

### Study on Benzo(a)pyrene Content of Medicinal Herbs and Transfer Ratios in their Extracts

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In this study, both of the concentration of benzo(a)pyrene in 5 species (total 50 samples) of medicinal herbs and their transfer ratios in the preparation steps of water extract(decoction) and soft extract, were measured by HPLC/FLD. The detected benzo(a)pyrene concentrations from the medicinal herbs ranged from non-detection to 37.54  $\mu\text{g}/\text{kg}$ , and their average was 6.73  $\mu\text{g}/\text{kg}$ . In particular, the concentration of benzo(a)pyrene in Coptidis Rhizome was turned out to be the highest of 37.54  $\mu\text{g}/\text{kg}$ . The detected benzo(a)pyrene concentrations from water extract(decoction), soft extract and remnant after boiling, ranged from non-detection to 2.31  $\mu\text{g}/\text{kg}$ , non-detection to 2.28  $\mu\text{g}/\text{kg}$ , and 2.18 to 21.91  $\mu\text{g}/\text{kg}$ , respectively. In preparation of water extract(decoction) and soft extract, transferred benzo(a)pyrene was not detected or, if transferred, the maximal transfer ratios of benzo(a)pyrene were shown to be 8.9% and 9.8%, respectively. Therefore, the content of benzo(a)pyrene in the samples of herbal medicine used in this study, were reduced by more than 90% in preparation steps of water extract (decoction) and soft extract.