Supplement Table 1: Means ± SD for instrumental texture attributes, water absorption capacity (WAC), and water content for Wholewheat = W and Sourdough = S breads, in different slice thicknesses without margarine.

N = 3	W1_M0	W2_M0	W4_M0	S1_M0	S2_M0	S4_M0	P_{bread}	$P_{thickness}$	$P_{bread \times thickness}$
Hardness [g]	374 ± 119	400. ± 116	411 ± 118	915 ± 67	839 ± 100	958 ± 52	<0.001	0.78	0.17
Chewiness [g]	315 ± 79	306 ± 78	307 ± 77	682 ± 54	629 ± 69	693 ± 38	<0.001	0.71	0.30
Springiness [-]	0.96 ± 0.0	0.96 ± 0.0	0.94 ± 0.0	0.95 ± 0.0	0.95 ± 0.0	0.95 ± 0.0	0.29	0.03	0.04
Cohesiveness [-]	0.89 ± 0.1	0.81 ± 0.0	0.81 ± 0.1	0.79 ± 0.0	0.79 ± 0.0	0.76 ± 0.0	0.02	0.17	0.09.
Adhesiveness[g*sec]	-0.09 ± 0.2	-0.19 ± 0.3	-1.17 ± 1.3	-10.3 ± 1.7	-5.69 ± 4.2	-4.16 ± 2.1	<0.001	0.07	0.01
WAC [g/g]	3.15 ± 0.2	2.99 ± 0.1	2.58 ± 0.13	1.65 ± 0.1	1.3 ± 0.1	1.18 ± 0.1	<0.001	0.27	0.41
Water content [w/w%]	48.7 ± 0.5	47.9 ± 0.3	48.1 ± 0.14	48.2 ± 0.3	47.2 ± 1.6	47.7 ± 0.3	0.91	0.90	0.94

Supplement Table 2: Means ± SEM of sensory texture attributes of WB differing in thickness and addition of margarine.

N=30	W1_M0	W1_M2	W1_M4	W2_M0	W2_M2	W2_M4	W4_M0	W4_M2	W4_M4	$P_{thickness}$	$P_{margarine}$	$P_{thickness \times mar}$
Hardness	24 ± 3	19 ± 4	18 ± 3	30 ± 4	30 ± 4	24 ± 3	43 ± 4	37 ± 4	29 ± 4	<0.001	0.007	0.49
Denseness	31 ± 4	23 ± 4	20 ± 4	36 ± 4	28 ± 3	31 ± 4	55 ± 5	39 ± 4	34 ± 4	<0.001	<0.001	0.09
Adhesiveness	45 ± 4	36 ± 4	29 ± 4	52 ± 4	38 ± 4	35 ± 3	55 ± 4	45 ± 4	40 ± 4	0.002	<0.001	0.90
Chewiness	40 ± 3	25 ± 4	22 ± 3	54 ± 4	40 ± 4	33 ± 4	69 ± 4	52 ± 4	49 ± 4	<0.001	<0.001	0.93
Dryness	60 ± 4	28 ± 4	29 ± 5	70 ± 3	39 ± 5	30 ± 5	68 ± 4	45 ± 4	37 ± 4	0.006	<0.001	0.32
Crumbliness	42 ± 5	32 ± 4	25 ± 4	41 ± 4	29 ± 4	35 ± 5	53 ± 4	38 ± 4	40 ± 4	<0.001	<0.001	0.21

Supplement Table 3: Means ± SEM of sensory texture attributes of SB differing in thickness and addition of margarine.

N=30	S1_M0	S1_M2	S1_M4	S2_M0	S2_M2	S2_M4	S4_M0	S4_M2	S4_M4	$P_{thickness}$	$P_{margarine}$	$P_{thickness \times mar}$
Hardness	45 ± 4	33 ± 4	30 ± 4	47 ± 3	47 ± 4	42 ± 4	57 ± 4	49 ± 5	46 ± 4	<0.001	0.002	0.23
Denseness	56 ± 4	50 ± 4	43 ± 5	60 ± 4	61 ± 4	57 ± 4	69 ± 4	62 ± 5	61 ± 4	<0.001	0.021	0.51
Adhesiveness	58 ± 4	39 ± 4	34 ± 4	56 ± 4	49 ± 4	34 ± 3	57 ± 4	47 ± 5	45 ± 4	0.041	<0.001	0.12
Chewiness	57 ± 4	39 ± 4	36 ± 3	66 ± 4	59 ± 3	50 ± 4	78 ± 3	70 ± 4	64 ± 4	<0.001	<0.001	0.27
Dryness	52 ± 5	26 ± 4	23 ± 4	50 ± 5	36 ± 4	25 ± 3	51 ± 5	39 ± 5	37 ± 5	0.027	<0.001	0.06
Crumbliness	42 ± 4	27 ± 4	28 ± 4	33 ± 4	31 ± 4	28 ± 4	36 ± 5	30 ± 4	30 ± 4	0.91	0.026	0.21

Supplement Table 4: Significant predictors of ER (bread only) and fit statistics of the reduced RSM. (BT: Bread type, ST: Slice thickness, M: Margarine addition), (n=30).

