Supplementary Materials

Propolis as a Cariostatic Agent in Lozenges and Impact of Storage Conditions on the Stability of Propolis

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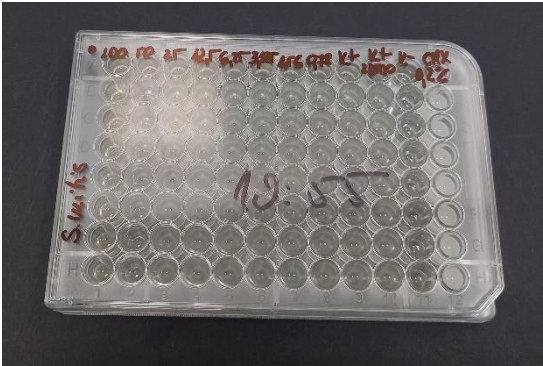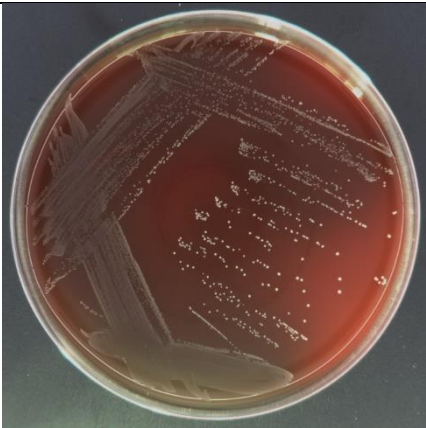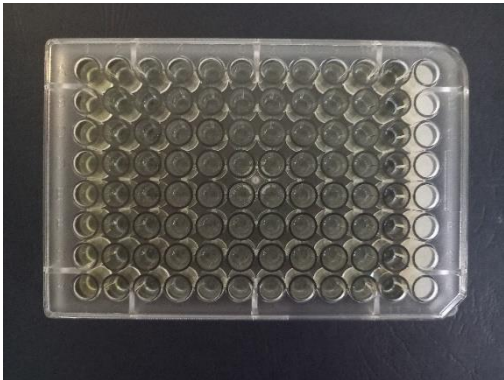
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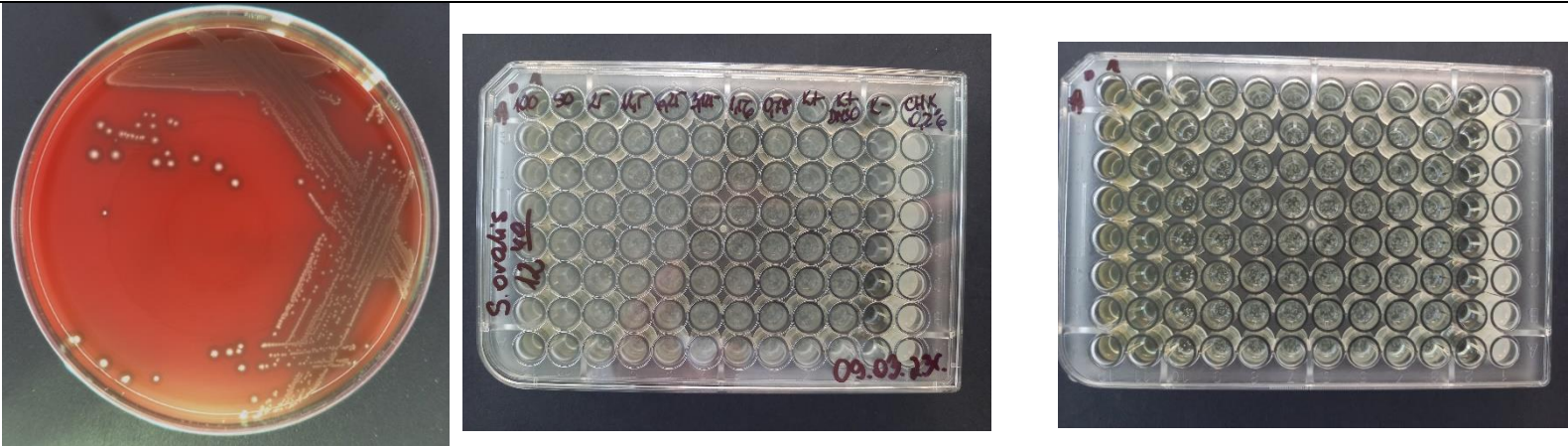
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Table S1. Photos presenting 96-well plates and plates with broth made to determine the minimum bactericidal concentration for EEP.

