Journal of the Serbian Chemical Society
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J. Serb. Chem. Soc. 85 (6) S279–S313 (2020) *Supplementary material*

SUPPLEMENTARY MATERIAL TO

The effect of yeast extract addition on bread quality parameters

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J. Serb. Chem. Soc. 85 (6) (2020) 737–750

TABLE S-I. Average values and standard deviations of the sensory analysis of the bread with yeast extract

Sample No.	Appearance				Taste			
	Characteristics	Crust colour intensity	Crumb colour intensity	Colour uniformity	Characteristic	Sweet	Sour	Salty
0	5.1±0.3 ^{a}	2.1±0.1 ^{a}	2.0±0.1 ^{a}	8.1±0.1 ^{c}	9.0±0.0 ^{h}	1.0±0.0 ^{a}	1.0±0.0 ^{a}	1.0±0.0 ^{a}
1	6.1±0.2 ^{c}	4.0±0.0 ^{d}	4.2±0.2 ^{b}	7.9±0.1 ^{c}	8.0±0.0 ^{g}	1.1±0.1 ^{a}	1.0±0.0 ^{a}	1.0±0.0 ^{a}
2	5.0±0.0 ^{a}	3.2±0.2 ^{b}	4.1±0.1 ^{b}	8.0±0.0 ^{c}	8.1±0.1 ^{g}	1.0±0.0 ^{a}	1.0±0.0 ^{a}	3.2±0.2 ^{b}
3	6.0±0.0 ^{c}	4.1±0.3 ^{d}	4.0±0.3 ^{b}	8.0±0.0 ^{c}	3.1±0.3 ^{ab}	2.0±0.0 ^{b}	2.0±0.0 ^{b}	2.0±0.0 ^{c}
4	6.5±0.5 ^{d}	4.0±0.0 ^{d}	4.1±0.1 ^{b}	8.0±0.0 ^{c}	5.0±0.0 ^{f}	2.1±0.2 ^{bc}	2.0±0.0 ^{b}	4.0±0.0 ^{d}
5	5.5±0.4 ^{b}	3.5±0.2 ^{c}	6.0±0.0 ^{cd}	8.1±0.1 ^{c}	3.9±0.1 ^{c}	3.1±0.1 ^{d}	3.9±.01^{d}	2.1±0.2 ^{b}
6	7.1±0.1 ^{e}	7.1±0.1 ^{g}	5.9±0.1 ^{cd}	8.0±0.0 ^{c}	3.2±0.2 ^{b}	2.2±0.2 ^{c}	2.0±0.0 ^{b}	2.0±0.0 ^{b}
7	6.5±0.2 ^{d}	6.9±0.1 ^{g}	6.0±0.0 ^{cd}	8.0±0.0 ^{c}	4.1±0.1 ^{d}	4.3±0.3 ^{e}	4.1±0.1 ^{e}	3.1±0.1 ^{c}
8	7.5±0.2 ^{f}	5.5±0.5 ^{e}	5.8±0.2 ^{c}	8.0±0.0 ^{c}	4.5±0.1 ^{e}	3.0±0.0 ^{d}	4.0±0.0 ^{de}	5.2±0.2 ^{e}
9	8.1±0.1 ^{g}	8.0±0.0 ^{h}	8.1±0.1 ^{e}	8.1±0.1 ^{c}	3.1±0.1 ^{ab}	3.1±0.1 ^{d}	3.2±0.2 ^{c}	5.8±0.2 ^{g}
10	7.2±0.2 ^{e}	6.0±0.5 ^{f}	6.1±0.3 ^{d}	8.0±0.0 ^{c}	3.1±0.3 ^{ab}	8.1±0.1 ^{f}	7.0±0.0 ^{f}	4.0±0.0 ^{d}
11	7.5±0.2 ^{f}	9.5±0.5 ^{j}	7.9±0.1 ^{e}	7.9±0.1 ^{c}	3.0±0.0 ^{a}	9.5±0.2 ^{i}	6.9±0.1 ^{f}	3.1±0.1 ^{c}
12	8.1±0.1 ^{g}	9.9±0.1 ^{k}	8.1±0.1 ^{e}	7.5±0.1 ^{b}	3.2±0.2 ^{b}	8.5±0.2 ^{g}	8.0±0.1 ^{g}	5.5±0.2 ^{f}
13	8.0±0.0 ^{g}	9.0±0.0^{i}	8.0±0.0 ^{e}	7.2±0.2 ^{a}	3.1±0.1 ^{ab}	9.0±0.0 ^{h}	8.1±0.1 ^{g}	6.2±0.2 ^{h}

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TABLE S-I. Average values and standard deviations of the sensory analysis of the bread with yeast extract

Sample No.	Aroma				Texture			
	Characteristic	Sour	Yeast	Pungent	Firmness	Elasticity	Wall thickness	Pores uniformity
0	8.8±0.2 ^{i}	1.0±0.0 ^{a}	2.1±0.1 ^{a}	3.2±0.2 ^{c}	7.8±0.2 ^{i}	2.1±0.1 ^{a}	8.8±0.2 ^{k}	2.5±0.5 ^{b}
1	7.6±0.1 ^{g}	1.1±0.1 ^{a}	2.0±0.0 ^{a}	2.2±0.1 ^{a}	2.5±0.5 ^{b}	4.5±0.3 ^{d}	3.1±0.1 ^{b}	7.0±0.0 ^{e}
2	8.5±0.5 ^{h}	1.0±0.0 ^{a}	2.0±0.0 ^{a}	2.5±0.1 ^{b}	7.5±0.5 ^{h}	2.5±0.5 ^{b}	7.4±0.4 ^{i}	3.5±0.5 ^{c}
3	3.0±0.0 ^{a}	2.1±0.1 ^{bc}	3.2±0.2 ^{c}	2.6±0.1 ^{b}	2.1±0.1 ^{a}	8.5±0.3 ^{h}	2.5±0.5 ^{a}	8.5±0.5 ^{j}
4	4.7±0.3 ^{f}	2.0±0.0 ^{b}	3.0±0.2 ^{b}	3.2±0.2 ^{c}	5.0±0.0 ^{f}	5.2±0.2 ^{f}	5.5±0.5 ^{f}	6.5±0.5 ^{d}
5	3.7±0.2 ^{c}	3.7±0.3 ^{e}	5.2±0.2 ^{d}	5.1±0.1 ^{e}	8.5±0.3 ^{j}	2.5±0.5 ^{b}	8.0±0.0 ^{j}	2.2±0.2 ^{a}
6	3.0±0.0 ^{a}	2.2±0.2 ^{c}	5.5±0.5 ^{e}	5.0±0.0 ^{e}	2.6±0.4 ^{b}	4.5±0.5 ^{d}	3.2±0.2 ^{b}	7.8±0.2 ^{h}
7	3.9±0.1 ^{d}	4.0±0.0 ^{f}	6.1±0.1 ^{g}	4.8±0.2 ^{d}	5.1±0.1 ^{f}	8.8±0.1 ^{i}	5.0±0.0 ^{e}	7.5±0.1 ^{g}
8	4.4±0.1 ^{e}	3.8±0.2 ^{e}	5.9±0.1 ^{f}	6.1±0.1 ^{f}	7.5±0.5 ^{h}	2.5±0.5 ^{b}	6.8±0.2 ^{h}	3.5±0.0 ^{c}
9	3.0±0.0 ^{a}	3.0±0.0 ^{d}	7.2±0.2 ^{i}	7.5±0.5 ^{i}	3.2±0.2 ^{d}	5.0±0.0 ^{e}	3.5±0.5 ^{c}	8.0±0.0 ^{i}
10	3.0±0.0 ^{a}	7.1±0.1 ^{g}	6.9±0.1 ^{h}	7.2±0.2 ^{h}	5.9±0.1 ^{g}	5.5±0.5 ^{g}	6.5±0.5 ^{g}	6.5±0.4 ^{d}
11	2.9±0.1 ^{a}	7.0±0.0 ^{g}	7.5±0.2 ^{j}	7.0±0.0 ^{g}	3.0±0.0 ^{c}	4.6±0.4 ^{d}	3.5±0.5 ^{c}	7.0±0.0 ^{e}
12	3.3±0.3 ^{b}	8.2±0.2 ^{h}	8.1±0.1 ^{k}	7.5±0.2 ^{i}	5.1±0.1 ^{f}	3.5±0.5 ^{c}	5.1±0.1 ^{e}	7.2±0.2 ^{f}
13	3.3±0.3 ^{b}	8.3±0.3 ^{h}	8.0±0.0 ^{k}	7.6±0.3 ^{i}	3.5±0.5 ^{e}	4.5±0.5 ^{d}	4.0±0.0 ^{d}	7.5±0.0 ^{g}

$^{a-k}$ Different letters in superscript in the same table column for the same sensory descriptor indicate statistically significant difference between the values, at a level of significance of $p<0.05$ (based on post hoc Tukey HSD test)

TABLE S-II. Regression coefficients of SOP of bread with the yeast extract model for chemical composition; * – statistically significant at $p < 0.05$ level

	Proteins	Starch	Fat	Total sugars	Cellulose
β_0	19.48823*	60.25488*	2.233773*	0.112927	2.527256*
β_1	0.66427	–0.22688	–0.026401*	0.210073	–0.037756
β_{11}	0.09820	0.01303	0.000220	0.009180	–0.002332
β_2	–2.75701	2.52659	0.130632*	2.611951	0.255671
β_{22}	0.60488	–1.39415	–0.064125*	–0.810488	–0.128293
β_3	–0.38412	–0.86644*	–0.026597*	1.069037*	–0.028628
β_{33}	0.00505	–0.00234	0.000220*	–0.008705	–0.000283
β_{12}	–0.20322	–0.34146*	0.001035	–0.182878	0.019073
β_{13}	–0.01312	–0.00095	0.000443*	–0.016288	0.000307
β_{23}	0.09739	0.20727*	0.001075*	–0.015439	0.006537
R^2	0.975	0.998	0.999	0.999	0.935
Kind of local extreme	max	max	min	min	max
Calculated critical value of quantity, % d.m.	22.09	61.39	1.97	1.55	2.65
Quantity of yeast extract, % on flour d.m.	5	0	5	5	0
Quantity of Salt, % on flour d.m.	1	1	1	2	1
Quantity of Sugar, / % on flour d.m.	0	0	10	0	0

TABLE S-III. Regression coefficients of SOP of bread with yeast extract model for mineral composition; * – statistically significant at $p < 0.05$ level

