

Variation in isoflavonoid phytoestrogen content in soybeans grown in Australia*FS Dalais^{1,2}, ML Wahlqvist¹, GE Rice²*¹Department of Medicine, Monash University, Monash Medical Centre, VIC, 3168²Department of Perinatal Medicine, Royal Women's Hospital, VIC, 3053

There is increased evidence that the consumption of soy and its phytoestrogens, the isoflavones, have beneficial effects on blood lipids, hormone-dependent cancers and menopausal symptoms. As a result of these potential beneficial effects, there have been a number of new products containing high levels of soy released onto the Australian consumer market. It has previously been demonstrated that isoflavonoid phytoestrogen concentration varies in different soybean strains, and with the increased use of Australian grown soy, phytoestrogen analysis of soybean strains is warranted.

Fifteen different strains of soybeans were selected. The isoflavones daidzin, genistin and their aglucones daidzein and genistein were assessed using High Performance Liquid Chromatography (HPLC).

Table 1. Isoflavone content of selected soybean varieties.

Soybean Variety	Daidzin mg/g	Genistin mg/g	Daidzein mg/g	Genistein mg/g	Total mg/g
Soy 1	0.684	0.847	0.009	0.011	1.551
Soy 2	0.349	0.458	0.008	0.008	0.823
Soy 3	0.533	0.555	0.009	0.009	1.106
Soy 4	0.503	0.747	0.003	0.008	1.261
Soy 5	0.430	0.534	0.010	0.009	0.983

The level of variation in phytoestrogen content observed in these analyses should be taken into account in the representation of products high in soy, as end product isoflavone content will also vary.