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Edited by Jennifer Teal, Juliet L Osborne and Robert J Paxton



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the aim of this study to genotype *P. larvae* isolates from Austria to gain some data on this issue for the first time. Genetic diversity of 214 *P. larvae* strains from all nine Austrian federal provinces was studied. Genotyping of isolates was performed with polymerase chain reaction with primers corresponding to enterobacterial repetitive intergenic consensus (ERIC), repetitive extragenic palindromic (REP) and BOX element (collectively known as rep-PCR) using ERIC 1R-ERIC2, BOX A1R and MBO REP1 primers. Using ERIC-PCR technique two genotypes could be differentiated: ERIC I (57 % of isolates) and ERIC II (43 %). Using combined typing by BOX- and REP-PCR, five different genotypes were detected: ab (43 %), aB (35 %), Ab (13 %), AB (8 %) and ab (1 %). Two genotypes, aB and ab, were obtained from Austrian isolates but not found to be reported in other studies using the same techniques.

Phenolic compounds and antioxidant activity of propolis from two regions of Portugal

Leandro Moreira, Ermelinda Pereira, Luís Dias, Sância Pires, Leticia Estevinho

Centro de Investigação de Montanha (CIMO)/Escola Superior Agrária, Instituto Politécnico de Bragança, Campus Sta Apolónia, Apartado 1172, 5301-855 Bragança, Portugal
Email: epereira@ipb.pt

The aim of the present work was to evaluate the total phenolic compounds, quantify and identify the phenolic and flavonoid compounds and also the antioxidant activity of the propolis collected from two regions of Portugal (Trás-os-Montes and Beira-Baixa). The total phenolic compounds was determined by Folin-Ciocalteu method and identified by Thin Layer Chromatography (TLC) bi-dimensional. The antioxidant activity was evaluated by 1.1-diphenyl-2-picrylhydrazyl scavenging (DPPH) and reducing power assays. The results showed that sample of Trás-os-Montes propolis (329mg/g eq. gallic acid) had a higher content in phenolic compounds of the methanolic extracts than Beira-Baixa propolis (151mg/g eq. gallic acid). The value of the antioxidant activity determined by the DPPH assay was $EC_{50} = 6.22 \mu\text{g/mL}$ and $EC_{50} = 52.00 \mu\text{g/mL}$ for Trás-os-Montes and Beira-Baixa propolis, respectively. Similar trend was obtained by the reducing power assays ($EC_{50} = 4 \mu\text{g/mL}$ and $EC_{50} = 39 \mu\text{g/mL}$ for the same samples, respectively). Through analysis of the results we can see that the propolis sample of Trás-os-Montes was a highest antioxidant activity, probably due to the amount of total phenolic compounds. Our results suggest that the concentration of propolis of Trás-os-Montes required to obtain an antioxidant activity is very low, making possible the use of this propolis as a natural antioxidant.

BeeShop - an overview

Robin Moritz

Institut für Biologie, Martin-Luther Universität, 06099 Halle/Saale, Germany
Email: r.moritz@zoologie.uni-halle.de

Honey is among the oldest food products of mankind and beekeeping is deeply rooted in every European culture. Numerous European and national regulations control