Background. The antimalarial drug resistance is an obstacle in the effort to overcome malaria. New alternative antimalarial drug was become in high attention of urgent need. Current antimalarial drugs were derived from plants. Therefore, plant is considering as a source of new drugs. *Cratoxylum sumatranum* stembark dichloromethane extract was reported to inhibit *Plasmodium falciparum* growth by Lactate Dehydrogenase (LDH) assay. The Fraction-6 was the most active fraction with Inhibitory Concentration 50% (IC50) value of 0.12 µg/ml. This study aims to obtain the active subfraction from Fraction-6 of *C. sumatranum* stembark.

Methods

Dichloromethane extract of *Cratoxylum sumatranum* stembark

Open column chromatography

Fraction 1 – 12 (F1-F12)

Fraction 6

Preparative TLC

Antimalarial activity by LDH assay

SubFraction 1 – 10 (SB1-SB10)

Results

Screening antimalarial activity of all fractions at 4 µg/mL.

- Two of ten subfractions of Fraction-6 were showed potential antimalarial activity by LDH assay, namely subfraction-4 and subfraction-7.
- Phytochemistry screening showed that subfraction-4 and subfraction-7 contain xanthone compounds.

TLC Profile of 10 subfractions

Stationary phase: Silica gel RP-18; Mobile phase: MeOH/Water (90/10 v/v)

- λ = 254 nm
- λ = 366 nm

HPLC profile and UV spectra of SB4 and SB7 using RP-18 Shimpack 9.4 x 250 mm, mobile phase MeOH:water (75.25 v/v), flow rate 1.5 ml/min.

Conclusion

Subfraction-4 (SB4) showed the strongest antimalarial activity among ten subfractions. The active xanthone compound in SB4 suggested to be further isolated to obtain the identified active compound which take a role in antimalarial activity of *C. sumatranum*.

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