

## **Streptococcus mutans**

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Optical densities revealing the growth of micro-organisms for undiluted solutions and percent solutions of the individual components of Listerine® (thymol 0.064%, eucalyptol 0.092%, menthol 0.042%, methyl salicylate 0.06%, ethanol 27%), Listerine® and various component mixtures (SD standard deviation).

Percent Solutions	Thymol		Eucalyptol		Menthol		Methyl Salicylate		ETOH	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD
100	0.054875	0.000457347	0.0546	0.001219291	0.053275	0.000492443	0.052675	0.000899536	0.053775	0.000899536
50	0.0614	0.000270801	0.0618	0.00100995	0.0611	0.001180394	0.060925	0.000500001	0.06075	0.000500001
25	0.06555	0.000685565	0.081775	0.01407158	0.070975	0.000991212	0.075625	0.005192943	0.0753	0.005192943
12.5	0.174325	0.05911404	0.407575	0.02431891	0.41375	0.01361286	0.396825	0.03348755	0.391075	0.03348755
6.25	0.3862	0.03038728	0.431575	0.004994913	0.4327	0.01029886	0.437675	0.03034172	0.4282	0.03034172
3.125	0.433225	0.02154846	0.45795	0.01984582	0.4676	0.02263287	0.4593	0.01474415	0.44285	0.01474415
1.5625	0.467875	0.02487695	0.4772	0.01276636	0.49065	0.01466072	0.50715	0.02195972	0.479175	0.02195972
0.78125	0.490075	0.02705455	0.500125	0.01475497	0.50635	0.02059395	0.527125	0.02587874	0.510875	0.02587874
0.390625	0.507375	0.02192645	0.513075	0.02499498	0.508275	0.01129024	0.54135	0.01338756	0.5063	0.01338756
0.1953125	0.5229	0.04464452	0.52415	0.02687781	0.5294	0.02610298	0.538625	0.02136438	0.50515	0.02136438
0	0.488475	0.03176984	0.517925	0.0377189	0.502825	0.006582495	0.5267	0.05549538	0.51745	0.05549538

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Percent Solution	Listerine		Eucalyptol + Menthol		Eucalyptol+ Thymol		Eucalyptol + Methyl Salicylate		Eucalyptol + Menthol + Methyl Salicylate		Eucalyptol + Menthol + Thymol	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD
100	0.0595	0.006576092	0.057475	0.01064196	0.052725	0.002580939	0.05335	0.002404163	0.054975	0.004914392	0.091525	0.006257893
50	0.060275	0.003429469	0.05905	0.003606242	0.05895	0.003818375	0.058625	0.003853733	0.058025	0.002722361	0.0666	0.000282842
25	0.062375	0.003924442	0.063025	0.003358757	0.061225	0.002368807	0.069375	0.008591348	0.066475	0.003500177	0.0607	0.000636396
12.5	0.105775	0.04267389	0.331375	0.00038891	0.163725	0.01580384	0.3484	0.06314464	0.341	0.04221427	0.062425	0.000459621
6.25	0.366575	0.07901919	0.382075	0.05759385	0.381425	0.1059599	0.3599	0.06477097	0.366475	0.04889644	0.34845	0.06774084
3.125	0.417575	0.1585687	0.365875	0.07378659	0.38965	0.1289763	0.354225	0.08198904	0.35	0.05487149	0.41135	0.1386636
1.5625	0.42355	0.1943837	0.373725	0.1015759	0.4158	0.1827871	0.367725	0.08184762	0.36205	0.0900854	0.43	0.1690692
0.78125	0.43085	0.1995455	0.411575	0.130143	0.42455	0.1952322	0.3993	0.1315926	0.389075	0.1198899	0.42525	0.184272
0.390625	0.429575	0.1807718	0.424025	0.1652155	0.442575	0.2104703	0.42535	0.1716148	0.4171	0.164968	0.437875	0.1807718
0.1953125	0.43205	0.1694228	0.4561	0.2127684	0.423425	0.17561	0.45065	0.1841306	0.463425	0.2052378	0.48075	0.199687
0	0.452375	0.2129452	0.481725	0.2065812	0.4848	0.2426084	0.421025	0.1456286	0.4478	0.1475732	0.454475	0.2069348