Development of composition tables of food bioactive components

Our research group's creating a Food Composition Table (FCT) on polyphenols (flavonoids, no flavonoids and resveratrol). This table comprises USDA databases (flavonoids, proanthocyanidins and isoflavones) and Phenol-Explorer database supported by data contributed by our group, through the application of cooking factors, of recipes, of the literature search of missing values, and extensive data summarizing composition with reference to resveratrol.

Currently, this FCT is used to calculate the ingestion of polyphenols in the Spanish population in conjunction with the Unit of Nutrition, Environment and Cancer from the Catalan Institute of Oncology, ICO-IDIBELL, the EPIC-Spain coordinator. In the future we shall aim to relate the consumption of polyphenols to factors of risk or prevention in diseases (such as different types of cancer and cardiovascular disease).

EXAMPLE: Food composition data sources for resveratrol content (mg/100g fresh weight)

The estimated mean of total resveratrol (cis and trans-resveratrol and piceid) intake is 933 µg/day. Approximately 32% of the population does not consume total resveratrol. The most important source of total dietary resveratrol is wine (>98%).

Food	**trans-resveratrol**	**cis-resveratrol**	**trans-piceid**	**cis-piceid**	**Total resveratrol**
Wine n/e*	0.114	0.037	0.303	0.105	0.558
Red wine	0.181	0.044	0.495	0.127	0.847
Rose wine	0.041	0.041	0.071	0.154	0.307
White wine	0.010	0.016	0.26	0.022	0.074
Sparkling wine	0.005	0.014	0.018	0.055	0.092
Fortified wine	0.110	0.095	0.141	0.040	0.386
Grape n/e*	0.156	no data	0.067	no data	0.223
Red grape	0.250	tr*	0.060	no data	0.310
White grape	0.068	tr*	0.025	no data	0.093
Must	0.070	0.012	0.465	no data	0.547
Grape juice	0.010	tr*	0.036	0.043	0.088
Peanuts, toasted	0.006	no data	no data	no data	0.006
Pistachios, toasted	0.0076	no data	no data	no data	0.007
Peanut butter	0.065	nd†	0.014	nd†	0.080

Cranberry juice	tr*	no data	no data	no data	tr*
Berries	0.008	no data	no data	no data	0.008
Itadotri tea (infusion)	0.068	nd†	0.906	nd†	0.974

* traces *not specified † not detected

GROUP PUBLICATIONS:

- Scalbert A, Andres-Lacueva C, Arita M, Kroon P, Manach C, Urpi-Sarda M, Wishart D. Databases on food phytochemicals and their health promoting effects. Journal of Agricultural and Food Chemistry. 2011;59(9):4331-48. PubMed [1]
- [1]Zamora-Ros R, Andres-Lacueva C, Lamuela-Raventós RM, Berenguer T, Jakszyn P, Barricarte A, Ardanaz E, Amiano P, Dorronsoro M, Larrañaga N, Martínez C, Sánchez MJ, Navarro C, Chirlaque MD, Tormo MJ, Quirós JR, González CA. Estimation of dietary sources and flavonoid intake in a Spanish adult population (EPIC-Spain). Journal of American Dietetic Association. 2010;110(3):390-398. PubMed [2]
- Zamora-Ros R, Andres-Lacueva C, Lamuela-Raventós RM, Berenguer T, Jakszyn P, Martínez C, Sánchez MJ, Navarro C, Chirlaque MD, Tormo MJ, Quirós JR, Amiano P, Dorronsoro M, Larrañaga N, Barricarte A, Ardanaz E, González CA. Concentrations of resveratrol and derivatives in foods and estimation of dietary intake in a Spanish population: European Prospective Investigation into Cancer and Nutrition (EPIC)-Spain cohort. British Journal of Nutrition. 2008;100(1):188-196.PubMed [3]

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