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APPENDICES

Nutrition Information

Composition per recommended usage:

Nutrients	Source	Min	Target	Max	UOM	%AKG*
Vit A	Retinyl acetate	485.51	606.89	728.27	mcg	74.37
Vit B1 (Thiamin)	Thiamin hydrochloride	0.76	0.95	1.13	mg	67.50
Vit B2 (Riboflavin)	Riboflavin	0.86	1.08	1.30	mg	63.53
Vit B3 (Niacin)	Niacinamide	8.64	10.80	12.96	mg	67.50
Vit B5 (Pantothenic acid)	Calcium D-pantothenate	3.24	4.05	4.86	mg	67.50
Vit B6 (Pyridoxin)	Pyridoxin hydrochloride	0.86	1.08	1.30	mg	63.53
Vit B9 (Folic acid)	Folic acid	324.00	405.00	486.00	mcg	67.50
Vit B12 (Cyanocobalamin)	Vitamin B12	1.40	1.76	2.11	mcg	67.50
Vit C	L-sodium ascorbate	54.83	64.50	77.40	mg	71.67
Vit D	Vitamin D3	8.10	10.13	13.67	mcg	67.50
Vit E	dl-α-tocopheryl acetate	8.10	10.13	12.15	mg	67.50
Sodium**	Monosodium phosphate	151.64	178.39	214.07	mg	11.89
Calcium	Calcium lactate	255.36	300.43	360.51	mg	23.11
Phosphor	Monosodium phosphate	204.30	240.35	288.42	mg	34.34
Iron	Ferrous fumarate	11.26	13.24	17.88	mg	38.96
Zinc	Zinc oxide	7.02	8.78	10.53	mg	54.86
Iodine	Potassium iodide	78.50	98.12	107.94	mcg	44.60
Selenium	Sodium selenite	19.13	22.50	27.00	mcg	64.29

*based on "ALG Ibu Hamil" 2,510 kcal

**will not be tested for Certificate of Analysis (reference only)

Appendix 1. The target of the micronutrient content in the premix

Appendix 2. The statistical analysis of Iron content of the cookies

Source	df	Mean Square	F	Sig.
Baking Treatment	2	32.905	3.417	.067
Premix Concentration	1	792.418	82.277	<.001
Baking Treatment * Premix Concentration	2	25.358	2.633	.113
Error	12	9.631		

Notes: Two-Way ANOVA was performed with the significance level of 5% (0.05).

Appendix 3. The statistical analysis of the true retention of iron content from of the cookies

Source	df	Mean Square	F	Sig.
Baking Treatment	1	418.601	1.510	.254
Premix Concentration	1	1.410.430	5.088	.054
Baking Treatment * Premix Concentration	1	17.881	.065	.806
Error	8	277.199		

Notes: Two-Way ANOVA was performed with the significance level of 5% (0.05).

Appendix 4. The statistical analysis of the diameter of the cookies

Source	df	Mean Square	F	Sig.
Temp	1	41.818	111.287	<,001
Premix Concentration	1	5.290	14.078	<,001
Baking Treatment * Premix Concentration	1	4.840	12.880	.001
Error	32	.376		

Notes: Two-Way ANOVA was performed with the significance level of 5% (0.05).

Appendix 5. The statistical analysis of the thickness of the cookies

Source	df	Mean Square	F	Sig.
Baking Treatment	1	198.951	33.140	<,001
Premix Concentration	1	105.987	17.655	<,001
Baking Treatments * Premix Concentration	1	.007	.001	.973
Error	32	6.003		

Notes: Two-Way ANOVA was performed with the significance level of 5% (0.05).

Appendix 6. The statistical analysis of the spread factor of the cookies

Source	df	Mean Square	F	Sig.
Baking Treatment	1	.153	59.978	<,001
Premix Concentration	1	.058	22.835	<,001
Baking Treatment * Concentration Premix	1	.006	2.199	.148
Error	32	.003		

Notes: Two-Way ANOVA was performed with the significance level of 5% (0.05).

Appendix 7. The statistical analysis of the hardness of the cookies

Source	df	Mean Square	F	Sig.
Baking Treatment	1	1102.228	603.216	<,001
Premix Concentration	1	32.571	17.825	<,001
Baking Treatment * Premix Concentration	1	99.349	54.371	<,001
Error	32	1.827		

Notes: Two-Way ANOVA was performed with the significance level of 5% (0.05).

Appendix 8. The statistical analysis of the L* value of the cookies

Source	df	Mean Square	F	Sig.
Baking Treatment	1	31.785	5.235	.051
Premix Concentration	1	29.234	4.815	.060
Baking Treatment * Premix Concentration	1	.806	.133	.725
Error	8	6.071		

Notes: Two-Way ANOVA was performed with the significance level of 5% (0.05).

Appendix 9. The statistical analysis of the a* value of the cookies

Source	df	Mean Square	F	Sig.
Baking Treatment	1	5.617	9.345	.016
Premix Concentration	1	5.347	8.895	.018
Baking Treatment * Premix Concentration	1	.075	.125	.733
Error	8	.601		

Notes: Two-Way ANOVA was performed with the significance level of 5% (0.05).