	Zn	Cu	Mg	Ca	Fe
β_0	21.05561*	5.905732*	238.2642*	95.7865*	43.74018*
β_1	0.56339*	–0.064232*	26.4998*	11.3420*	0.63632
β_{11}	0.01643	–0.001405	–0.1098	–0.4297	–0.04075
β_2	3.05707*	0.345488	80.8633	–18.2048	1.78762
β_{22}	–1.22927*	–0.185122*	–28.3049	5.5468	–0.84878
β_3	–0.19630*	–0.082116*	–4.1025	–0.9203	–0.66209*
β_{33}	0.00191	0.002049*	0.0308	–0.0045	0.01511
β_{12}	0.04732	0.020780	–2.4269	–0.3957	–0.10380
β_{13}	–0.00327	0.001078	–0.2997	–0.0220	–0.01158
β_{23}	–0.02634	0.002390	0.4837	0.0511	0.06510
R^2	0.999	0.998	0.996	0.994	0.981
Kind of local extreme	max	max	max	max	max
Calculated critical value of quantity, mg kg^{-1}	26.49	6.07	409.74	127.12	46.32
Quantity of yeast extract, % on flour d.m.	5	0	5	5	5
Quantity of salt, % on flour d.m.	1.34	1	1.21	1	1
Quantity of sugar, % on flour d.m.	0	0	0	0	0

TABLE S-IV. Regression coefficients of SOP of bread with yeast extract model for instrumental colour and breadcrumb quality; * – statistically significant at $p < 0.05$ level

	L*	a*	b*	C*	Bread crumb quality
β_0	64.22543*	4.427622*	19.18201*	16.53756*	–2.29909
β_1	0.25357	–0.382622	0.98349*	0.23244	–0.05341
β_{11}	–0.03402	0.006966	–0.00506	–0.02772	0.03624
β_2	0.05945	1.510915	–2.90616	2.85171	5.68811
β_{22}	–0.09049	–0.485854	1.38341	–0.89293	–1.84390
β_3	0.30854	0.013939	–0.05651	0.09072	0.65704*
β_{33}	–0.03660	–0.000359	0.00003	–0.01013	–0.02344
β_{12}	0.47912	–0.006537	–0.29585	0.14273	0.14098
β_{13}	–0.03149	–0.001254	0.01321	0.01147	–0.05590
β_{23}	0.03056	–0.008268	0.01307	–0.01463	–0.05451
R^2	0.937	0.979	0.965	0.969	0.932
Kind of local extreme	max	max	max	max	max
Calculated critical value of quantity, mg kg^{-1}	69.50	5.60	21.10	20.92	4.75
Quantity of yeast extract, % on flour d.m.	5	0	5	5	5
Quantity of salt, % on flour d.m.	2	1.54	2	1.95	1.64
Quantity of sugar, % on flour d.m.	2.90	1.67	10	5.90	6.14

TABLE S-V. Regression coefficients of SOP of bread with yeast extract model for sensory characteristics; * – statistically significant at $p < 0.05$ level

	Appearance				Taste			
	Chara-cteristics	Crust colour intensity	Crumb colour intensity	Colour uniformity	Chara-cteristic	Sweet	Sour	Salty
β_0	7.33780*	–5.59817	0.41220	8.079878*	1.099.573	–498.720	–241.707	0.91159
β_1	0.21220	0.29817	113.280	0.350122*	–2.59073*	0.21720	0.52707	0.44341
β_{11}	0.00741	–0.03951	–0.11941	–0.029366	0.11220	0.26741*	0.12878	0.00976
β_2	–409.146	11.27.622	394.146	–0.138415	–214.451	8.63354*	502.195	–105.061
β_{22}	178.537	–3.58780	–128.537	0.065854	0.10488	–2.91463*	–158.049	154.390
β_3	0.19110	0.36159	–0.11860	–0.077439	–0.16787	0.09110	–0.00146	–0.16579
β_{33}	0.00585	0.00112	0.00415	0.003659	–0.01695	–0.02215	–0.01780	0.00144
β_{12}	0.09366	0.60195	0.18634	–0.161463	0.60878	0.03366	0.01512	–0.24098
β_{13}	–0.00663	–0.00980	–0.01537	–0.006146	0.10488*	–0.03463	0.00151	0.06390*
β_{23}	–0.09317	–0.10902	0.13317	0.029268	–0.06561	0.12683	0.10756	0.02951
R^2	0.936	0.926	0.912	0.875	0.952	0.996	0.967	0.968
Kind of local extreme	max	max	min	max	max	max	min	min
Calculated critical value of quantity, mg kg^{-1}	8.78	10.28	3.07	8.31	8.96	9.57	1.02	0.19
Quantity of yeast extract, % on flour d.m.	5	5	0	3.21	0	5	0	0
Quantity of salt, % on flour d.m.	2	1.84	1	1	1	1.57	1	1
Quantity of sugar, % on flour d.m.	10	10	0	0	0	2.63	0	10

	Aroma				Texture			
	Chara-cteristic	Sour	Yeast	Pungent	Firmness	Elasticity	Wall thickness	Pores uni-formity
β_0	971.037	–239.024	0.548171	7.71768*	744.207	–15.6585*	1.123.415	–451.707
β_1	–2.72037*	0.32024	1.661829*	1.17732*	134.293	14.185	0.78585	–0.17793
β_{11}	0.12810	0.16127	–0.140488*	–0.03395	–0.14078	–0.1636	–0.04556	0.05278
β_2	–0.43476	497.317	1.873.780	–692.988	–0.44695	25.3610*	–494.390	1.022.195
β_{22}	–0.39756	–156.829	–0.512195	225.122	0.58049	–8.6902*	186.098	–338.049
β_3	–0.22268	0.07012	–0.116585	–0.52384*	–114.104	1.1993*	–110.707	1.21604*
β_{33}	–0.01298	–0.01768	0.003878	0.01651	0.01380	–0.0929*	0.01261	–0.04680
β_{12}	0.62439	0.05707	0.058049	–0.08780	–0.93512	–0.1224	–0.85024	0.33512
β_{13}	0.11644*	0.00171	–0.008195	0.01122	0.15449*	–0.1202*	0.14298*	–0.09249
β_{23}	–0.07780	0.06854	0.119024*	0.26610*	0.18244	0.1588	0.21488	–0.09244
R^2	0.957	0.970	0.998	0.989	0.881	0.920	0.900	0.942
Kind of local extreme	max	min	min	min	min	max	min	max
Calculated critical value of quantity, mg kg^{-1}	8.88	1.01	1.91	2.01	–0.63	8.58	0.49	9.36
Quantity of yeast extract, % on flour d.m.	0	0	0	0	0	1.21	0	0
Quantity of salt, % on flour d.m.	1	1	1	1.15	1	1.51	1	1.378
Quantity of sugar / % on flour d.m.	0	0	0	6.61	10	6.97	10	10

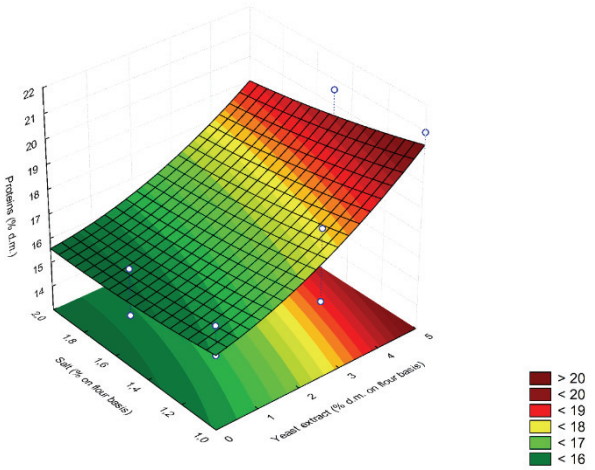

Fig. S-1a. Graphical presentation of the modelled dependence of the protein content from yeast extract and salt addition, with a level of sugar addition of 5 %.

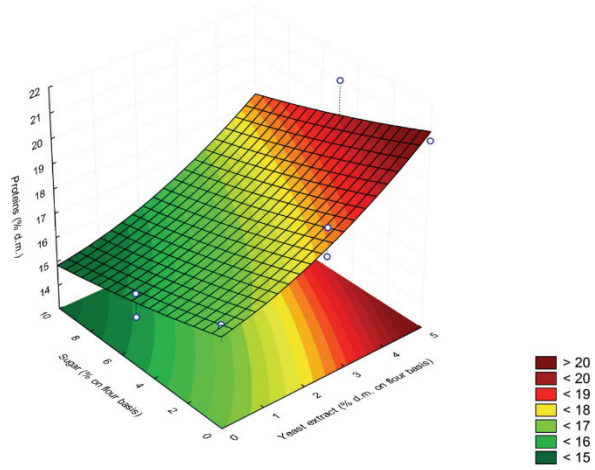

Fig. S-1b. Graphical presentation of the modelled dependence of the protein content on yeast extract and sugar addition, at a level of salt addition of 1.5 %.

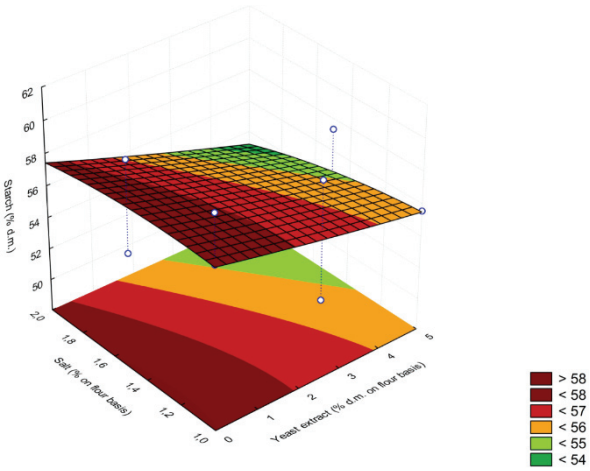

Fig. S-2a. Graphical presentation of the modelled dependence of the starch content on yeast extract and salt addition, at a level of sugar addition of 5 %.

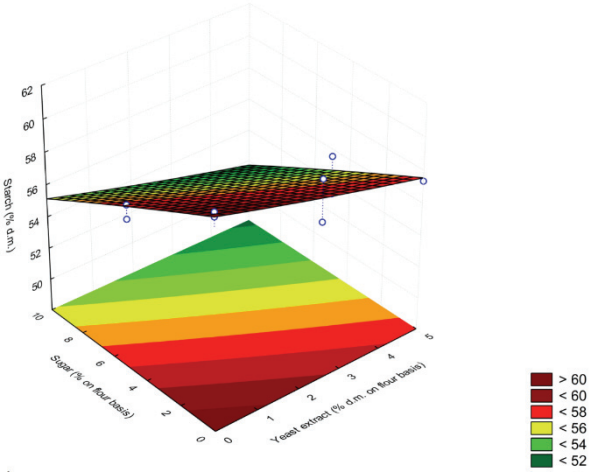

Fig. S-2b. Graphical presentation of the modelled dependence of the protein starch on the yeast extract and sugar addition, at a level of salt addition of 1.5 %.

