The sage (Salvia officinalis), laurel (Laurus nobilis), thyme (Thymus vulgaris), mastic tree (Pistacia lentiscus L.), carob (Ceratonia siliqua) and myrtle (Myrtus communis) have many potential applications due to large number of bioactive molecules (BAM) with high antioxidant capacity (AOC). Currently there is an increasing interest in using these plants in the production of plant extracts (PE) and essential oils (EO) for food, pharmaceutical and cosmetic industries. However, extraction yield and antioxidant activity of PE depend on selection of appropriate extraction technique and solvent used for extraction. The modern unconventional extraction methods such as accelerated solvent (ASE) and ultrasound assisted extraction (UAE) methods has been increasingly explored to increase the efficiency of isolation and to reduce the use of solvents and extraction time (1). Therefore, the aim of this study was to determine the AOC of PE obtained by successive extraction with three different extraction solvents (hexane, 80% acetone and 96% ethanol) using ASE, UAE and shaking water bath extraction (SWB). The AOC of PE was evaluated using the ORAC method (2).

**Methodology**

The AOC of analysed PE was in range from 3.39 to 187.90 mmol TE/100 g dm. The highest AOC was determined in laurel leaves samples obtained by UAE in acetone while the lowest AOC was determined in carob pod obtained by same extraction method and solvent. Generally, the highest AOCs were determined in ASE and UAE acetone extracts compared to SWB. The results showed higher AOC in thyme, mastic tree and carob extracts obtained by ASE extraction method and sage and laurel extracts obtained by UPE, respectively.

**Results and discussion**

The AOC was determined in sage leaves, laurel leaves, thyme leaves, mastic tree pod, and carob pod by ASE, UAE and SWB extraction methods. The AOCs were determined using ORAC method.

**Conclusion**

- **ASE is the most appropriate method for extraction of BAM from thyme, mastic tree and carob.**
- **UAE is better method for extraction of BAM from sage and laurel.**
- **Sage and laurel extracts contribute to the highest AOC.**

**Literature**


This work was supported by the project “Bioactive molecules of medical plant as natural antioxidants, microbicides and preservatives” (KK.01.1.1.04.0059), co-financed by the Croatian Government and the European Union through the European Regional Development Fund - Operational Programme Competitiveness and Cohesion 2014 – 2020 (KK.01.1.1.04.1).