Determination of andrographolide and neoandrographolide levels in hempedu bumi (Andrographis paniculata Nees) grown under rubber ecosystem

ABSTRACT

Two active compounds, andrographolide and neoandrographolide were extracted from Andrographis paniculata planted under rubber ecosystem and analysed using isocratic HPLC (High Performance Liquid Chromatography) system. Quantity of andrographolide and neoandrographolide from the methanol extract of the samples grown under rubber were compared to the extracts from the sample grown by monocropping method in Serdang which was taken as control. Andrographolide (ADGP) level of A. paniculata grown under rubber was slightly lower (9.40%) compared to the control (23.23%). However, neoandrographolide (NADGP) from A. paniculata grown under rubber was higher (19.83%) compared to the extract of A. paniculata from the control (11.13%). The differences could be due to the biochemical pathway of the compounds influenced by the environment, which has some effect on the synthesis of secondary or tertiary metabolites in the plant.

Keyword: Andrographis paniculata; Hempedu bumi; Diterpenoids; Andrographolide; Neoandrographolide; High performance liquid chromatography