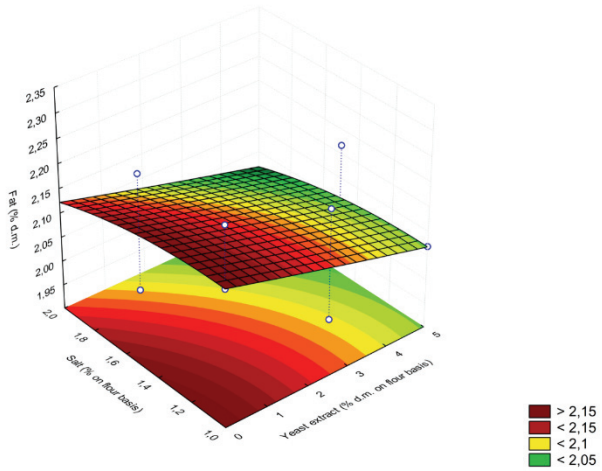

Fig. S-3a. Graphical presentation of the modelled dependence of the fat content on yeast extract and salt addition, at a level of sugar addition of 5 %.

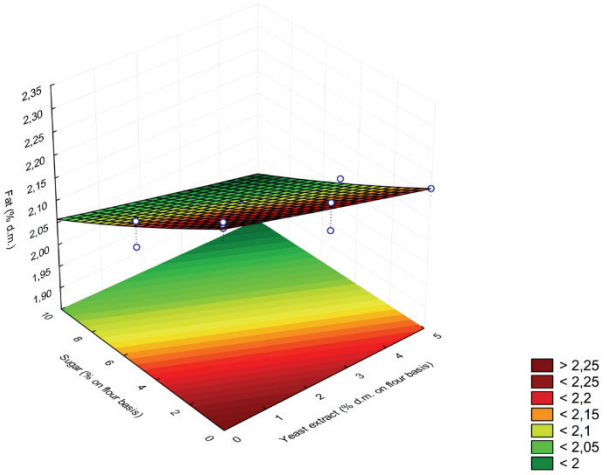

Fig. S-3b. Graphical presentation of the modelled dependence of the fat content on yeast extract and sugar addition, at a level of salt addition of 1.5 %.

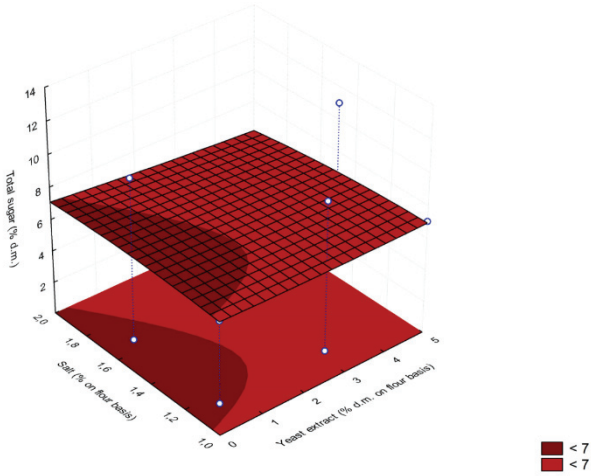

Fig. S-4a. Graphical presentation of the modelled dependence of the total sugars content on yeast extract and salt addition, at a level of sugar addition of 5 %.

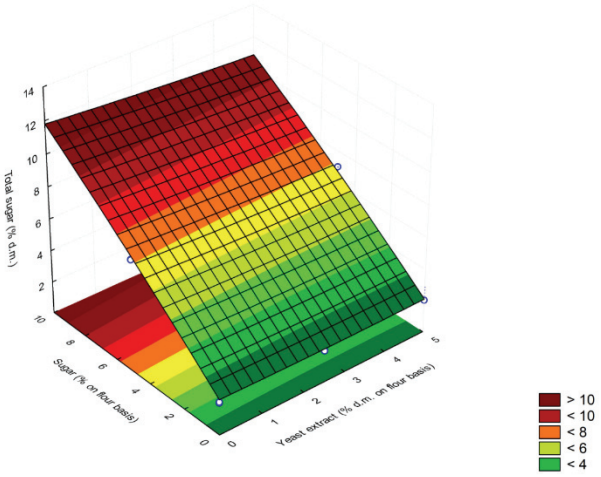

Fig. S-4b. Graphical presentation of the modelled dependence of the total sugars content on yeast extract and sugar addition, at a level of salt addition of 1.5 %.

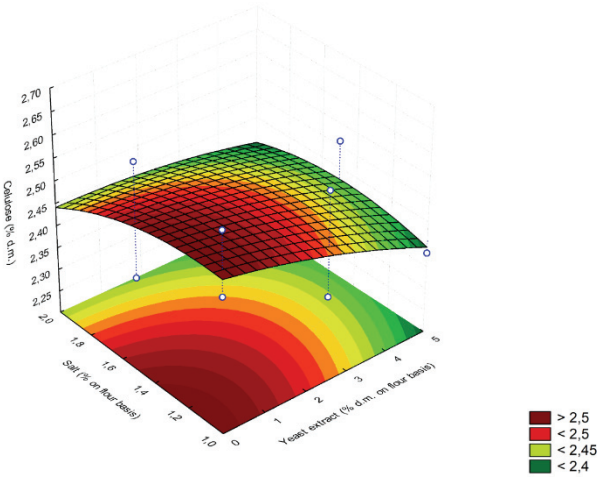

Fig. S-5a. Graphical presentation of the modelled dependence of the cellulose content on yeast extract and salt addition, at a level of sugar addition of 5 %.

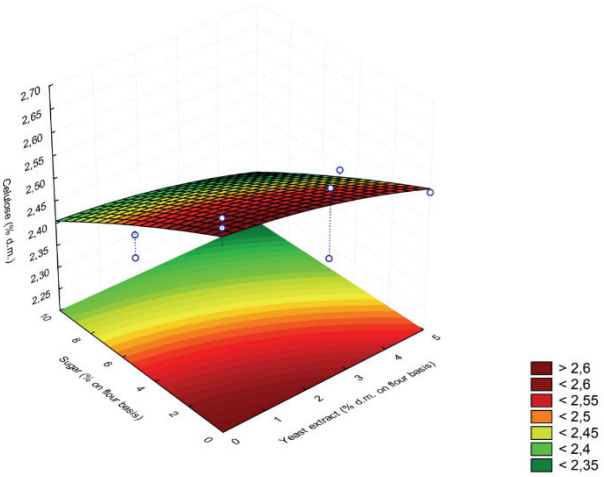

Fig. S-5b. Graphical presentation of the modelled dependence of the cellulose content on yeast extract and sugar addition, at a level of salt addition of 1.5 %.

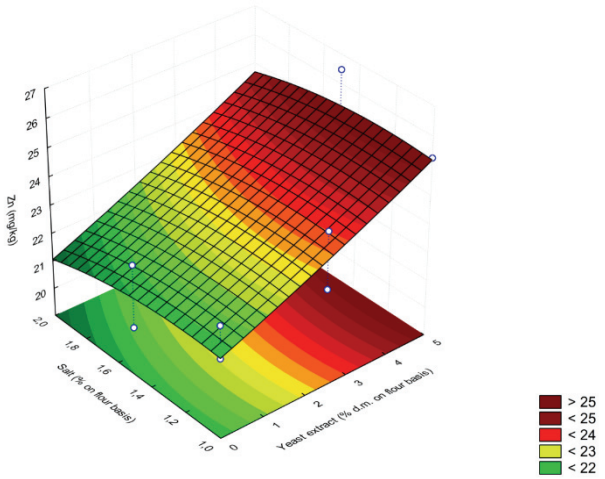

Fig. S-6a. Graphical presentation of the modelled dependence of the Zn content on yeast extract and salt addition, at a level of sugar addition of 5 %.

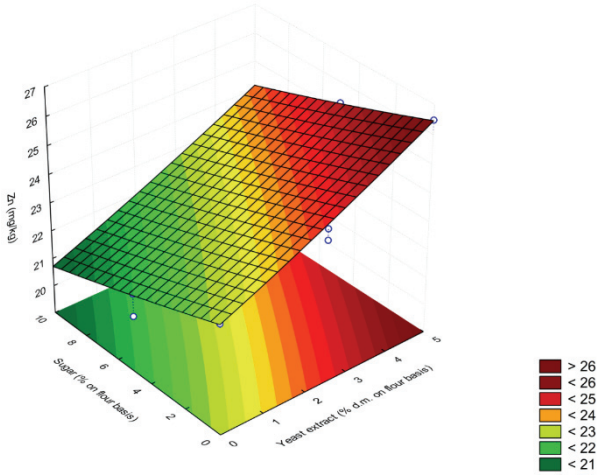

Fig. S-6b. Graphical presentation of the modelled dependence of the Zn content on yeast extract and sugar addition, at a level of salt addition of 1.5 %.

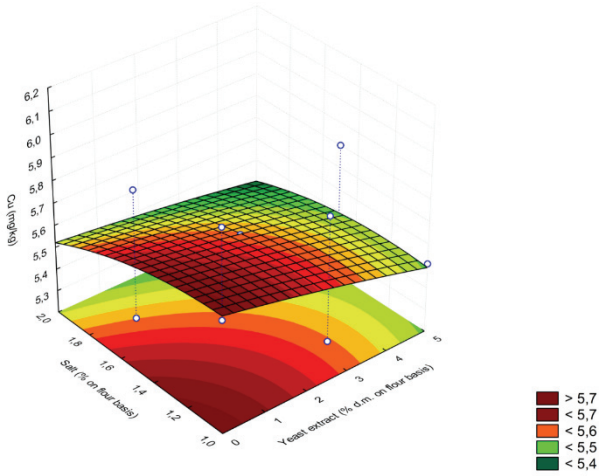

Fig. S-7a. Graphical presentation of the modelled dependence of the Cu content on yeast extract and salt addition, at a level of sugar addition of 5 %.