Bacteria	Photos of the plate presenting strains bacteria tested	Photos of the 96-well microtiter plates used to determination of the Minimum Inhibitory Concentration and Minimum Bactericidal Concentration of EEP	
Streptococcus mitis			
Streptococcus mutans			

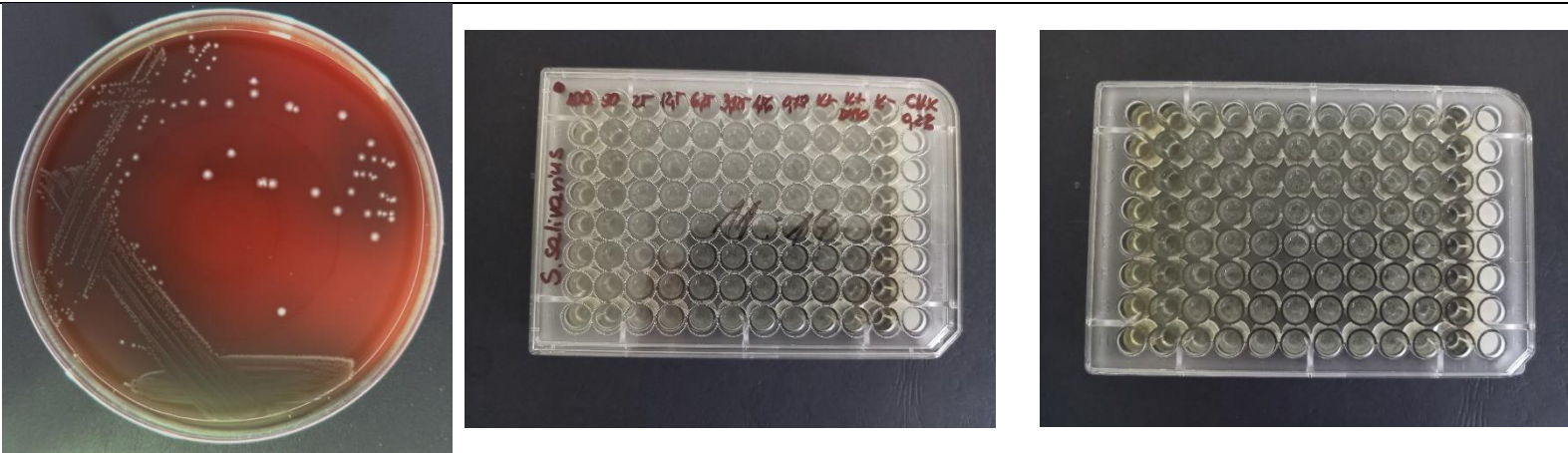| *Streptococcus oralis* | | | |
| *Streptococcus salivarius* | | | |

Table S2. Results of main effect of ANOVA analysis for MIC of tested EEP concentrations.

Effect	Multivariate Tests of Significance Sigma-restricted parameterization Effective hypothesis decomposition					
	Test	Value	F	Effect df	Error df	p
Intercept	Wilks	0,001428	14160,06	4	81,0000	0,00
Formulation	Wilks	0,000079	76,57	44	311,8403	0,00

Results marked in red are statistically significant at the level p ≤ 0.05.

Table S3. Results of main effect of ANOVA analysis for MIC values of tested lozenges.

