

## A Study on the Functionality in Natural Colorants

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### Abstract

The aims of this study were to examine the efficacy of phytochemical compounds of colorants as anti-oxidant agent. The bioactive properties of natural colorants were studied by total phenolic contents, 2,2-diphenyl-1-picrylhydrazyl (DPPH) radical scavenging and anti-bacterial activity in *Escherichial coli*. The concentration ( $IC_{50}$ ) of various extracts from colorants required to exert 50% reducing effect on DPPH radical were found to be 0.007–4 mg/ml. Especially, the gallnut (*Schlectendalia Chinensis*) displayed remarkable effect of DPPH as compared to positive control ascorbic acid. The total phenolic contents (TPC) and restraint of *E coli*. also analyzed.

It was found that gallnut extracts effectively inhibited DPPH radical at a concentration below 0.01 mg/ml. Natural colorant extracts could be of good resources as anti-oxidant and anti-bacterial agents. The results suggest that our study may contribute to the development of natural and functional materials with potential application to reduce oxidative damage

### 참고문헌

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