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HEADSPACE SCREENING OF ALGA COLPOMENIA SINUOSA (MERTENS EX ROTH) DERBÈS & SOLIER, 1851 VOLATILES

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C*olpomenia sinuosa* (Mertens ex Roth) Derbès & Solier, 1851 is thallus bladder-like, smooth, slick, hollow, crisp, spherical to sac-like, irregularly expanded or somewhat lobed, to 30 cm diameter, 10 cm high. This golden-brown alga belongs to *Scytosiphonaceae* family. The sample was collected in the Adriatic Sea close to Island Vis (43° 03' 47" N, 16° 11' 15" E). Volatiles of fresh *C. sinuosa* were extracted by headspace solid-phase microextraction (HS-SPME) and analysed by gas chromatography and mass spectrometry (GC-MS). In this investigation of alga headspace volatile organic compounds (VOCs), two fibers were used: namely polydimethylsiloxane/ divinylbenzene (PDMS/DVB) and divinylbenzene/carboxene/polydimethylsiloxane (DVB/CAR/PDMS). The major *C. sinuosa* volatile compounds (PDMS/DVB; DVB/CAR/PDMS) were: dictyoptere D (6-[(Z)-1-butenyl]-1,4-cycloheptadiene) (26.7%; 10.9%), Dictyoptere C' (6-Butyl-1,4-cycloheptadiene) (11.4%, 2.7%), dimethyl sulfid (8.4%; 18.3%), tridecanal (5.1%; 6.3%), pentadecanal (5.0%; 2.4%), 1-pentene-3-on (2.2%; 3.4%), octan-1-ol (1.2%; 3.1%), -lonone (3,8%; 5,8%) and S-methyl thioacetate (-; 3.3 %). Application of headspace solid-phase microextraction enables identification of low-molecular organic compounds. Among those volatiles, biologically active compound can be found such as allelochemicals, defensive compounds, sex attractants or pheromones.

Biography

Marina Zekić has graduated in 2005 at Faculty of Chemistry and Technology, University of Split. She obtained her PhD in 2013 at Faculty of Chemical Engineering and Technology, University of Zagreb. In 2007, she started to work as an Assistant at the Department of Organic Chemistry, Faculty of Chemistry and Technology in Split, where she is currently employed. She was elected as an Assistant Professor in 2017 (Natural Sciences, Field Chemistry). She has published 10 scientific papers cited by Current Contents. She has been involved in realization of three research projects. Currently, she is a Member of Project Bioprospecting of Adriatic Sea. K.K. 01.1.1.01.0002.

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Sample of *Colpomenia sinuosa* collected
in the port of Vis