Shown at table 4. as MGIC value of both extract that red betel extract has reduce bacterial growth from conc. 7.5 – 9% w/v and aloe vera from 28.5 – 30 %w/v. This result was draw the line for mix both extract to determine which has the best mixture composition. Then the best composition will used in toothpaste gel formulation. Found that the best composition came from extract mixture of red betel : aloe vera = 2 : 1 (17% : 30%). After formulation found performance quality (pH and viscosity) the product from formulation was almost like as market product. To find out when the antibacterial activity was begin in the formulation product, the contact time test was carried out. From experiment clarify that activity was start from 120 seconds after applicaton.

Table 5: MGIC against *Streptococcus mutans*

Mixture Composition (red betel: aloe vera) (% w/v)	**Inhibitory zone diameter (cm)**		**Average (cm)**
	Petri 1	**Petri 2**	
2 (17%) : 1 (30%)	1.92	1.98	1.95
2 (17%) : 2 (60%)	1.54	1.57	1.55
1 (8.5%) : 1 (30%)	0.91	0.83	0.87
1 (8.5%) : 2 (60%)	-	-	-

Table 6: Comparision of Various Products

Product	**Physical Quality**		**Antimicrobial Activity (MGIC)**				
			Inhibitory zone diameter (cm)	**Contact time (seconds)**			
	pH	**Visc. (cP)**		**30**	**60**	**90**	**120**
A_0	6.91	190.30	-	+	+	+	+
A_1	6.72	195.50	1.6	+	+	+	-
S	6.50	170.00	1.9				

Note : A = Formulation product S = Market product

CONCLUSION

Antimicrobial activity against *Strepto-coccus mutans* of red betel and aloe vera has carried out. The best result came from mixture of red betel : aloe vera = 2 : 1. The quality of our product has relatively as like as the market product. Shown from contact time test that our product was effective after 2 minutes application.

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