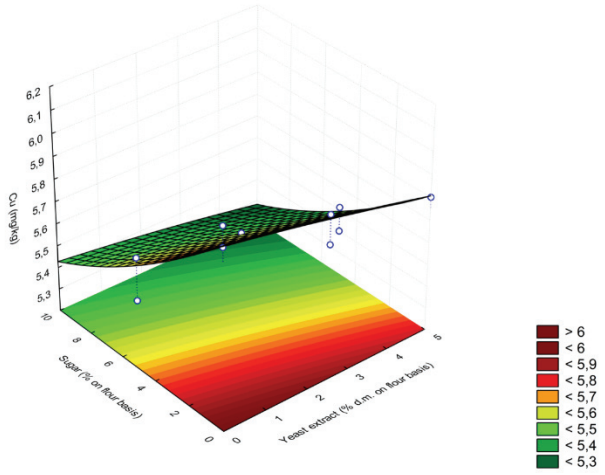

Fig. S-7b. Graphical presentation of the modelled dependence of the Cu content on yeast extract and sugar addition, at a level of salt addition of 1.5 %.

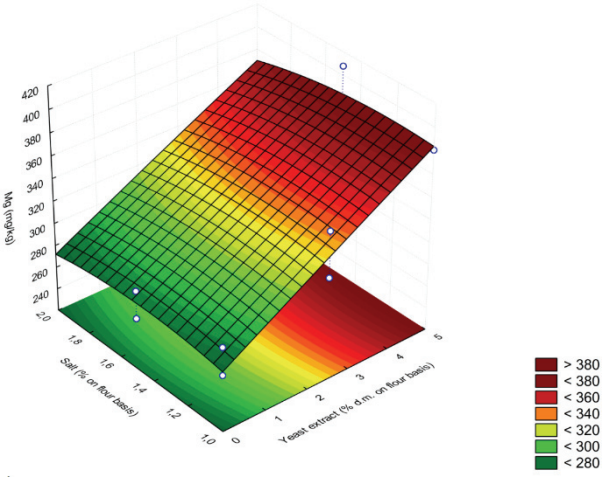

Fig. S-8a. Graphical presentation of the modelled dependence of the Mg content on yeast extract and salt addition, at a level of sugar addition of 5 %.

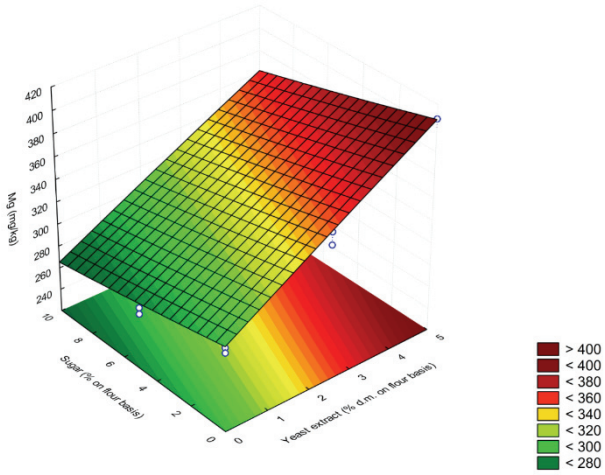

Fig. S-8b. Graphical presentation of the modelled dependence of the Mg content on yeast extract and sugar addition, at a level of salt addition of 1.5 %.

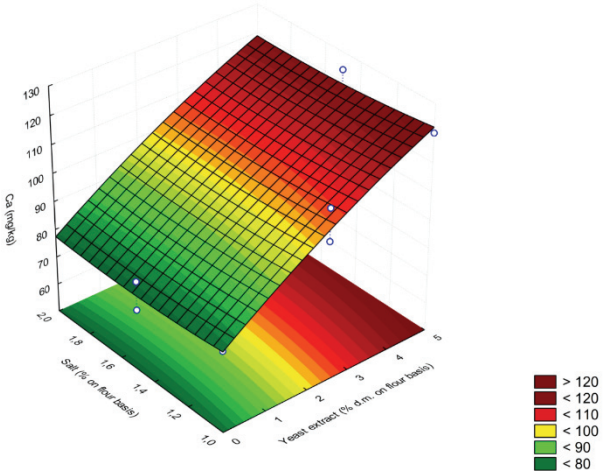

Fig. S-9a. Graphical presentation of the modelled dependence of the Ca content on yeast extract and salt addition, at a level of sugar addition of 5 %.

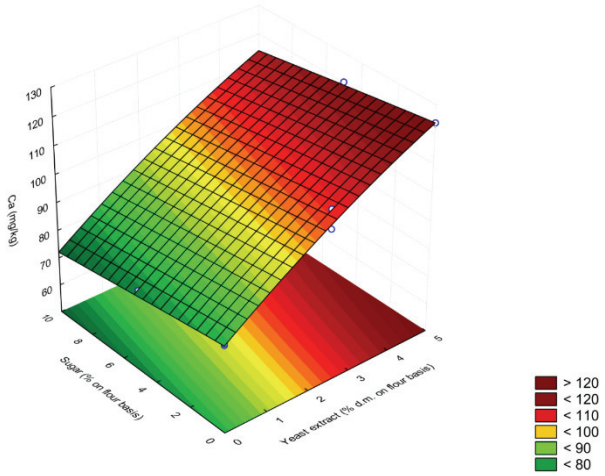

Fig. S-9b. Graphical presentation of the modelled dependence of the Ca content on yeast extract and sugar addition, at a level of salt addition of 1.5 %.

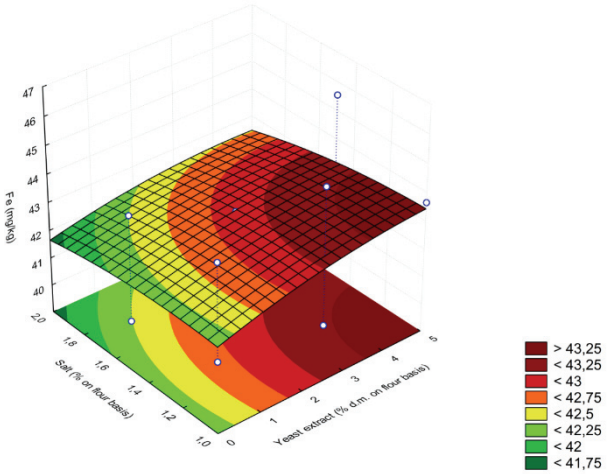

Fig. S-10a. Graphical presentation of the modelled dependence of the Fe content on yeast extract and salt addition, at a level of sugar addition of 5 %.

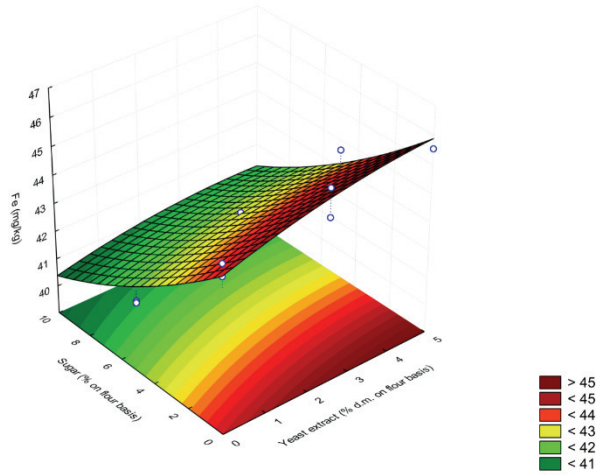

Fig. S-10b. Graphical presentation of the modelled dependence of the Fe content on yeast extract and sugar addition, at a level of salt addition of 1.5 %.

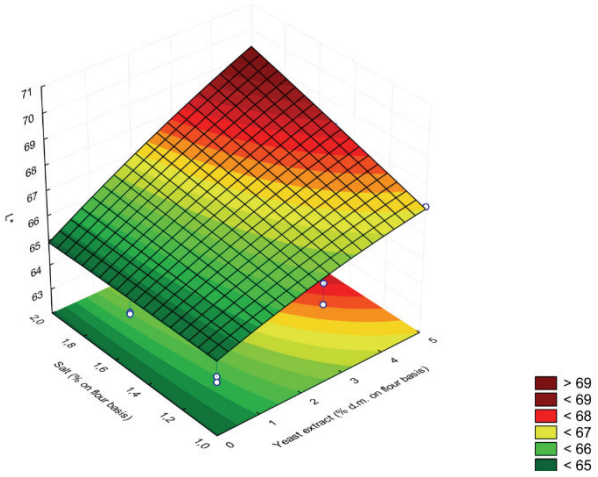

Fig. S-11a. Graphical presentation of the modelled dependence of L* on yeast extract and salt addition, at a level of sugar addition of 5 %.

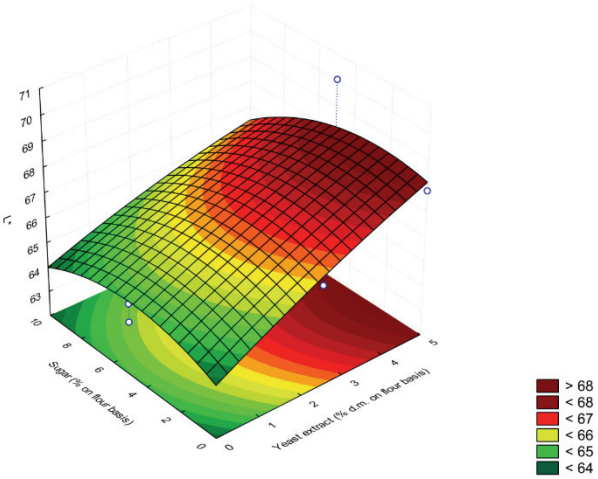

Fig. S-11b. Graphical presentation of the modelled dependence of L* on yeast extract and sugar addition, at a level of salt addition of 1.5 %.

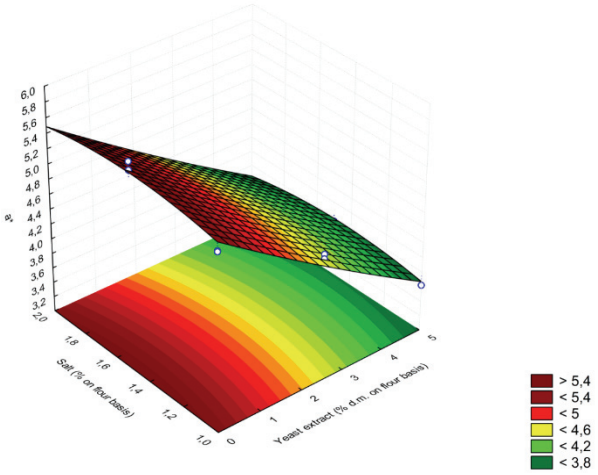

Fig. S-12a. Graphical presentation of the modelled dependence of a* on yeast extract and salt addition, at a level of sugar addition of 5 %.

