

*Lactobacillus plantarum*에 의한 흰 민들레 발효물의 항산화 및 광노화 억제 효과

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In this study, *Lactobacillus plantarum* SM4, a strain producing α -glucosidase, was isolated from kimchi and fermented with white *Taraxacum coreanum* to enhance the production of bioactive compounds. Then, total polyphenol content(TPC), total flavonoid content(TFC), radical scavenging activity(RSA), tyrosinase inhibitory activities(TIA), collagenase inhibitory activities(CIA) were measured to evaluate the skin whitening and anti-wrinkle effects of the fermented product. TPC of fermented white *T. coreanum* was 41.8 ± 0.26 mg GAE/g DW, which was about 2 times higher than hot-water extraction of 21.4 ± 0.67 mg GAE/g DW. RSA, an indicator of antioxidant activity, was $65.6 \pm 4.7\%$ in fermentation, 4 times higher than that of hot-water extract. TAI and CAI, indicators of whitening and anti-wrinkle effects, were $87.9 \pm 4.73\%$ and $66.7 \pm 3.48\%$, respectively, which were 2.4 and 1.5 times higher than those of hot-water extraction. When comparing the UVA(320 nm) protection effects of fermented and hot-water extraction, the fermented white *T. coreanum* was higher with a absorption rate of 64.7% and 15.2% respectively.