



BULGARIAN-SWISS COOPERATION PROGRAMME
БЪЛГАРО-ШВЕЙЦАРСКА ПРОГРАМА ЗА СЪТРУДНИЧЕСТВО

Valorisation of industrial wastewater: biologically active substances from side products of rose oil distillation

Starting Date 01.12.2012

Duration 36 Months

Discipline Ecology

Main Goals

- To develop an efficient, adequate and low cost waste sampling extraction procedure of the liquid waste
- To develop an HPLC-PDA-MS-based qualitative and quantitative characterization method of the polyphenolic profile of the liquid waste and concentrated fractions
- To screen for pharmacological activities of the concentrated polyphenol fraction

Activities

Scientific research includes the following process engineering, phytochemical and pharmacological methods:

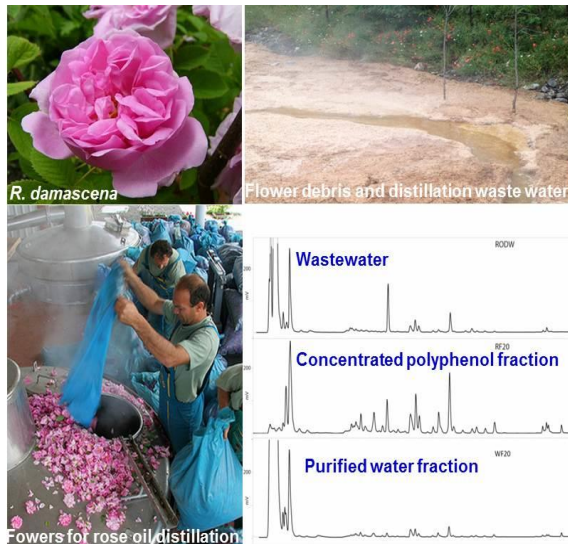
- Small scale liquid waste extraction procedures using adsorbant resins for the recovery of polyphenols
- HPLC-PDA-MS profiling of the concentrated resin and remaining purified water fraction
- Cell culture model based activity profiling of the polyphenol fraction

Expected results

- Development of a purification process which could be considered as a new approach to the management of RODW combining environmental protection and production of value-added products to be used as active ingredients in the cosmetic industry
- Establishment of a long-lasting cooperation between both cooperation partners

Swiss Coordinator

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