4 CONCLUSION

Investigation of the chemical constituents of the extracts from the green fruits, ripe fruits, flowers and seeds resulted in the isolation of seventy-three compounds. Twenty-five compounds were isolated from the extracts of the green fruits[A] and twenty-five compounds were obtained from the extract of the ripe fruits[B]. Twenty-eight compounds were isolated from the extracts of the flowers[C] and fifteen compounds were obtained from the extract of the seeds[D]. Twelve of them are the new compounds[E], two are the new naturally occurring but synthetically known compounds[F]. In addition, fifty-six compounds were isolated from this plant for the first time.

In term of the types of the secondary metabolites, they are thirty-one xanthones, six biflavones, six isoflavones, five benzophenones, one glycerol derivative, four chalcones, four flavans, four flavonols, three flavones, two chromones, two homoisoflavans and one triterpene. Some of the compounds exhibited very effective radical scavengers. This work demonstrated that *G. dulcis* are among the potential sources of antioxidative activity. Biological activities such as anti-HIV, cyctoxic, antibacterial, antimicrobial and anticancer need to be further investigated in order to search for active compounds. Further exploration should be performed to search for compounds with greater efficacy and specificity for the treatment of many human diseases. The acetone extract of the green fruits, ripe fruits, flowers and the methanolic extract of flowers showed strong radical scavenging activity. **GD1**, **GD20**, **RD5**, **RD14**, **RD16**, **FD5**, **FD8**, **FD11** and **FD12** acted as potent radical scavengers with IC_{50} 5.90 - 13.00 μM which were more effective than BHT (IC_{50} 19.00 μM). **RD5** and **RD16** exhibited stronger antioxidant activity (IC_{50} 5.90 and 6.10 μM, respectively)

than ascorbic acid (IC_{50} 6.50 μM).

[A] **GD1-GD25**

[B] **RD1-RD17**, **GD1, GD2, GD10, GD13**, **GD14**, **GD20**, **GD21** and **GD23**

[C] **FD1-FD19, GD7, GD8**, **GD13**, **GD14**, **GD20**, **RD6-RD8** and **RD12**

[E] **GD9**, **GD16**, **GD21**, **RD5**, **RD17**, **FD2**, **FD9**, **FD15**, **FD17**, **FD18**, **FD21** and **SD7**

[F] **GD3** and **RD3**