

Original article

Preparation and Characterization of St. John's Wort Herb Extracts Using Olive, Sunflower and Palm Oils

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SUMMARY

The aim of the study was to obtain St. John's wort herb extract (drug:extract ratio 1:5), in a traditional way, using different solvents (sunflower, olive and palm oils) with or without antioxidants (0,02% alpha-tocopherol and 0,01% butylhydroxyanisol). Their characterization was done (organoleptic features, relative density, refractive index, acid number) immediately after the preparation, and during the period of 12 months (the samples were stored at room temperature, 22±2°C).

The type of oil used for the extraction of St. John's wort herb has a significant influence on organoleptic and physicochemical characteristics of extracts. Oil extracts had approximately the same values for refractive index and relative density as solvents used for extraction. The acid numbers of extracts were slightly higher compared to the used oils. Using the antioxidants for preparing the St. John's wort oil liquid herb extracts did not change the acid number of extracts made using sunflower and palm oils, while oil extracts made using olive oil and tocopherol or BHA had lower acid number values. During the period of 12 months, only extracts which were made using three different vegetable oils, with the use of antioxidants, showed satisfactory physicochemical, chemical and microbiological stability (with no significant changes in organoleptic properties, relative density, refractive index, acid number value and microbiological safety), which points to the necessity of using antioxidants in the preparation of St. John's wort oil herb extracts, using the traditional method.

Key words: St. John's wort herb, oil extracts, sunflower, olive and palm oils

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