Appendix 10. The statistical analysis of the b* value of the cookies

Source	df	Mean Square	F	Sig.
Baking Treatment	1	26.196	7.011	.029
Premix Concentration	1	71.394	19.108	.002
Baking Treatment * Premix Concentration	1	.195	.052	.825
Error	8	3.736		

Notes: Two-Way ANOVA was performed with the significance level of 5% (0.05).

Appendix 11. The statistical analysis of the ash content of the cookies

Source	df	Mean Square	F	Sig.
Baking Treatment	1	.007	.566	.474
Premix Concentration	1	5.307	400.254	<,001
Baking Treatment * Premix Concentration	1	.002	.161	.699
Error	8	.013		

Notes: Two-Way ANOVA was performed with the significance level of 5% (0.05).

Appendix 12. The statistical analysis of the carbohydrate content of the cookies

Source	df	Mean Square	F	Sig.
Baking Treatment	1	.071	.019	.895
Premix Concentration	1	4.083	1.082	.329
Baking Treatment * Premix Concentration	1	.002	.001	.982
Error	8	3.774		

Notes: Two-Way ANOVA was performed with the significance level of 5% (0.05).

Appendix 13. The statistical analysis of the fat content of the cookies

Source	df	Mean Square	F	Sig.
Baking Treatment	1	9.153	2.414	.159
Premix Concentration	1	1.415	.373	.558
Baking Treatment * Premix Concentration	1	.998	.263	.622
Error	8	3.792		

Notes: Two-Way ANOVA was performed with the significance level of 5% (0.05).

Appendix 14. The statistical analysis of the moisture content of the cookies

Source	df	Mean Square	F	Sig.
Baking Treatment	1	13.042	38.952	<,001
Premix Concentration	1	.869	2.597	.146
Baking Treatment * Premix Concentration	1	.980	2.928	.125
Error	8	.335		

Notes: Two-Way ANOVA was performed with the significance level of 5% (0.05).

Table 4.30 The statistical analysis of the protein content from all the cookies treatment

Source	df	Mean Square	F	Sig.
Baking Treatment	1	.166	.968	.354
Premix Concentration	1	.001	.004	.951
Baking Treatment * Premix Concentration	1	7.500E-5	.000	.984
Error	8	.171		

Notes: Two-Way ANOVA was performed with the significance level of 5% (0.05).

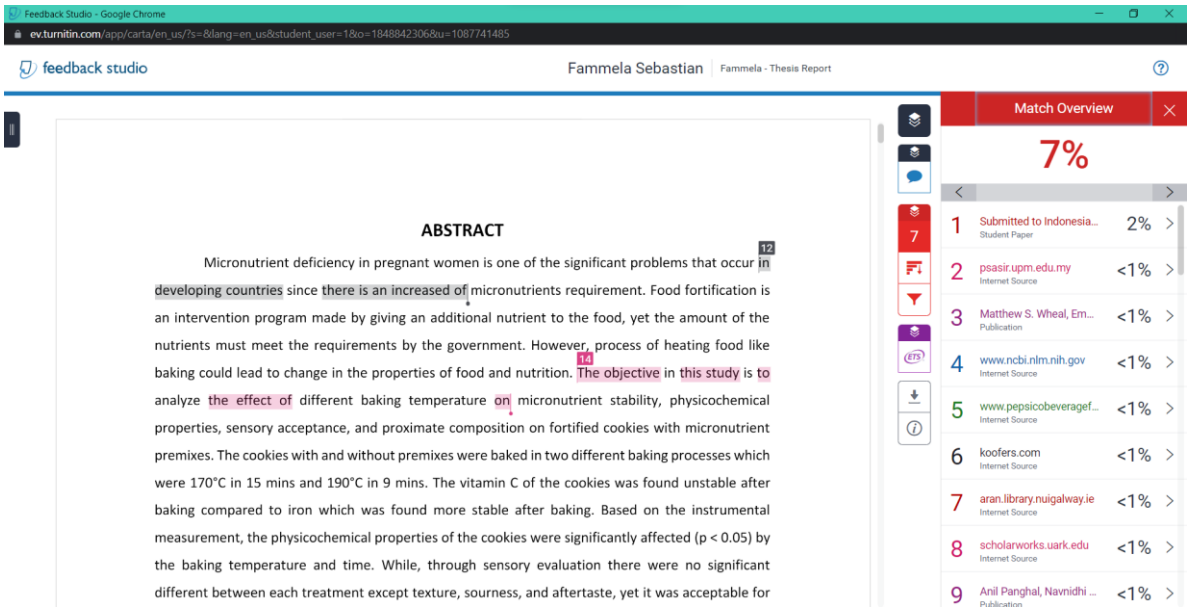
Appendix 2. Fortified cookie dough

Appendix 3. Fortified cookie baked at 170°C for 15 minutes

Appendix 4. Fortified cookie baked at 190°C for 9 minutes

Appendix 5. Baking process in the oven

Appendix 6. Cookie for Sensory Evaluation



Appendix 7. Turn it in Result