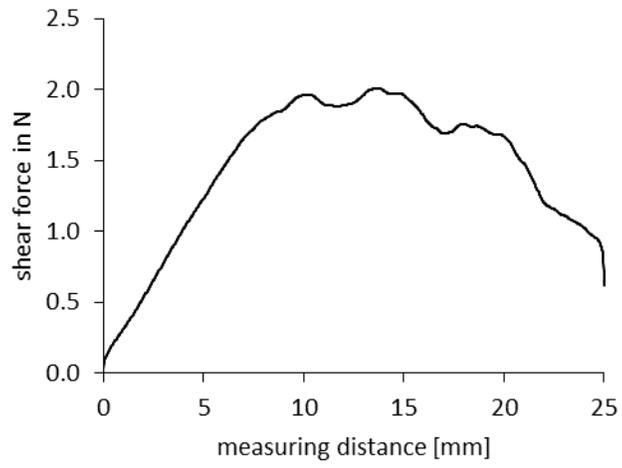


Figure S3 A typical curve for Warner Bratzler's shear force measurement for a sample containing 4.0% (w/w) Brussels sprouts.