ANALYSIS OF THE VOLATILE ORGANIC COMPOUNDS FROM LEAVES AND NECTAR OF AUSTRALIAN GROWN LEONURUS SIBIRICUS

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Abstract - Leonurus sibiricus which known as a Motherwort, it is a member of the family Lamiaceae and native to India and central and Southwest Asia, including China, Mongolia, and Russia. Moreover, now it is naturalized in many other parts of the world including South, North and Central Americas. Headspace solid-phase microextraction / Gas chromatography–mass spectrometry (HS-SPME /GC-MS) was optimized to identify the volatile bioactive compounds in the leaves and for the first time, the flower nectar of Australian grown Leonurus sibiricus. The alcohol 1-Octen-3-ol (octenol) was identified as the most abundant constituents of the flower with nectar and the leaves from Leonurus sibiricus grown in Australia. It made up more than 50% of the total volatile compounds in both sample types. It is the most common volatile compounds in straw mushrooms and has also been found in blue cheeses, and in some fruit sources, such as orange juice oil, raspberries and elder flowers as well as in Australian prawns and sand-lobsters. It is also known to attract biting insects such as mosquitoes and indeed, it has been used in mosquito traps. Australian grown L. sibiricus should be highly considered in the production of octenol for using as flavouring agent.

Index Terms - Gas chromatography–mass spectrometry, Headspace solid-phase, Leonurus sibiricu, Octenol .