

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

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ABSTRACT

The evaluation of organochlorine pesticides 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 14 raw materials of TCM as follows, *Aconiti Lateralis Praeparata Radix*, *Citri Reticulatae Pericarpium Viride*, *Sophorae Flavescentis Radix*, *Curcumae Rhizoma*, *Astragali Radix*, *Farfarae Flos*, *Polyporus*, *Trichosanthis Radix*, *Gastrodiae Rhizoma*, *Alpiniae Officinari Rhizoma*, *Angelicae Pubescentis Radix*, *Cimicifugae Rhizoma*, *Fritillariae Cirrhosae Bulbus* and *Red Ginseng* were investigated. For each raw material of TCM, the residues of 11 organochlorine pesticides, such as aldrin, BHC, chlordane, DDT, dicofol, dieldrin, endosulfan, endrin, heptachlor, hexachlorobenzene, and quintozone, were analyzed by GC/ECD and confirmed by GC/MS. Twenty samples per raw material of TCM were tested. The result showed that all 20 samples of *Red Ginseng* were found to contain PCNB of 0.047~16.610 ppm and 18 samples contained hexachlorobenzene of 0.004~1.224 ppm. Among 20 samples of *Red Ginseng*, 6 samples were over limit of PCNB. Besides, 17 samples of *Citri Reticulatae Pericarpium Viride* contained dicofol of 0.083~5.789 ppm, 2 samples of *Trichosanthis Radix* contained DDT of 0.007 ppm, one sample of *Polyporus* contained chlordane of 0.067 ppm, one sample of *Astragali Radix* contained DDT of 0.016 ppm and one sample of *Farfarae Flos* contained hexachlorobenzene of 0.006 ppm. The results of this survey can serve as the references for the regulatory authority.

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