

Chapter 4

Conclusion

1. Among 4 different varieties of mulberry green tea extracts, "KOK-MOO" extract exhibited highest antioxidant activity, followed by "JEEN", "BU-RERUM 60" and "DOK-INN" extract, respectively.
2. The optimum condition for preparing "KOK-MOO" water extract involved extracting mulberry green tea at 60°C for 5 min in first repetition, while ethyl acetate extracts of same varieties could be prepared by extracting mulberry green tea at room temperature for 0.5 h.
3. Antioxidant activities of both extracts increased with an increasing concentration and were concomitant with the development of reducing power.
4. Antioxidant activity of both extracts at alkaline and neutral pH were stronger than that at acidic pH.
5. Synergistic effect of water extract with citric acid in β -carotene/linoleic acid system was observed. However, no synergistic effect of both extracts with α -tocopherol and ascorbic acid was obtained.
6. Water and ethyl acetate extracts acted as radical scavenger in a concentration-dependent manner.
7. Dihydroxy-phenolics were present in mulberry green tea ethyl acetate extract.
8. Mulberry green tea ethyl acetate extract (100 and 200 ppm) retarded the oxidation of lard and partially purified fish oil during 18 days of storage at room temperature (28-30 °C).
9. Mulberry green tea ethyl acetate extract (0.125 and 0.5 $\mu\text{g/ml}$) inhibited the Fe^{2+} -induced LDL oxidation more effectively than water extract at the same concentrations. However, the ethyl acetate extract showed lower efficiency in inhibition of LDL oxidation than α -tocopherol at a concentration of 0.5 $\mu\text{g/ml}$.