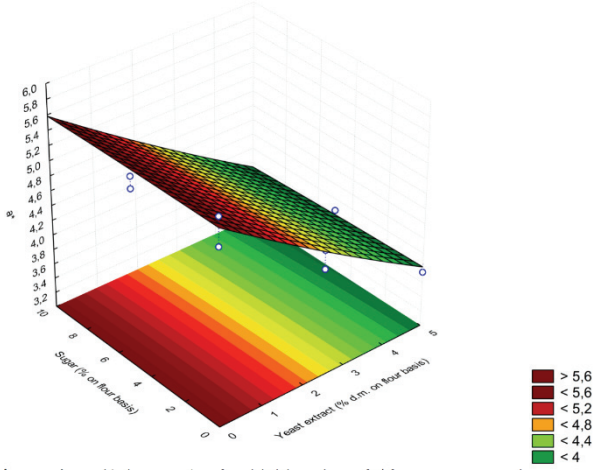

Fig. S-12b. Graphical presentation of the modelled dependence of a* on yeast extract and sugar addition, at a level of salt addition of 1.5 %.

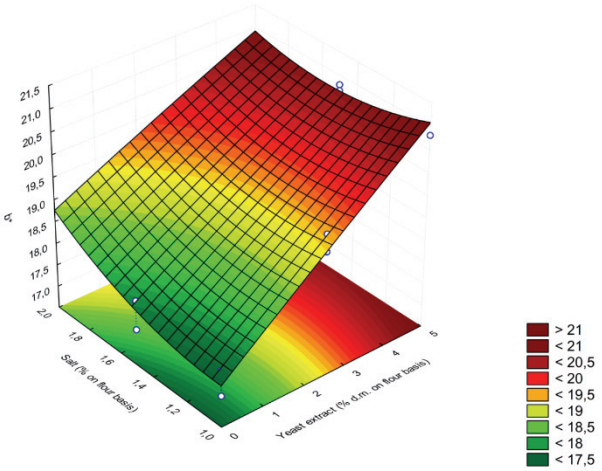

Fig. S13a. Graphical presentation of the modelled dependence of b* on yeast extract and salt addition, at a level of sugar addition of 5 %.

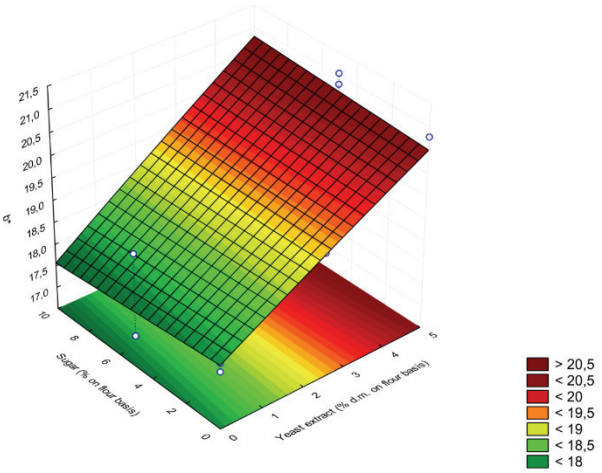

Fig. S-13b. Graphical presentation of the modelled dependence of b* on yeast extract and sugar addition, at a level of salt addition of 1.5 %.

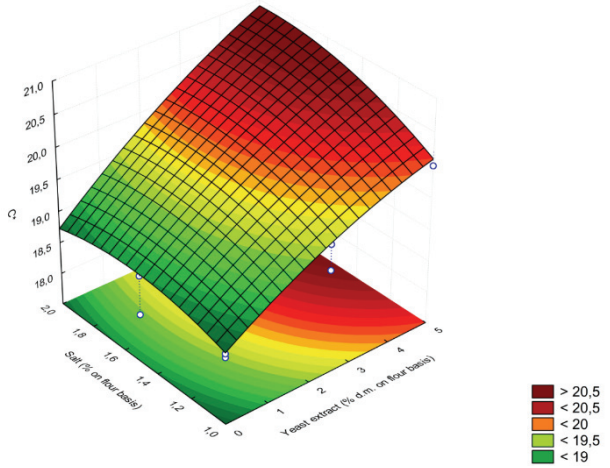

Fig. S-14a. Graphical presentation of the modelled dependence of C* on yeast extract and salt addition, at a level of sugar addition of 5 %.

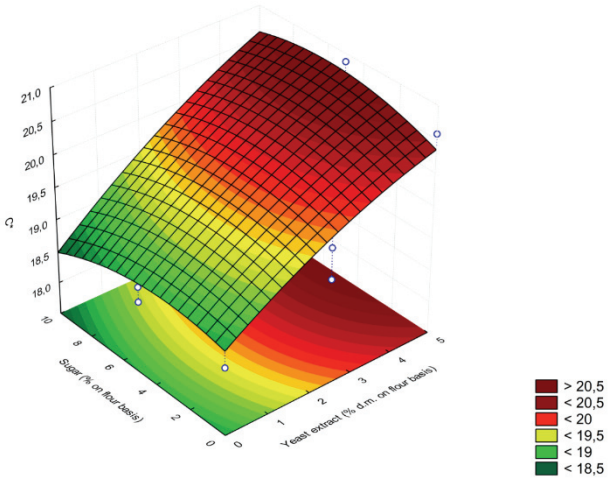

Fig. S-14b. Graphical presentation of the modelled dependence of C* on yeast extract and sugar addition, at a level of salt addition of 1.5 %.

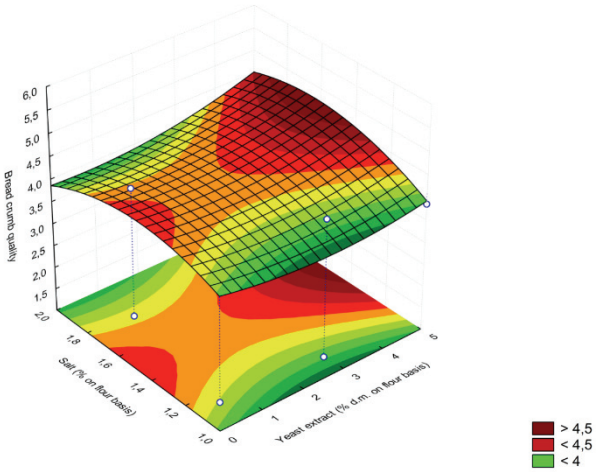

Fig. S-15a. Graphical presentation of the modelled dependence of Bread crumb quality on yeast extract and salt addition, at a level of sugar addition of 5%.

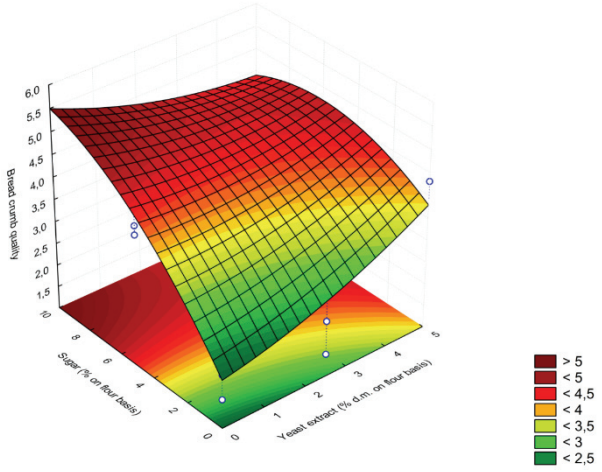

Fig. S-15b. Graphical presentation of the modelled dependence of Bread crumb quality on yeast extract and sugar addition, at a level of salt addition of 1.5 %.

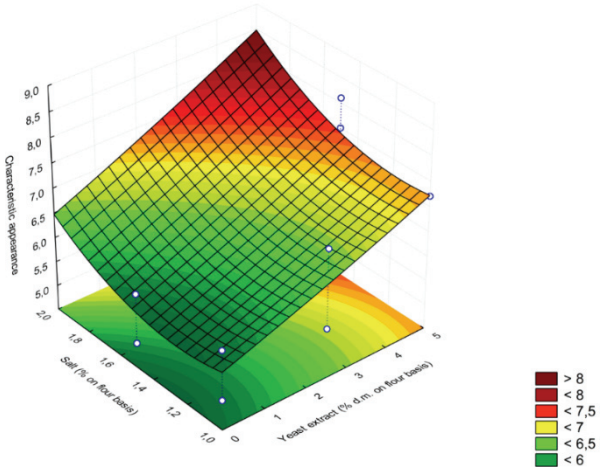

Fig. S-16a. Graphical presentation of the modelled dependence of Characteristic appearance on yeast extract and salt addition, at a level of sugar addition of 5 %.

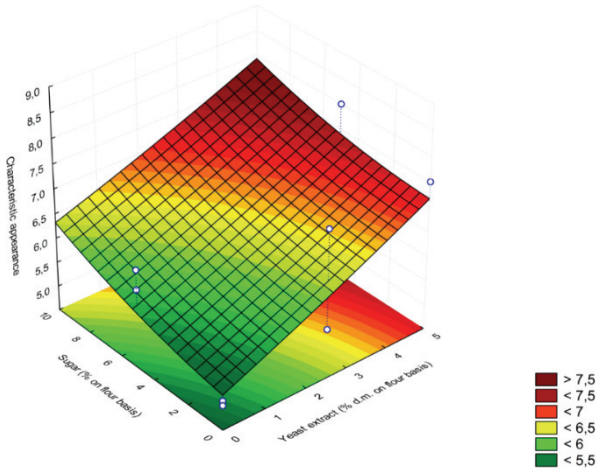

Fig. S-16b. Graphical presentation of the modelled dependence of the Characteristic appearance on yeast extract and sugar addition, at a level of salt addition of 1.5 %.

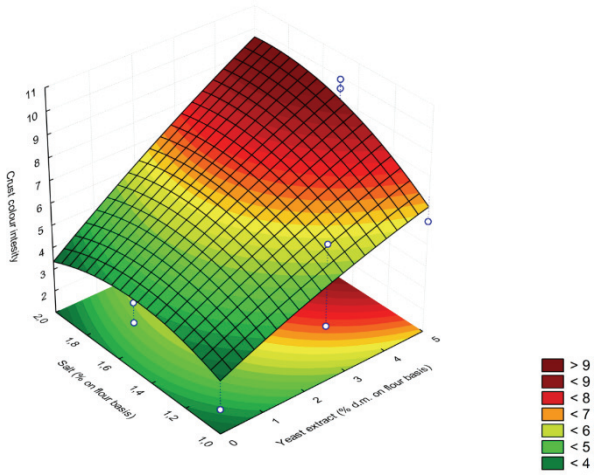

Fig. S-17a. Graphical presentation of the modelled dependence of Crust colour intensity on yeast extract and salt addition, at a level of sugar addition of 5 %.

