

Table. Platelet Aggregation Inhibition

	Adenosine	Water Extract	Hexane Extract	Chloroform Extract	Ethanol Extract	Methanol Extract
Inhibition (%)	68.6±4.3	72.7±3.3	40.1±5.6	44.7±2.7	43.5±6.6	68.8±6.7

Values are mean ± SE (n=8). Platelet counts was 1.5x10<sup>8</sup> cells/mL

of 250mg/ml showed a potent inhibition effect toward platelet aggregation. Compared with other extracts, water extract exhibited the strongest inhibition as well as adenosine (50µM/ml) as a positive control.

In Addition to this, methanol extracts showed relatively similar inhibition pattern with adenosine. Finally, this initial finding has provided the evidence of *Phyllanthus niruri* L. action in platelet functions.

## PRODUCTION OF ANTI-MADECASSOSIDE POLYCLONAL ANTIBODY AND ITS APPLICATION FOR QUALITY CONTROL OF *CENTELLA ASIATICA* (L.) URBAN

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Madecassoside is the major triterpenoid saponins derived from *Centella asiatica* (L.) Urban, a medicinal plant used in Ayurvedic medicine for centuries. Madecassoside possesses various biological activities, including antidepressant effect (1), burn wound healing and anti-inflammatory (2). In this study, we developed the immunoassay method for quantitative analysis of the major compounds in *C. asiatica*. A sensitive indirect competitive enzyme-linked immunosorbent assay (ELISA) was developed using polyclonal antibody against madecassoside. Madecassoside-bovine serum albumin conjugate was immunized to rabbits for producing polyclonal antibody. The results showed that the antibodies were specific for madecassoside and asiaticoside. The

range of the assay extends from 0.39 to 50 µg/ml. A good correlation between ELISA and HPLC methods was obtained when analysis of total triterpenoid saponins in the crude extracts of plant samples. In addition, the products containing *C. asiatica* in various preparations were determined triterpenoid saponins content by competitive ELISA. The developed ELISA method can be used for quality assessment of *C. asiatica* and their products.

**References:** (1) Liu, M. R., Han, T., Chen, Y., Qin, L. P., Zheng, H. C. and Rui, Y. C. (2004). Journal of Chinese Integrative Medicine, 2 (6), 440-444. (2) Li, H., Gong, X., Zhang, L., Zhang, Z., Luo, F., and Zhou, Q. (2009). Phytomedicine, 16 (6-7), 538-546.

## METABOLIC EFFECTS OF *CITRUS GRANDIS* WHOLE FRUITS EXTRACT IN THE STREPTOZOTOCIN-INDUCED DIABETIC RATS

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*Citrus grandis* fruits are used as a folk remedy in Korea for hangovers, peel of the fruit in Taiwan for the treatment of stomach ache, in Cameroon traditional

medicine for treatment of hypertension, in Chinese medicine as antitussive, expectorant and antiasthmatic. Dried *Citrus* peels, known as Chenpi are used in