Effect	Multivariate Tests of Significance0 Sigma-restricted parameterization Effective hypothesis decomposition					
	Test	Value	F	Effect df	Error df	p
Intercept	Wilks	0,004078	4762,232	4	78,0000	0,00
Formulation	Wilks	0,003115	48,173	24	273,3195	0,00

* Results marked in red are statistically significant at the level p ≤ 0.05.

Table S4. Results of Fisher's LSD Test for *S. mitis* MIC values of tested lozenges.

		LSD test; variable S. mitis						
		Probabilities for Post Hoc Tests Error: Between MS = .00048. df = 49.000						
Cell No.	Formulation	{1} .29812	{2} .28412	{3} .27088	{4} .35012	{5} .04212	{6} .06425	{7} .04037
1	PT		0.206348	0.016107	0.000018	0.000000	0.000000	0.000000
2	PT/HT	0.206348		0.231311	0.000000	0.000000	0.000000	0.000000
3	PT/UV30m	0.016107	0.231311		0.000000	0.000000	0.000000	0.000000
4	PT/UV60m	0.000018	0.000000	0.000000		0.000000	0.000000	0.000000
5	Control (saliva & bacteria)	0.000000	0.000000	0.000000	0.000000		0.048454	0.873476
6	Control (tablets WP & bacteria)	0.000000	0.000000	0.000000	0.000000	0.048454		0.033782
7	Control (saliva)	0.000000	0.000000	0.000000	0.000000	0.873476	0.033782	

Results marked in red are statistically significant at the level p ≤ 0.05.

Table S5. Results of Fisher's LSD Test for *S. mutans* MIC values of tested lozenges.

Cell No.	Formulation	{1} 1.3363	{2} 1.1121	{3} 1.0305	{4} 1.1420	{5} .05487	{6} .08238	{7} .05237
		LSD test; variable S. mutans **Probabilities for Post Hoc Tests Error: Between MS = .00267. df = 49.000**						
1	PT		0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
2	PT/HT	0.000000		0.002725	0.253465	0.000000	0.000000	0.000000
3	PT/UV30m	0.000000	0.002725		0.000078	0.000000	0.000000	0.000000
4	PT/UV60m	0.000000	0.253465	0.000078		0.000000	0.000000	0.000000
5	Control (saliva & bacteria)	0.000000	0.000000	0.000000	0.000000		0.292681	0.923359
6	Control (tablets WP & bacteria)	0.000000	0.000000	0.000000	0.000000	0.292681		0.251511
7	Control (saliva)	0.000000	0.000000	0.000000	0.000000	0.923359	0.251511	

Results marked in red are statistically significant at the level p ≤ 0.05.

Table S6. Results of Fisher's LSD Test for *S. oralis* MIC values of tested lozenges.