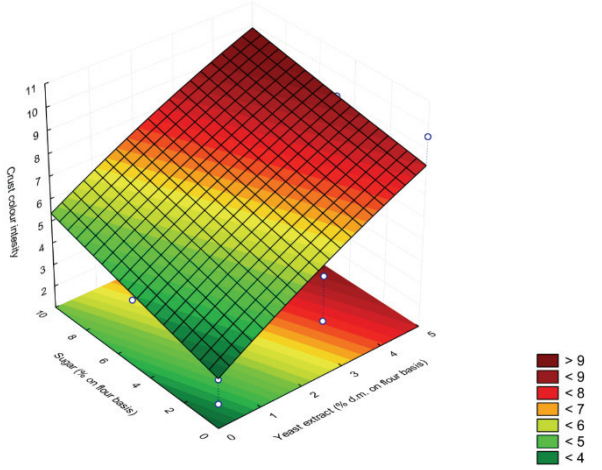

Fig. S-17b. Graphical presentation of the modelled dependence of the Crust colour intensity on yeast extract and sugar addition, at a level of salt addition of 1.5 %.

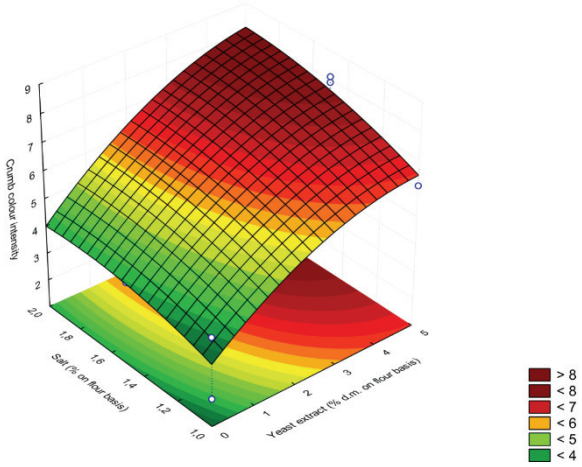

Fig. S-18a. Graphical presentation of the modelled dependence of the Crumb colour intensity on yeast extract and salt addition, at a level of sugar addition of 5 %.

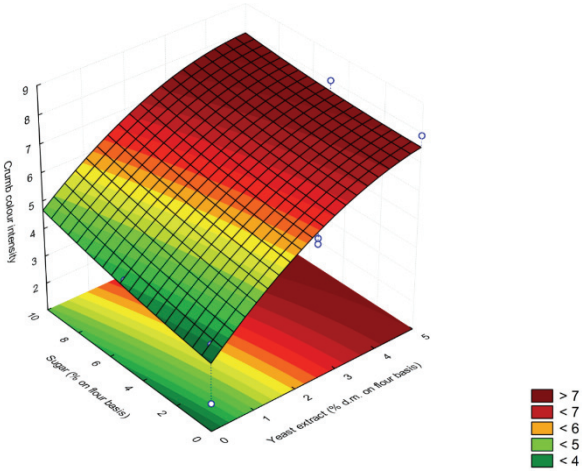

Fig. S-18b. Graphical presentation of the modelled dependence of Crumb colour intensity on yeast extract and sugar addition, at a level of salt addition of 1.5 %.

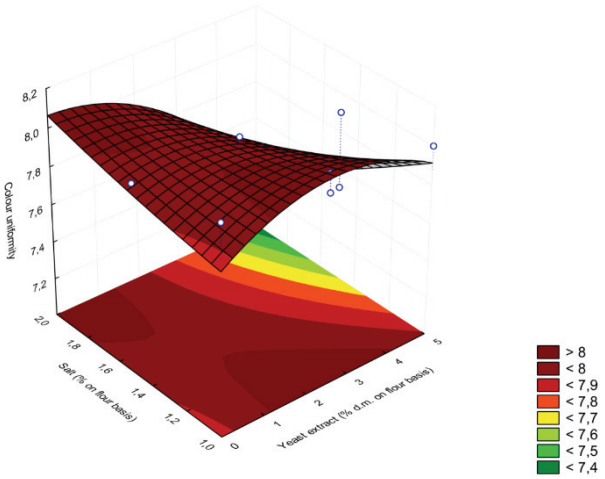

Fig. S-19a. Graphical presentation of the modelled dependence of Colour uniformity on yeast extract and salt addition, at a level of sugar addition of 5 %.

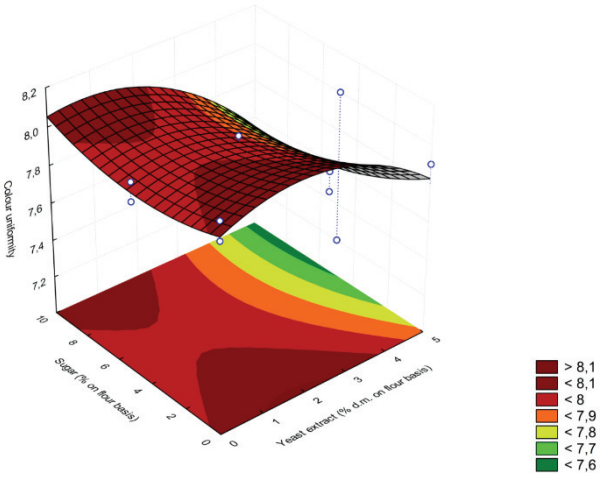

Fig. S-19b. Graphical presentation of the modelled dependence of Colour uniformity on yeast extract and sugar addition, at a level of salt addition of 1.5 %.

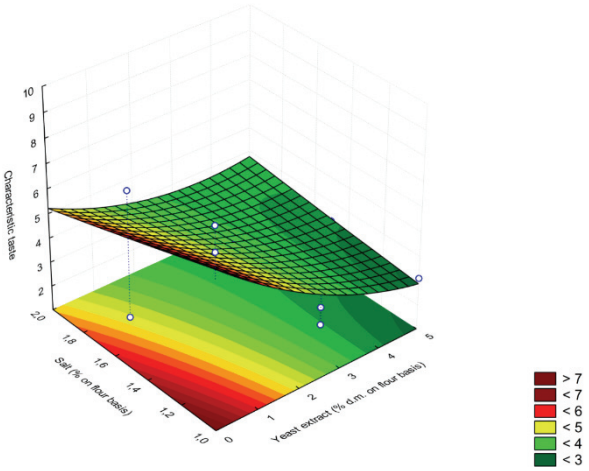

Fig. S-20a. Graphical presentation of the modelled dependence of the Characteristic taste on yeast extract and salt addition, at a level of sugar addition of 5 %.

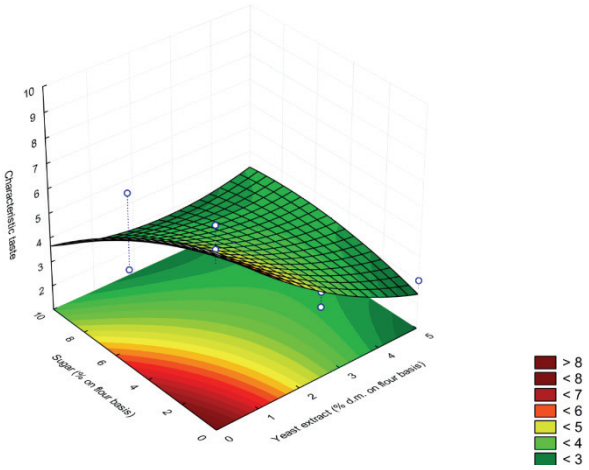

Fig. S-20b. Graphical presentation of the modelled dependence of the Characteristic taste on yeast extract and sugar addition, at a level of salt addition of 1.5 %.

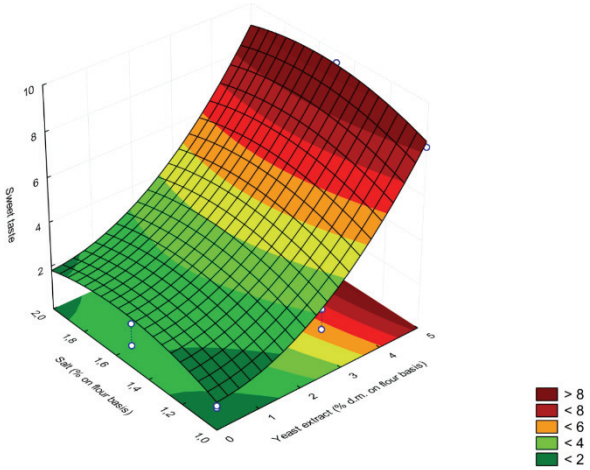

Fig. S-21a. Graphical presentation of the modelled dependence of Sweet taste on yeast extract and salt addition, at a level of sugar addition of 5 %.

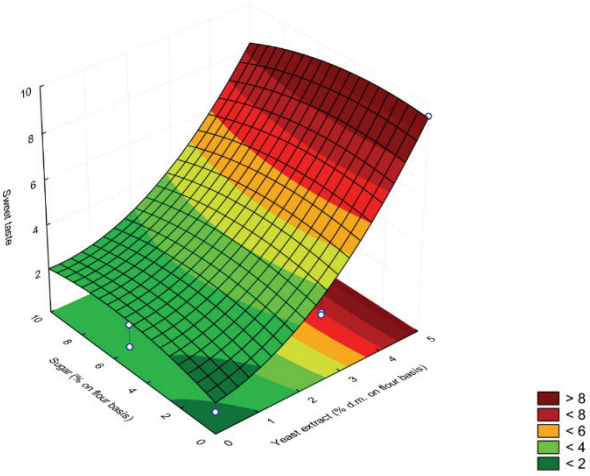

Fig. S-21b. Graphical presentation of the modelled dependence of Sweet taste on yeast extract and sugar addition, at a level of salt addition of 1.5 %.

