

Survey on Organochlorine Pesticide Residues in Raw Materials of Traditional Chinese Medicine (IV)

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ABSTRACT

The evaluation of organochlorine pesticide residues in raw materials of traditional Chinese medicine (TCM) is essential to the quality control of TCM. In this study, the contents of organochlorine pesticides in 9 raw materials of TCM, including *Rehmanniae Radix*, *Perillae Folium*, *Ligustri Lucidi Fructus*, *Alismatis Rhizoma*, *Corni Fructus*, *Polygalae Radix*, *Atractylodis Rhizoma*, *Panacis Quinquefolii Radix*, and *Asari Radix*, were investigated. For each raw material of TCM, 9 organochlorine pesticides, including BHC, DDT, aldrin, dieldrin, endrin, PCNB, hexachlorobenzene, chlordane, and heptachlor, were analyzed by GC/ECD and confirmed by GC/MS/MS. Twenty samples per each raw material of TCM were tested. The results showed that the pesticide residues were not detected both in all samples of *Alismatis Rhizoma* and *Atractylodis Rhizoma*. However, BHCs, PCNB, and hexachlorobenzene existed in all samples of *Panacis Quinquefolii Radix*, in 0.01~5.26 ppm, 0.36~13.08 ppm, and 0.02~0.50 ppm, respectively. The residues of organochlorine pesticides in sample of all species other than *Panacis Quinquefolii Radix* were less than 0.1 ppm, except one sample of *Asari Radix*, in which the residue of PCNB was 0.35 ppm. The results of this study could be used as the references for the regulatory authority.

Key words: traditional Chinese medicine, organochlorine pesticide, BHC, DDT, aldrin, dieldrin, endrin, PCNB, chlordane, hexachlorobenzene, heptachlor