



IMBEFI 1

1st Iberian Meeting on Natural Bioactives Entrapment for the Food Industry Challenges and Perspectives, from nanotechnology to bioavailability

May 12-13, 2011

"Lagoa Branca" Auditorium, ISA, Lisbon

Topics:

- Extraction and production of bioactive compounds
- Micro and nano entrapping processes
- Release kinetics and bioavailability
- Characterization of functional products

Objectives:

The industrial production of foods is increasingly using functional ingredients. Typically, these have been used for preserving purposes and/or controlling flavour, colour, and texture. Nowadays more and more ingredients with potential health benefits are also included.

Adding bioactive ingredients to functional foods presents many challenges, particularly with respect to the stability of the bioactive compounds during processing and storage and the need to prevent undesirable interactions with the carrier food system. Moreover, a health benefit also requires actions to ensure the stability of the compounds in the gastrointestinal system and to facilitate controlled release at the appropriate target. The entrapment of bioactive ingredients could help to address some of these problems.

The main objective of **IMBEFI** is to provide a forum for discussion of research results and updated scientific knowledge on the topic of micro-entrapment of bioactive compounds, facilitating personal contacts and promoting synergism and advanced interaction between academia and industry. This event will culminate in a **Brokersage Event**.

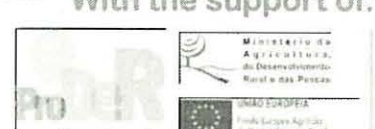
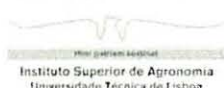
Invited Speakers:

- Dr. Anna Gergely (Steptoe & Johnson LLP, Belgium)
- Prof. Maria José Cocero Alonso (Universidad de Valladolid, Spain)
- Prof Lorenzo Pastrana (Universidad de Vigo, Spain)
- Prof José Maria Lagarón (IATA/CSIC, Universidad de Valencia)

More Information:

- Registration: - Open from March 1 to May 6
- Registration form and more information: www.inovisa.pt
- Poster abstract submission deadline: April 18
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Organization:



With the support of:

Herbal beverages formulations and bioactive properties: a comparative study

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Herbal beverages are among the main products which claim medicinal benefits, specially related with antioxidant properties [1,2]. The definition of herbal beverages (“teas”) as functional drinks might be related with the plant species from which is prepared, formulation or preparation method. In this study the beverages were prepared from *Camellia sinensis* (black and green tea), *Aspalathus linearis* (red tea) and *Cochlospermum angolensis* (borututu tea), available in different formulations (bags, leaves, roots, granulates, powders or liquids), after infusion, solubilisation or by simple direct use. Further than single plants, some mixtures composed by different fruits, plants or algae extracts were also evaluated. For a better understanding of the bioactive potential of these products, the DF₅₀ (dilution factor responsible for 50% of antioxidant activity, AA) was calculated for all the AA assays (scavenging effects, reducing power and lipid peroxidation inhibition). Linear discriminant analysis was used to categorize tea formulations according with their AA and antioxidant compounds. The results showed that either preparation method or formulation influence “teas” antioxidant properties. Furthermore, data confirmed and validated the antioxidant benefits indicated in labels. Green tea was the most active herbal beverage, but with different behaviours according to the formulation used: liquid extract gave the best scavenging effects and reducing power, the liquid drink with lemon gave the best β-carotene bleaching inhibition, and the bag infusion showed the best thiobarbituric acid reactive substances inhibition. However, due to the high DF₅₀ values, some suggested preparation methods should be reviewed in order to prevent eventual pro-oxidant effects. This work might be useful in the definition of the best “teas” formulation, considering the health benefits of these highly consumed beverages.

Acknowledgements

J.C.M. Barreira thanks to FCT, POPH-QREN and FSE for his grant (SFRH/BPD/72802/2010).

References

- [1] Henning, S.M., Niu, Y., Lee, N.H., Thames, G.D., Minutti, R.R., Wang, H., Go, V.L., Heber, D. 2004, *Am. J. Clin. Nutr.* 80, 1558-1564.
- [2] Milasiene, R., Sawicka, K., Kornysova, O., Ligor, M., Maruska, A., Buszewski, B. 2007, *Ars. Separatoria Acta*, 5, 27-33.