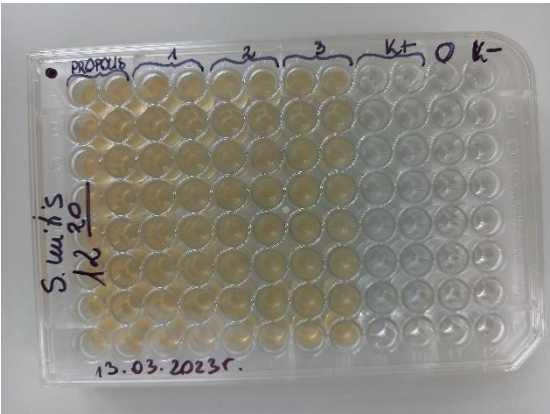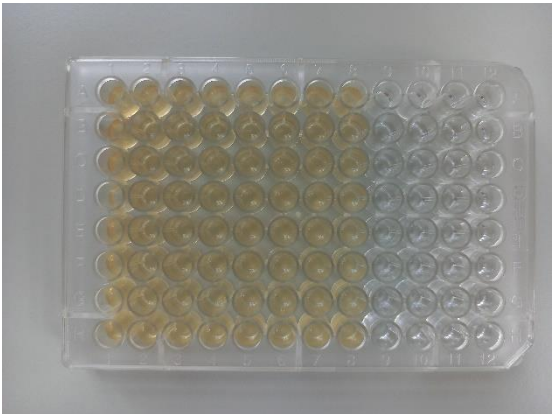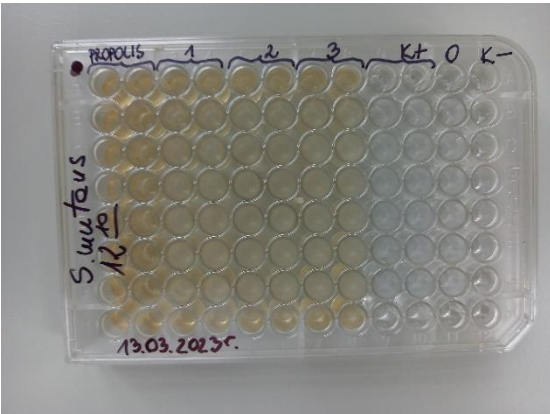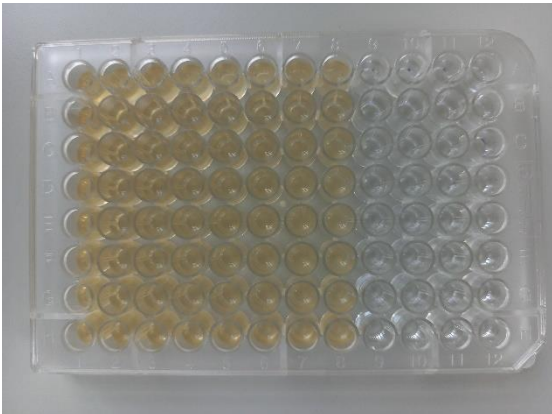| Cell No.	Formulation	{1} 1.2576	{2} 1.0605	{3} .98200	{4} 1.1495	{5} .05475	{6} .11000	{7} .05275
				LSD test; variable S. oralis				
				Probabilities for Post Hoc Tests Error: Between MS = .00116. df = 49.000				
1	PT		0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
2	PT/HT	0.000000		0.000029	0.000004	0.000000	0.000000	0.000000
3	PT/UV30m	0.000000	0.000029		0.000000	0.000000	0.000000	0.000000
4	PT/UV60m	0.000000	0.000004	0.000000		0.000000	0.000000	0.000000
5	Control (saliva & bacteria)	0.000000	0.000000	0.000000	0.000000		0.002121	0.906979
6	Control (tablets WP & bacteria)	0.000000	0.000000	0.000000	0.000000	0.002121		0.001507
7	Control (saliva)	0.000000	0.000000	0.000000	0.000000	0.906979	0.001507	