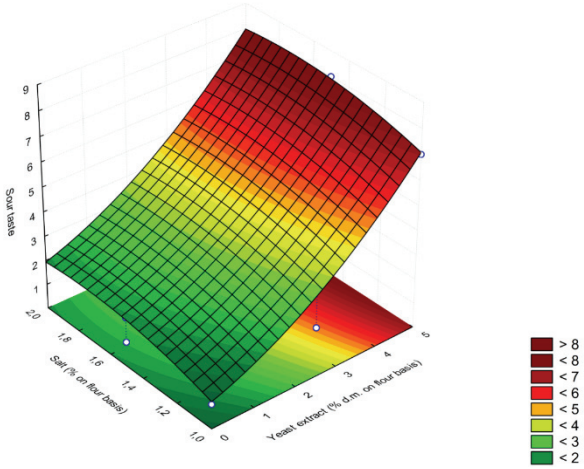

Fig. S-22a. Graphical presentation of the modelled dependence of Sour taste on yeast extract and salt addition, at a level of sugar addition of 5 %.

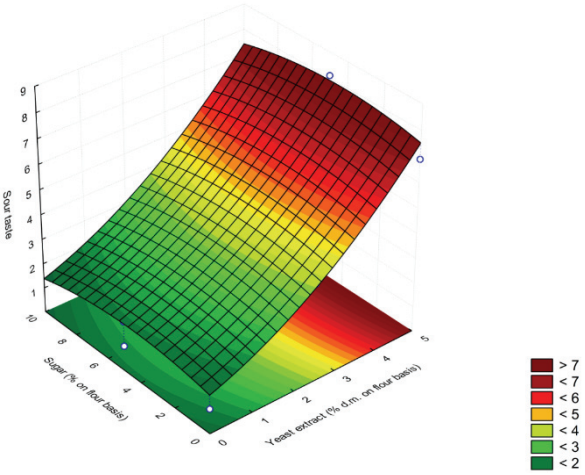

Fig. S-22b. Graphical presentation of the modelled dependence of Sour taste on yeast extract and sugar addition, at a level of salt addition of 1.5 %.

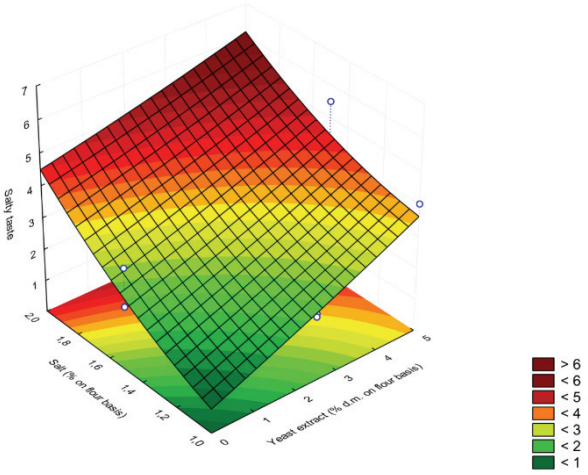

Fig. S-23a. Graphical presentation of the modelled dependence of Salty taste on yeast extract and salt addition, at a level of sugar addition of 5 %.

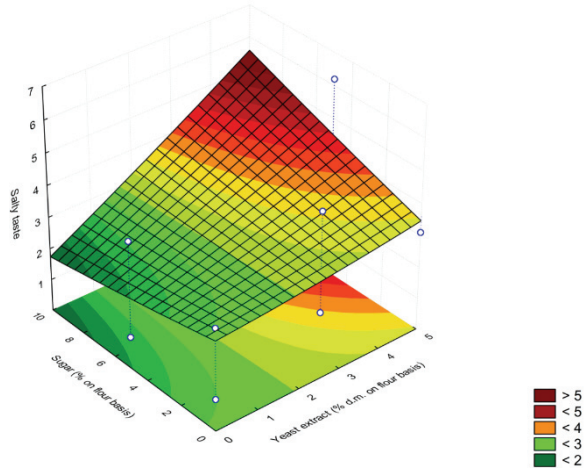

Fig. S-23b. Graphical presentation of the modelled dependence of Salty taste on yeast extract and sugar addition, at a level of salt addition of 1.5 %.

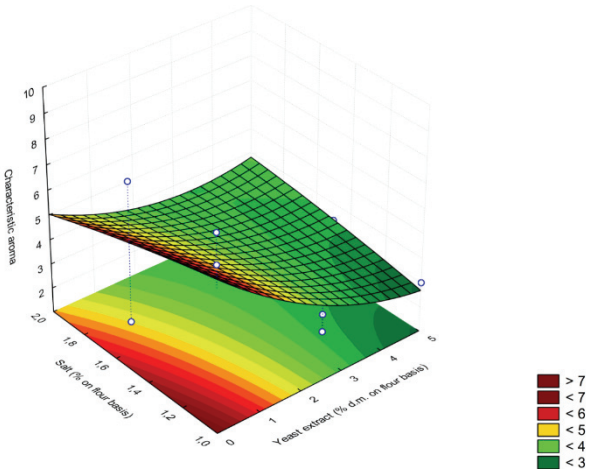

Fig. S-24a. Graphical presentation of the modelled dependence of Characteristic aroma on yeast extract and salt addition, at a level of sugar addition of 5 %.

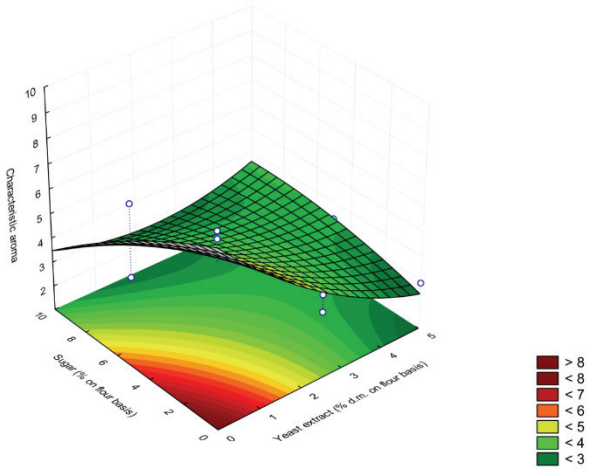

Fig. S-24b. Graphical presentation of the modelled dependence of Characteristic aroma on yeast extract and sugar addition, at a level of salt addition of 1.5 %.

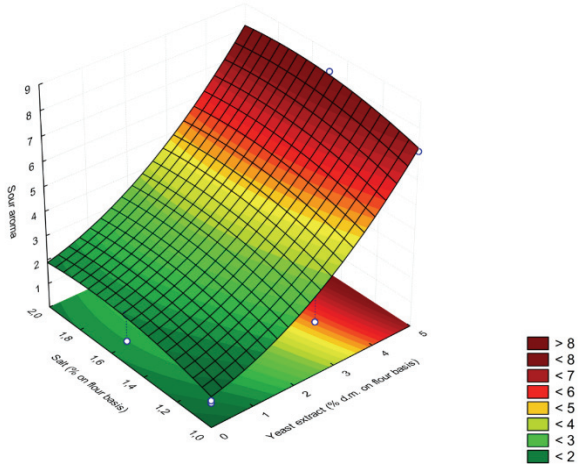

Fig. S-25a. Graphical presentation of the modelled dependence of Sour aroma on yeast extract and salt addition, at a level of sugar addition of 5 %.

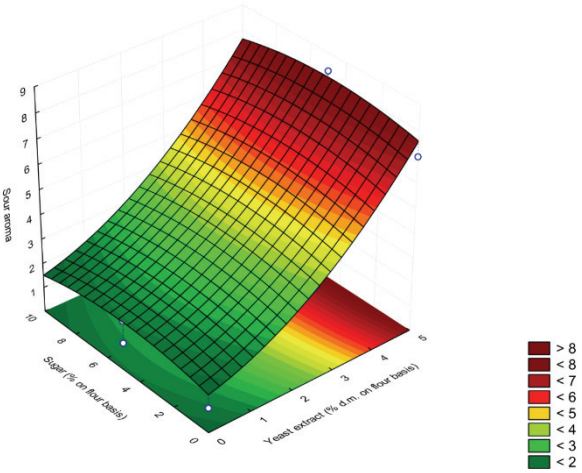

Fig. S-25b. Graphical presentation of the modelled dependence of Sour aroma on yeast extract and sugar addition, at a level of salt addition of 1.5 %.

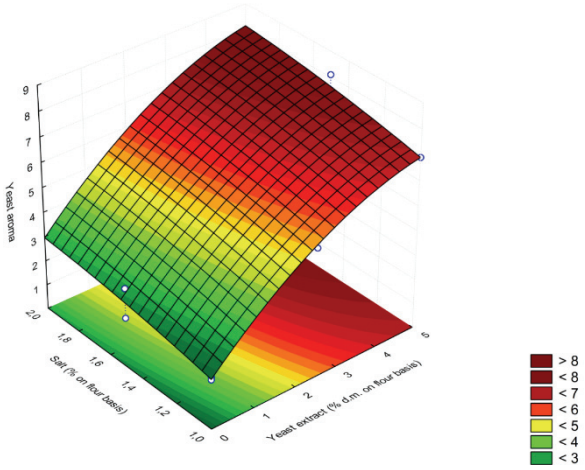

Fig. S-26a. Graphical presentation of the modelled dependence of Yeast aroma on yeast extract and salt addition, at a level of sugar addition of 5 %.

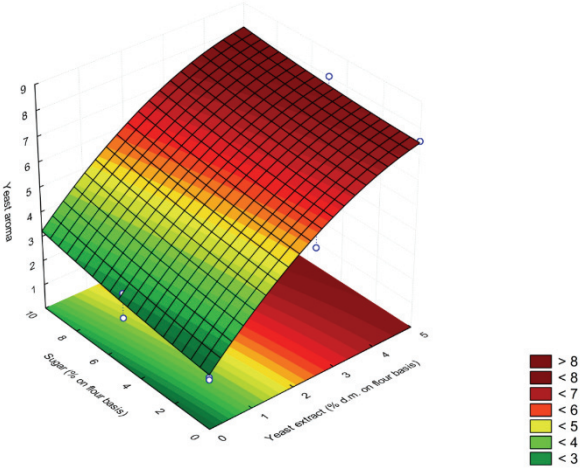

Fig. S-26b. Graphical presentation of the modelled dependence of Yeast aroma on yeast extract and sugar addition, at a level of salt addition of 1.5 %.

