We reported that the steaming of ginseng increase its biological activity. In the course of study on chemical constituents of steamed ginseng, we isolated seven new ginsenosides named as ginsenoside Rk1, Rk2, Rk3, Rs4, Rs5, Rs6 and Rs7.
There structure was elucidated based on spectroscopic and physico-chemical evidence. Ginsenoside 20(S)-Rg3, 20(R)-Rg3, Rg5, Rg6, F4, Rh4, 20(S)-Rs3, 20(R)-Rs3 and Rs4 were also isolated.

[PD4-20] [10/19/2000 (Thr) 15:00 - 16:00 / [Hall B]]

Antioxidative Activity of Siegesbeckia Herba extract

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To investigation the antioxidative activity of Siegesbeckia Herba, this study was carried out. Through the examination of MeOH, BuOH and CH_2Cl_2 extracts from Siegesbeckia Herba for radica savenging effects using DPPH method. A various organic extract of Siegesbeckia Herba showed 90-95 % of the antioxidative activities when measured by the method of absorption spectraphotometer. Especially, antioxidative activities of BuOH extracts were higher than CH_2Cl_2 extracts. Above all, antioxidative activities of Heat treatment were higher than non-treatment or antioxidative activities of acid hydrolysis were higher than Base hydrolysis.

[PD4-21] [10/19/2000 (Thr) 15:00 - 16:00 / [Hall B]]

Effects of some crude drug extracts on the brain neurotransmitters in the ethanol-treated rats

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The concentration of neurotransmitters in rat brain was determined by HPLC-ECD method and the effects of methanol extracts of some crude drugs on the concentration of neurotransmitters in the ethanol-treated rat brain were investigated. By the administration of ethanol, dopamine (DA), 3,4-dihydroxyphenyl acetic acid (DOPAC) and serotonin (5-HT) levels in frontal cortex and 5-HT level in hippocampus were significantly increased compared with the neurotransmitter levels in the brain of saline-treated rats. The γ-aminobutyric acid (GABA) level in frontal cortex was decreased by the same treatment. There was a tendency that the DA level in frontal cortex and striatum of ethanol-treated rats were increased by the administration of crude drug extracts. Especially, Myrrha and Visci Herba significantly increased the DA level of frontal cortex in ethanol-treated rats, while they significantly decreased the 5-HT level in the same region of the brain. GABA level in striatum of ethanol-treated rats was significantly decreased by Myristicae Semen, Visci Herba and Myrrha. These results suggest that the tested crude drug extracts have selective interaction with neurotransmitters in specified region of central nervous system.

[PD4-22] [10/19/2000 (Thr) 15:00 - 16:00 / [Hall B]]

A Survey on Pesticide Residues of Commercial Agricultural Products in the Northern area of Seoul (I)

Hwang YS°, Kim YS, Lee SD, Hwang KH, Kim GS, Tu OJ, Jung BK, Jung EG, Chung AH, Kim DJ, Jang MR, Yoon YT, Kim JG, Kim MH, Seo SH*

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This study was carried out to investigate the 115 kinds of pesticide residues in agricultural products, 3644 samples, in the northern area of Seoul from March in 1999 to August in 2000. The detection rate of pesticide residues was 5.0% (181 of 3644 samples). The order of the agricultural products in which pesticide residues were detected was korean lettuce> perilla leaf> green pepper> korean cabbage> leek> spinach> cucumber> leafy radish. The percentage of the agricultural products in excess of MRL was 1.9% (70 of 3644 samples). The agricultural products in excess of MRL were perilla leaf(14 cases), korean lettuce(12 cases), spinach(6 cases), green pepper(5 cases), etc.
The order of the pesticide residues which were detected in agricultural products was procymidone, endosulfan, chlorpyrifos, vinclozolin and pyrazophos. the average residual values(㎎/㎏) of procymidone, endosulfan, vinclozolin, chlorpyrifos and pyrazophos were 2.203, 1.027, 1.729, 1.111 and 0.775, respectively. The pesticide residues in excess of MRL were chlorpyrifos (19 cases), endosulfan (10 cases), procymidone (8 cases), vinclozolin (6 cases), pyrazophos (4 cases), etc. and the measured concentration ranges of chlorpyrifos, endosulfan, procymidone,vinclozolin
,chlorothalonil, diazinon, and EPN were 0.009~6.723, 2.3~5.8, 2.0~30.8, 1.7~20.33, 10.7~21.7, 0.5~4.3, 0.28~4.19, respectively.

[PD4-23] [10/19/2000 (Thr) 15:00 - 16:00 / [Hall B]]

The analysis of retinol derivatives in cosmetics by HPLC

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This study was carried out to determine retinol derivatives in domestic and imported cosmetics. Experimental subjects were 34 cosmetics which contained cream, cleanser, lotion, liquid and packs.
The obtained results were as follows:
1. The analytical method was applied with HPLC system of μ-Bondapak C18 column with mobile phase, 100% methanol at 325nm.
2. The calibration curve showed good linearities having r value of 0.9998, 0.9999 and 0.9997, at the range of standard concentrations; retinol(3.4~344.2), retinyl acetate(2.2~109.0) and retinyl palmitate(7.5~422.4)unit/ml were used as standards. These compounds were successfully separated on the retention time 4.6, 5.4 and 17.3 respectively.
3. The recovery was obtained as 98.3 ±2.3% (RSD:2.34), 93.7 ±2.3% (RSD:2.47) and 103.2 ± 3.6% (RSD:3.52) respectively from the spiked preparations.
4. Samples were extracted as two ways; 100% methanol only(method I) and mixture of methanol and chloroform(95:5, method II). Target component in samples was determined as the range of amount 510.9~194019.9 and 502.5~197976.7(unit/g) respectively except four samples.

[PE1-1] [10/19/2000 (Thr) 15:00 - 16:00 / [Hall B]]

The influence of terpenes on the in vitro permeation of prostaglandin E1 through hairless mouse skin