

Contents of *trans*-Resveratrol in Peanut according to Growth Stage

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Objectives

We intend to identify change of *trans*-Resveratrol amount in parts of peanut plant according to growth period.

Materials and Methods

1. Materials : Palkwang, Dakwang, Shinamkwang, Daekwang

2. Methods

·Extraction method : 5g of freeze-dried peanut, 80% MeOH, 30°C, 45min

·HPLC Analysis : PDA detector, waters XTerra C18 column, 308nm

·Mobil phase : Isoflavone - (A) glacial acetic acid : DW (52.6 : 900)

(B) acetonitril : solution A (80 : 20).

Results and Discussion

To analyze the *trans*-Resveratrol content according to growth, samples were taken at 5, 40, 70 and 90 days after flowering stages. Change of *trans*-Resveratrol amount in parts of Palkwang peanut plant according to growth period was shown in table 1. It was found that the content of *trans*-Resveratrol was the highest in root at 70 days after flowering and ranged from 258.6 to 20.7 $\mu\text{g/g}$. According to growth, from 5 days to 70 days after flowering, *trans*-Resveratrol content was increased and then decreased at 90 days after flowering. Also, stem and leaf of peanut plants were showed similar trend. *trans*-Resveratrol content in peanut plant was higher than that of peanut seed(0.018 ~ 4.96 $\mu\text{g/g}$). *trans*-Resveratrol content in various cultivar was showed in table 2. *trans*-Resveratrol content was the highest in root of Daekwang at 70 days after flowering and then content was decreased regardless of cultivar.

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Table 1. Content of *trans*-Resveratrol in Palkwang peanut at different growing time after flowering stage

Part	5 days	40 days	70 days	90 days
root	77.81	130	258.6	20.7
stem	12.05	21.5	45.85	0.0
leaf	23.55	25.5	116.25	55.6

unit : $\mu\text{g/g}$ D.B

Table 2. Content of *trans*-Resveratrol in various peanut cultivars at 70 and 90 days after flowering stages

Cultivar	Part	70 days	90 days
Palkwang	root	258.6	20.7
	stem	45.85	0.0
	leaf	116.25	55.6
Daekwang	root	352.75	244.25
	stem	58.95	15.65
	leaf	9.45	35.4
Shinnamkwang	root	268.2	126.1
	stem	22.0	14.0
	leaf	38.1	0.0
Dakwang	root	266.5	186.45
	stem	29.35	17.75
	leaf	102.45	51.05

unit : $\mu\text{g/g}$ D.B

Reference

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