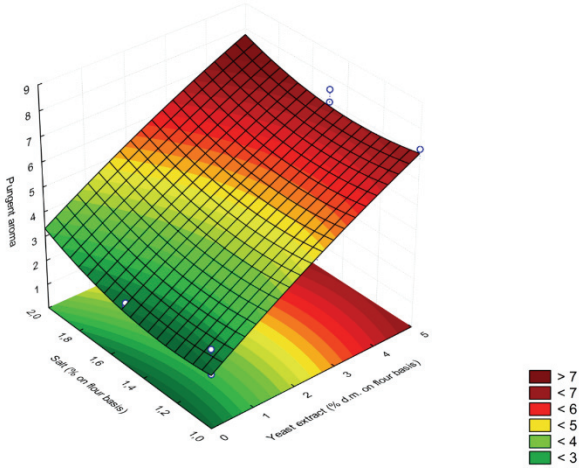

Fig. S=27a. Graphical presentation of the modelled dependence of the pungent aroma on yeast extract and salt addition, at a level of sugar addition of 5 %.

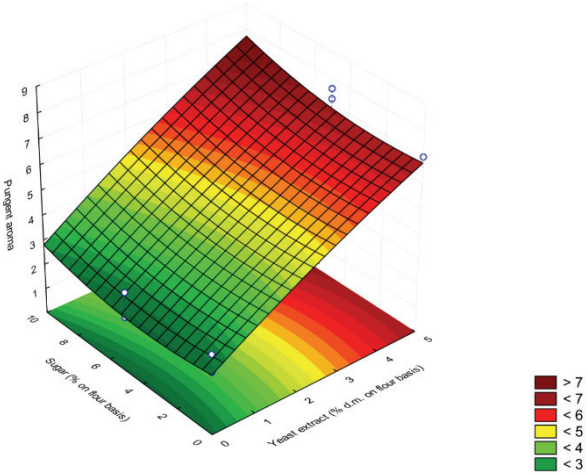

Fig. S-27b. Graphical presentation of the modelled dependence of the pungent aroma on yeast extract and sugar addition, at a level of salt addition of 1.5 %.

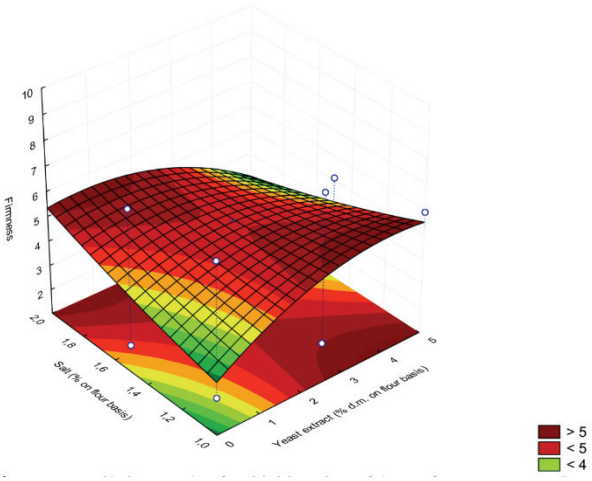

Fig. S-28a. Graphical presentation of the modelled dependence of Firmness on yeast extract and salt addition, at a level of sugar addition of 5 %.

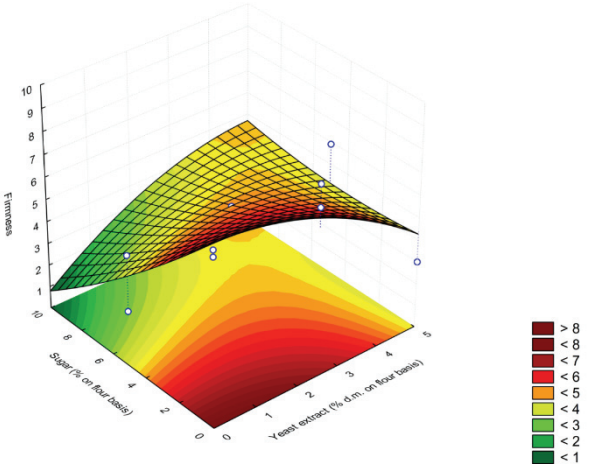

Fig. S-28b. Graphical presentation of the modelled dependence of Firmness on yeast extract and sugar addition, at a level of salt addition of 1.5 %.

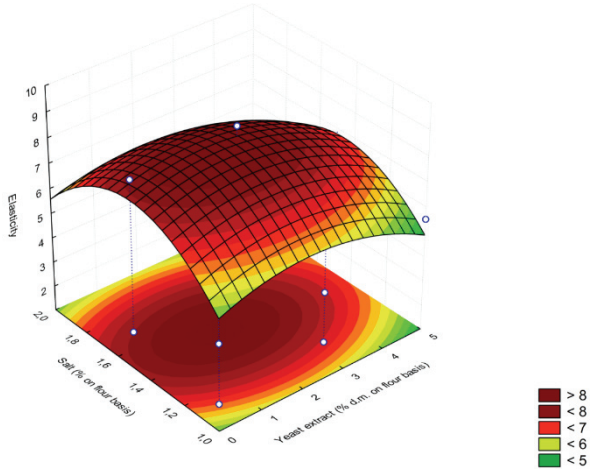

Fig. S-29a. Graphical presentation of the modelled dependence of Elasticity on yeast extract and salt addition, at a level of sugar addition of 5 %.

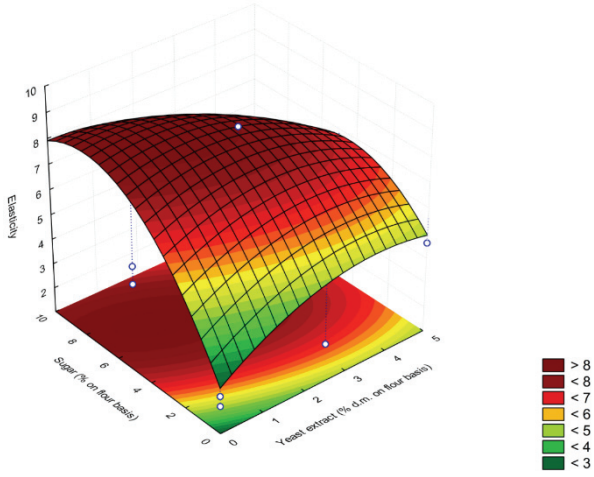

Fig. S-29b. Graphical presentation of the modelled dependence of Elasticity on yeast extract and sugar addition, at a level of salt addition of 1.5 %.

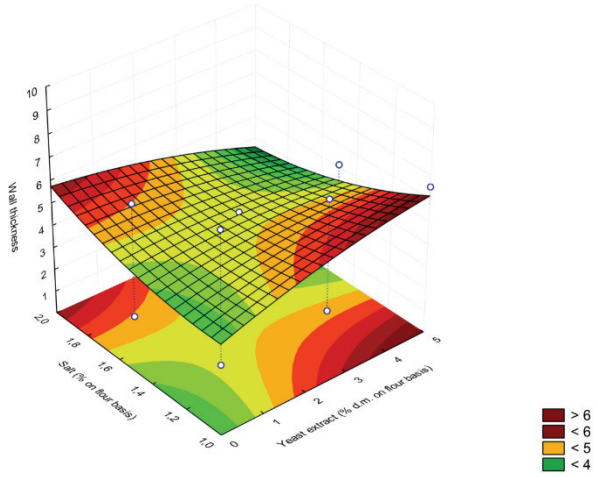

Fig. S-30a. Graphical presentation of the modelled dependence of Wall thickness on yeast extract and salt addition, at a level of sugar addition of 5 %.

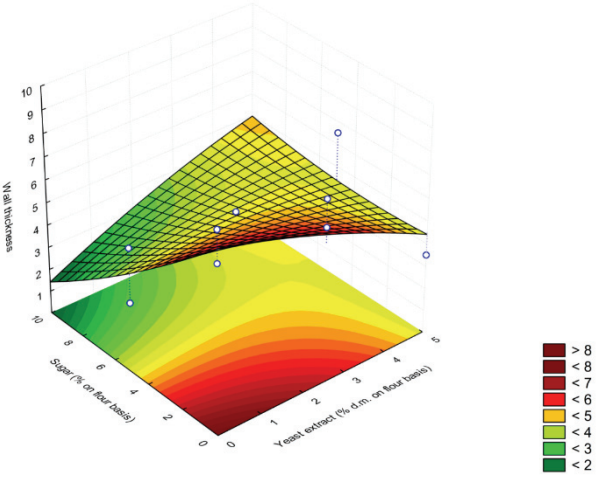

Fig. S-30b. Graphical presentation of the modelled dependence of Wall thickness on yeast extract and sugar addition, at a level of salt addition of 1.5 %.

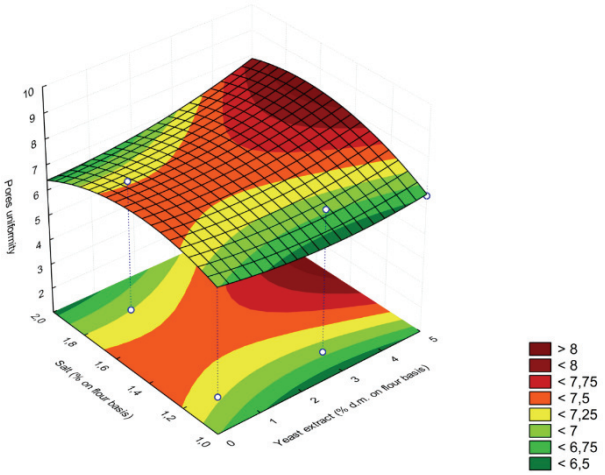

Fig. S-31a. Graphical presentation of the modelled dependence of Pores uniformity on yeast extract and salt addition, at a level of sugar addition of 5%.

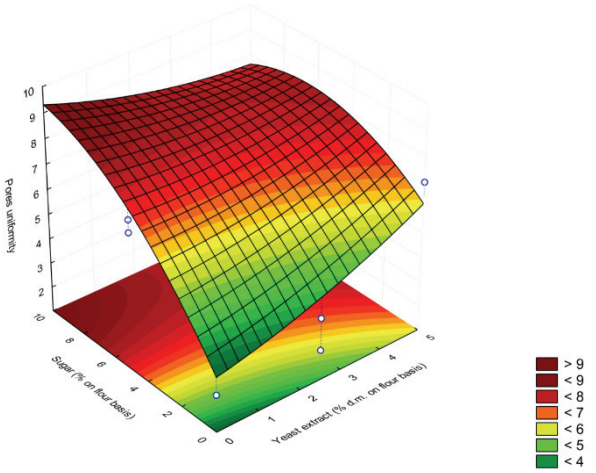

Fig. S-31b. Graphical presentation of the modelled dependence of Pores uniformity on yeast extract and sugar addition, at a level of salt addition of 1.5 %.