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## Growth Characteristics and Chemical Compounds in *Schisandra chinensis* Collections for the Selection of Superior Lines

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### ABSTRACT

There are about 2 genera and 49 species of Schisandraceae all over the world which grow 2 genera and 5 species in Korea. As 'Schisandra' genus, *S. chinensis*, *S. repanda*, *S. nigra* and *S. viridicarpa* are distributed. As 'Kadsura' genus, there is *K. japonica* species. Although *S. chinensis* is often used for food and herbal medicine, 'Cheongsoon' is the only cultivar in Korea. Therefore cultivar breeding is required for standardized production of *Schisandra chinensis*.

To select superior lines, characteristics of collected varieties was investigated. These collections were from all the country including Mungyeong, Muju and Jangsu. In the case of 'Schisandra chinensis', analysis of chemical compound is very important. Because in 'Korean Pharmacopoeia', Schisandrin has to contain more than 0.7% of sum of Shizandrin, Gomisins A, Gomisins N as standard compound. According to the investigation, the weight of SC-154 was the highest one that was 99g of fresh fruit and 60g of dried fruit in the 100 granules of it. As the control group, the weight of cultivar 'Cheongsoon' was 57g of fresh fruit and 40g of dried fruit.

The chemical compounds such as Shizandrin A, Gomisins A, Gomisins N and Shizandrin C from the collections were analyzed by HPLC. As a result, all average of total content was 1.67% satisfied with the standard that is over 0.7%. Among them, SC-13, SC-22, SC-40 and SC-45 had more than 2.0% of compound. In this case, the content of Gomisins N was relatively higher than that of the other collections. It can be used for high content compound breeding.

This above results indicate that these findings could be used for breeding superior *Schisandra chinensis* through selection of high quality resource.

Keywords: medicinal crop, *Schisandra chinensis*

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