







### C. Total Polyphenol

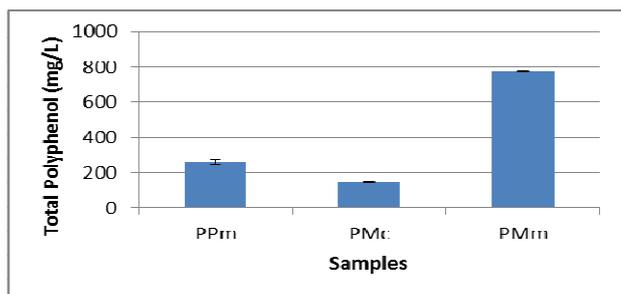


Fig. 5. Total Polyphenol of PPm (Powder of *Phaleria macrocarpa*), PMc (Powder of *Morinda citrifolia*), PMm (Powder of *Melastoma malabathricum*). I : Standard deviation of triplicate.

Figure 6 showed that the dried leaf of Mm have the highest polyphenol. Interestingly dried fruit of Pm have total polyphenol three times low than dried leaf of Mm, which means, there is another compounds act as antioxidant besides polyphenol. The compound must be very reactive with oxygen or easily to oxidated, as shown in Figure 6, total polyphenol of Pmfe not so differ with Mmle. Quercetin was found to be the most active as radical scavenger in DPPH method with  $IC_{50}$  of  $0,69 \mu M$ .  $\alpha$ -Amyrin and kaempherol-3-O-(2'', 6''-diO-p-trans-coumarol) glycoside demonstrated the strongest activities in the anti-inflammatory assay of TPA mouse ear oedema with  $IC_{50}$  of 0,11 and 0,31 mM/ear respectively in Mm [12].

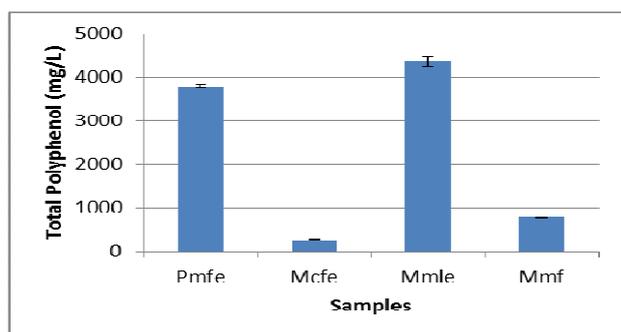


Fig. 6. Total Polyphenol of Pmfe (*Phaleria macrocarpa* fruit extract), Mcfe (*Morinda citrifolia* fruit extract), Mmle (*Melastoma malabathricum* leaf extract) and Mmf (*Melastoma malabathricum* fruit) I : Standard deviation of triplicate.

Some compounds successfully isolated from Mm by using spectroscopic techniques, resulted in the isolation of a series of flavonoids, triterpenoids and alkaloids. These compounds are  $\alpha$ -amyrin, patriscabratine, auranamide, quercetin, quercitrin and kaempherol-3-O-(2'', 6''-diO-p-trans-coumarol) glycoside [12],[20]. The major flavonoid compounds in Pm were kaemferol, myricetin, naringin and rutin [21].

### IV. CONCLUSIONS

The kinds of the unique plant of Indonesia *Phaleria macrocarpa*, *Morinda citrifolia* and *Melastoma malabathricum* were the potent antioxidant. Interestingly

*Melastoma malabathricum* leaf have the highest antioxidant activity and polyphenol compared to others.

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