Malaria is a type of infectious disease that mostly occurs in tropical and subtropical regions, it remains a problem in Indonesia and the world (World Health Organization, 2015; Crompton et al., 2014; White et al., 2014). Antimalarial drugs resistance is a challenge for the elimination of malaria (Talisuna et al., 2004). Indonesia has 64 species of Garcinia and 25 species in Kalimantan (Uji, 2007). G. parvifolia Miq. is a tropical plant that can be found wildly in peat forests, primary and secondary forests and submontana forests (Merza et al., 2004). It also as known as *Garcinia dioica* Blume and *Garcinia globulosa* Ridley. The common name for it is cherry mangosteen, kandis and yellow kandis. *G. parvifolia* Miq. in Indonesia has a local name as “asam kandis” (Lim, 2012). This study used *G. parvifolia* Miq, because it is well known to be a rich source of bioactive prenylated xanthones and triterpenes. Both of them are reported have an antimalarial activity.

**METHOD**

- **Extraction**
  - Ultrasound assisted extraction
  - n-hexane
  - Dichloromethane

- **Fractination**
  - Dichloromethane extract (BP12-S-D)
  - Ultrasound assisted extraction
  - Dichloromethane
  - Residue
  - Methanol extract
  - Residue

All extracts were tested antimalarial activity by LDH assay.

**RESULT**

- All extracts inhibit *P. falciparum* growth by LDH assay
- The strongest inhibition was showed by dichloromethane stem extract (BP12-S-D) with the IC₅₀ value of 6.61 µg/ml
- Fractionation of BP12-S-D was obtained 10 fractions and all fractions were identified using TLC
- Fraction-1 (F1) performed the strongest inhibition of the parasite growth with IC₅₀ value of 6.00 µg/mL
- F1 was identified using HPLC and 2 major peaks were observed (A and B)

**CONCLUSION**

In this study 10 fractions were separated from *G. parvifolia* Miq. stem extract. The fraction-1 (F1) of dichloromethane extract of *G. parvifolia* Miq. stem was the strongest antimalarial activity in LDH assay. F1 showed active antimalarial activity with the IC₅₀ value of 6.00 µg/mL against *P. falciparum* 3D7. It might be a potential candidate for the new antimalarial drug.

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