

[PD4-25] [2003-10-10 14:00 - 17:30 / Grand Ballroom Pre-function]

Study of the Optimal Condition for Maximum Extraction Efficiency in Armeniaceae Semen Powder

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Armeniaceae Semen is a seed of *Prunus armeniaca* Linne var. *ansu* Maximowicz, which belongs to Rosaceae family. It contains amygdalin and fatty oil and is widely used to treat asthma, dyspnea and edema. It was reported that D-amygdalin in Armeniaceae Semen undergoes hydrolytic reaction by emulsin when using water, and especially it is almost decomposed when extracting from powder type. We set up a condition where we can achieve the maximum extraction yield through the study of the methods to restrain emulsin from causing hydrolysis of D-amygdalin in Armeniaceae Semen in the aqueous solution and to prevent D-amygdalin from being converted into neoamygdalin. We also conducted quantitative analysis and separation of D-amygdalin and neodamygdalin through the Reversed-phase HPLC method using C18 column. HPLC condition as follows
Column : Synergi 4 μ Hydro-RP 80 Å (4.6mm \times 250mm) Mobile Phase : 10mM Sodium Phosphate buffer (pH 3.5) containing 8.5% Acetonitrile Column Temperature : 10 $^{\circ}$ C Wavelength : 214nm

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Construction of Database and Analysis of Specifications of Pharmaceutical Agents Listed in Korean Compendiums

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Several Compendia are effective in relation with production and supply of pharmaceutical agents in Korea. Those compendia exist only in printed documents, which are not suitable for the analysis of their contents and inter-relationship among them when they have specifications on the same or related pharmaceutical agents. For the analysis of contents of Korean compendia, database system is designed and all of the available data are entered into relational database system. Every specification was analyzed into several database tables, fields and relations between tables. All of the reagents and standard materials specified in the compendia also analyzed into organized database tables, fields and relations with specifications of pharmaceutical agents. The database program was created with Microsoft Access for initial construction of database and upsized to Microsoft SQL server version for network access of the database. The poster will give architecture of database and some statistical aspect of specifications and reagent usages.

[PD4-27] [2003-10-10 14:00 - 17:30 / Grand Ballroom Pre-function]

Quality Control of Adenophorae Radix

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Adenophorae Radix, the roots of *Adenophora triphylla* var. *japonica* Hara (Campanulaceae) is known to be an anti-inflammatory and antitussive drug used for the treatment of lung disease. However quality control method is not established yet. This study is to establish the quality control method of Adenophorae Radix. From the roots of this plant, we isolated (6R,7R)-E,E-tetradeca-4,12-diene-8,10-diyne-1,6,7-triol (1) as a marker compound for the quality control and determined its content by HPLC-UV detector. The content of 1 in *Codonopsis radix* is very low, therefore it can be used as a marker compound to distinguish *Codonopsis radix* from Adenophorae radix. Furthermore, 1 is easy to analyze by HPLC, 1g of Adenophorae radix was enough to analyze it. Analytical condition of 1 using HPLC was established as follows ; column : RP-18 column, eluent : gradient elution of

MeOH and H₂O (30: 70 then 100 : 0), detection : UV 220nm. Content of 1 in Adenophorae Radix was 0.006 ± 0.003% (n = 43). In addition, total ash content was 6.5 ± 4.0%, and loss on drying was 12.1 ± 2.1%.

[PD4-28] [2003-10-10 14:00 - 17:30 / Grand Ballroom Pre-function]

Quantitative Analysis of Puerarin and Daidzein in Domestic and Imported Puerariae Radix by High Performance Liquid Chromatography

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This study was carried out to investigate the quality control of domestic and imported Puerariae Radix. It was analyzed by HPLC using μ -Bondapak C₁₈ column with 35% MeOH containing 1% CH₃CO₂H system as the mobile phase at UV 254nm. Good linearity showed over the range of 10 to 200 μ g/ml ($r^2=1$) for Puerarin, and 0.5 to 10 μ g/ml ($r^2=0.9999$) for Daidzein. The average contents of Puerarin and Daidzein were 5.5±1.2%(Domestic), 5.3±0.7%(Imported), and 0.05±0.02%(Domestic), 0.08±0.02%(Imported). The average recovery rates of Puerarin and Daidzein were 101.8±1.9% and 97.2±0.7%, respectively.

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Studies on the quality control of Araliae continentalis Radix

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The Araliae continentalis Radix is the root of Aralia continentalis Kitagawa, which belongs to the Araliaceae and is distributed in Korea, Japan, Manchuria, China and Sahalane. It is generally used as a folk medicine for its excellent medical action and efficacy in various symptoms such as headache, edema, inflammation, rheumatism and neuralgia. (-)-Pimara-8(14)-15-dien-19-oic acid (1) and 1-kaur-16-en-19-oic acid have been reported as the major constituent of A. continentalis Radix. Essential oils such as limonene, sabinene, myrcene, humulene and sesamin, β -sitosterol are also reported as constituent elements. However, the marker standard for quality control has not been reported yet. It is necessary to select the marker compound and establish the standard for the quality control. In this study, we selected (-)-pimara-8(14)-15-dien-19-oic acid (1) as an analytical marker compound. Quantitative analysis of (1) by GC after methylation showed 1.00±0.29% of (1) in 41 samples collected throughout Korea. Total ash content was 5.22±0.83% and loss on dring was 9.55±1.13%.

[PD4-30] [2003-10-10 14:00 - 17:30 / Grand Ballroom Pre-function]

Quality Control of Codonopsis Radix

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Codonopsis radix, a root of Codonopsis lanceolata (S. et Z.) Trautv., is a source of the traditional medicine and health foods. However quality control method is not established yet. This research is to establish the standard for the quality control of Codonopsis radix. From the root of this plant, 1,2,3,4-tetrahydro- β -carboline -3-carboxylic acid (1) was isolated. This alkaloid was adequate as a marker compound for quality control, since it is a unique constituent of Codonopsis radix. In particular, (1) was not found in Adenophorae radix, a common adulterants of Codonopsis radix. Furthermore, (1) has strong UV absorbance which makes it easy to detect in HPLC analysis. Analytical condition of (1) using HPLC was established as follows; column: RP-18 column, eluant: gradient elution of methanol and water, detection: UV 220nm. Content of (1) in dried Codinopsis radix was