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Characterization of bioactive components from chiba seed (*Psoralea corylifolia* L.) extracts obtained by supercritical carbon dioxide

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The rapid emergence of nutraceuticals and functional foods has created a new trend in food processing industries. The nutraceutical and functional foods are more often prepared from the phytochemicals / plant extracts. They are gaining popularity because of several advantages such as fewer adverse health side effects, better patient tolerance, relatively low price and acceptance due to a long history of use. The more important cause is that natural products provide rational means for the treatment of many diseases that are obstinate and incurable. Among the various plant materials available for extraction of bioactives, the present work focuses on *Psoralea corylifolia* L, known commonly bakuchi. The seed-oil is used externally for the treatment of leucoderma, psoriasis and leprosy in Indian folk medicine. The plant has been used in Ayurvedic medicinal system as a cardiac tonic, vasodilator and pigmentor. It is widely used in Chinese medicine to treat a variety of diseases and possesses antitumor, antibacterial, cytotoxic and antihelmenthic properties. Thermally sensitive bakuchiol, psoralen and isosporalen, the major components present in the seed possess high biotechnological values.

- The extraction of bioactives from Psoralea corylifolia seeds was carried out using the high pressure supercritical carbon dioxide (SCCO2) system at pressures 220, 260 and 300 bar and at temperature of 40°C. Even though yield of extraction by SCCO2 extraction process was slightly less than the yield by hexane extraction method, bakuchiol concentration in the extract was much higher than the hexane extraction. LC-MS chromatogram of the extract identified presence of nine compounds. The results indicated that the extract having bakuchiol concentration of 51% was possible with SCCO2 extraction.
- Thanking you