

Analyzing statistically the oxyresveratrol content using Kruskal Wallis method obtained a significant value of 0.006 with a confidence level of 95%. This indicates that there was a significant difference of oxyresveratrol content from mulberry root extract using different polarity solvent.

CONCLUSION

Antityrosinase and antioxidant activity of 96% ethanol extract of mulberry root are the most highest than other of the fifth extract. Oxyresveratrol level is the most highest in the methanol extract 100%. So, in this study, Antityrosinase and antioxidant activity of mulberry root extract was not related to oxyresveratrol content in extracts.

ACKNOWLEDGEMENTS

The authors acknowledge the financial support received from PITA University of Indonesia, for their support and encouragement in carrying out his college work.

CONFLICTS OF INTERESTS

The authors declare no conflicts of interest.

REFERENCES

- Batubara, I., Darusman, L.K., *et al.* Flavonoid from *Instia Palembangica* as Skin Whitening Agent. *JBiol Sci.* 2011, 8, 475-480.
- Batubara, I., Darusman, L.K., Mitsunaga, T., Rahminiwati, M., Djauhari, E. Potency of Indonesia medicinal plant astyrosinase inhibitor and antioxidant agent. *JBiol Sci.* 2010, 10, 138-144.
- Kim KJ, Kim M, Cho GS, Kim KM, Kim WS, Lim HY. Biotransformation of Mulberroside a from *Morus alba* results in enhancement of tyrosinase inhibition. *Ind Microbiol J.* 2010, 1.
- Kim, Y.M.; Yun, J.; Lee, C.K.; Lee, H.; Min, K.R.; Kim, Y. Oxyresveratrol and hydroxystilbene compounds. Inhibitory effect on tyrosinase and mechanism of action. *J. Biol. Chem.* 2002, 277, 16340-16344.
- Zhou J, Li XS, Wang W, Guo X, Lu YX, Yan PX. Variations in the levels of Mulberroside A, Oxyresveratrol, and Resveratrol in mulberries in different seasons and during growth. *The Scientific World Journal.* 2013, 2.
- Lee HS ,Choi YS, Kim H. Mulberroside isolated from the leaves of *Morus alba* L inhibits melanin biosynthesis. *Pharmaceutical Society of Japan.* 2002, 1046.
- Chang L.W, Juang L J., Wang B S., *et al.* Antioxidant and Antityrosinase Activity of Mulberry (*Morus alba* L) twigs and Root Bark. *Food and Chemical Technology* 49. 2011, 785-790
- Chang, T.-S. An Updated Review of Tyrosinase Inhibitors. *International Journal of Molecular Sciences.* 2009, 10, 2440-2475.
- Islamudin Ahmad, Rissyelly, Agus Kurniawan, Abdul Mun'im. Screening Of Extraction Method For Alkaloid Enrichment Of *Peperomia Pellucida* (L.) Kunth. *Asian J Pharm Clin Res.* 2017, 10, 214-219
- Ayinampudi, S.R., Y.H. Wang, B. Avula, T.J. Smillie and I.A. Khan. Quantitative analysis of oxyresveratrol in different plant parts of *Morus* species and related genera by HPTLC and HPLC. *J. Planar Chromatography-Modern TLC.* 2011, 24, 125-129.
- Baschong, W., Herzog, B., Artmann, C. W., Mendrok, C., Mongiat, S., & Lupia, J. A. *Nanotopes - A Novel Ultra-Small Unilamellar Carrier System for Cosmetic Actives.* editor M. R. Rosen, Delivery System Handbook for Personal Care and Cosmetics. Norwich, N.Y.: William Andrew Publishing 2005, 365 - 394.
- Farouk K El-Baz, Amal Z Hassan, Howaida I Abd-Alla, Hanan F Aly, Khaled Mahmoud. Phytochemical Analysis, Assessment Of Antiproliferative And Free Radical Scavenging Activity Of *Morus Alba* And *Morus Rubra* Fruits. *Asian J Pharm Clin Res.* 2017, 10, 189-199