Source	p-value	Coefficient Estimate	Standard Error
BT	< 0.001	1.68	0.17
ST	< 0.001	2.45	0.20
M	< 0.001	1.34	0.21
M²	0.011	-1.06	0.36

Fit statistics	value
Model p-value	< 0.001
R²	0.958
Adjusted R²	0.945
Predicted R²	0.917
Signal/Noise	29.0
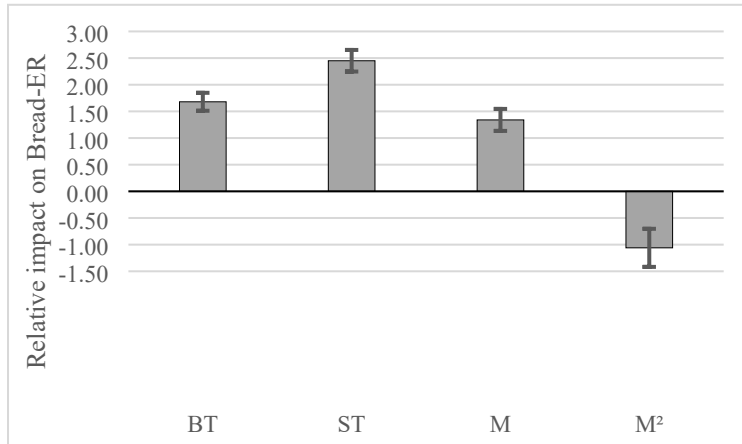
Supplement Figure 1: Relative impact of the predictors on ER ('bread only') (n=30).
(BT: Bread type, ST: Slice thickness, MA: Margarine addition, error bars represent standard errors).
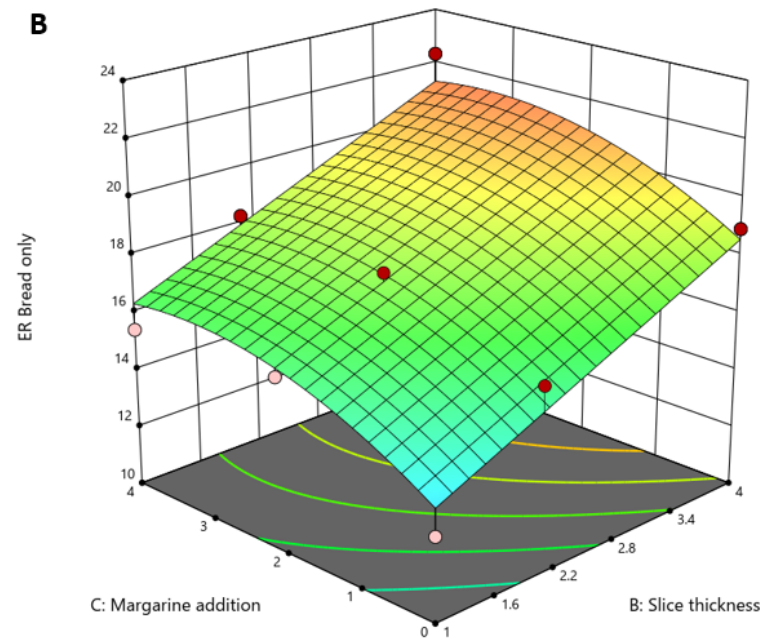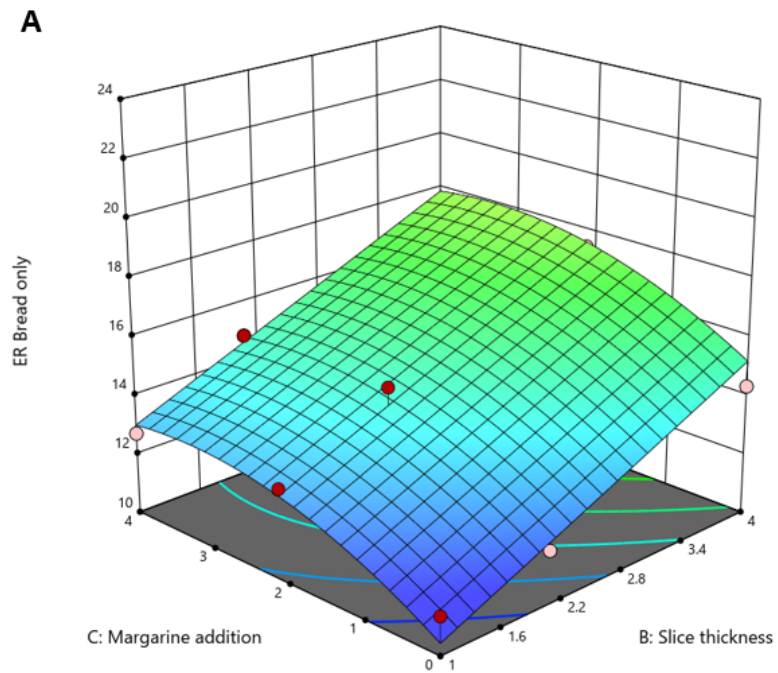
Supplement Figure 2: Surface plots of the RSM of ER ('bread only') for wheat bread (A) and sourdough bread (B) (n=30).