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Active Compounds of Red betel (*Piper crocatum*) Extract for Safe Antioxidant as Cytotoxicity Test Revealed

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Abstract : The objective of this study was to explore the red betel active compounds promising as a safe antioxidant based on fibroblast cell toxicity test. **Methods**: Sample of red betel collected from Balai Materia Medica, Batu East Java. Red betel extracted with ethanol by percolation method. Phytochemical compounds were analyzed using Tin Layer Chromatography (CTLC), High Performance LiquidChromatography (HPLC) and Fourier Transform–Infra Red Spectroscopy (FT-IR). The scavenging activity of free radical was determined by 2,2-diphenyl 1-picrylhydrazyl (DPPH) method, and the cytotoxicity test was determined by exposed fibroblast cell to ethanol extract red betel for 72 hours. Viability test further assessed by 3-(4,5-Dimethylthiazol-2-yl)-2,5-diphenyltetrazolium bromide(MTT) assay. **Results**: The main compounds of red betel extract are flavonoids and tannins. HPLC results showed epigenin is the main compound in red betel extract and the major functional group as follows C-O-C; C-NO2; C=O, CH; C=C; C-N; N-C-N, OH and NH. Red betel extract has 30,20 % antioxidant potency (IC_{50}). Red betel dose 400µg/ml is toxic to fibroblast cell. **Conclusion**: Red betel extract is safe source of antioxidant based on toxocity test.
Keywords: red betel extract, antioxidant, toxicity test.

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