**Total phenolic content and antioxidant activity of betel quid extract**

**N. NURSAZWI, Z.H.A. RAHIM, T. NALINA**  
Department of Oral Biology, Faculty of Dentistry, University of Malaya, Kuala Lumpur

**Objectives:** To evaluate the antioxidant activity and total phenolic content of aqueous extract of betel quid mixture (*Piper betel*, areca nut, gambir and lime) and its individual components.

**Methods:** Total phenolic content of aqueous extract of the individual component as well as the mixture was determined according to the Folin-Ciocalteu procedure. Antioxidant activity was assessed for radical scavenging ability against 2,2-diphenyl-1-picrylhydrazil (DPPH).

**Results:** Areca nut possessed the highest phenolic content (1142.46 µg of TAE/mg dry weight) and showed the highest antioxidant activity (IC$_{50}$ of 6.18 µg dry weight/ml). The betel quid mixture (IC$_{50}$ more than 1000 µg dry weight/ml) demonstrated the lowest antioxidant activity and has the lowest phenolic content (45.40 µg of TAE/mg dry weight). The IC$_{50}$ for ascorbic acid was found to be 4.93 µg dry weight/ml which is slightly lower than that of areca nut. There is a positive correlation between phenolic content and antioxidant activity for all samples ($r=0.996$, $p=0.001$).

**Conclusions:** Areca nut demonstrated the highest antioxidant activity (free radical scavenging ability) and this could be attributed to its high phenolic content.

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