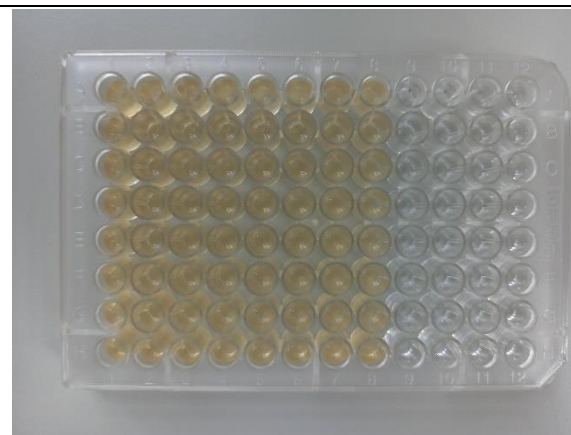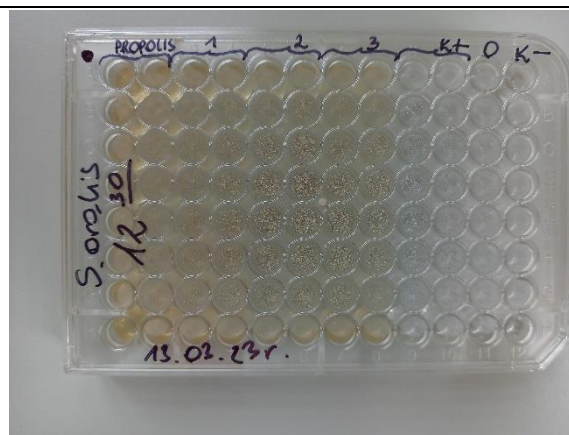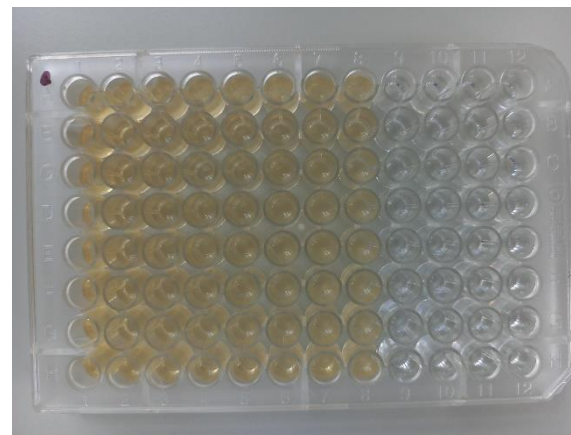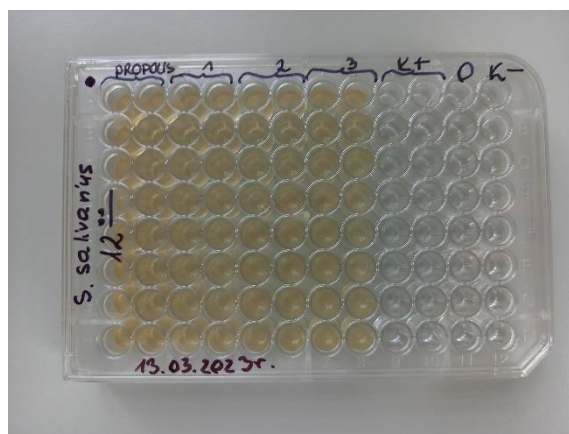Results marked in red are statistically significant at the level $p \leq 0.05$.

Table S7. Results of Fisher's LSD Test for *S. salivarius* MIC values of tested lozenges.

Cell No.	Formulation	{1} 1.3731	{2} 1.1195	{3} 1.0253	{4} 1.1885	{5} .05262	{6} .09975	{7} .05237
		LSD test; variable S. salivarius **Probabilities for Post Hoc Tests Error: Between MS = .00583. df = 49.000**						
1	PT		0.000000	0.000000	0.000014	0.000000	0.000000	0.000000
2	PT/HT	0.000000		0.017122	0.076924	0.000000	0.000000	0.000000
3	PT/UV30m	0.000000	0.017122		0.000088	0.000000	0.000000	0.000000
4	PT/UV60m	0.000014	0.076924	0.000088		0.000000	0.000000	0.000000
5	Control (saliva & bacteria)	0.000000	0.000000	0.000000	0.000000		0.223073	0.994803
6	Control (tablets WP & bacteria)	0.000000	0.000000	0.000000	0.000000	0.223073		0.220665
7	Control (saliva)	0.000000	0.000000	0.000000	0.000000	0.994803	0.220665	

Results marked in red are statistically significant at the level $p \le 0.05$.

Table S8. Photos presenting 96-well plates and plates with broth made to determine the minimum bactericidal concentration for prepared lozenges with EEP.

Bacteria	Photos of the 96-well microtiter plates used to determination of the Minimum Inhibitory Concentration and Minimum Bactericidal Concentration of EEP	
Streptococcus mitis		
Streptococcus mutans		

Streptococcus oralis	
Streptococcus salivar-ius	