

## URINARY EXCRETION OF ISOFLAVONES AGLICONES AND METABOLITES IN HEALTHY ADULTS AFTER CONSUMPTION OF A SOY-COFFEE BEVERAGE

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Several studies have reported the influence of food matrixes on the bioavailability of polyphenols and, therefore, on their bioactivity in humans. The present study compared the bioavailability of the isoflavones from soy and soy-coffee beverages, in humans. In separate days, after being in a soy-free and phenolic-free diet for 3 days, and 10h overnight fasting, subjects (n=7) consumed 200mL of each beverage. Both beverages contained 79.7µmol isoflavones (aglycone equivalents). The soy-coffee beverage also contained 561.2µmol chlorogenic acids. The urinary excretion of isoflavones (daidzein, genistein and glycitein) and the metabolites equol, dihydrodaidzein, O-desmethylangolensin and dihydrogenistein were evaluated using HPLC (DAD/Fluorimetric detector) for 12h before consumption (baseline) and after the consumption, at intervals of 0-12, 12-24, 24-48h. Results were treated by ANOVA, followed by LSD test (p<0.05). The average total urinary excretion of aglycones and metabolites after soy and soy-coffee consumption was 22.0 ± 19.1 µmol and 20.3 ± 9.4 µmol, respectively, with no difference between treatments considering the same intervals of collection. The major excretion (51% and 47% recovery, respectively) occurred from 0-12h after the soy and soy-coffee beverages consumption. About 61 and 21% of aglycones and metabolites (relative to their precursors), respectively, were recovered in urine up to 48h after soy beverage consumption, while 54% and 24%, respectively, were recovery after soy-coffee consumption. The present results showed that the addition of coffee did not decrease the bioavailability of isoflavones, even though the amount of chlorogenic acids was about 7 times higher than the amount of isoflavones in soy-coffee beverage.