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Authors / Autores

António M. Peres (Instituto Politécnico de Bragança, Portugal)

Lillian Barros (Instituto Politécnico de Bragança, Portugal)

Luís G. Dias (Instituto Politécnico de Bragança, Portugal)

Isabel C.F.R. Ferreira (Instituto Politécnico de Bragança, Portugal)

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PC3	Fatty acid profile of seaweeds from the North Portuguese Coast	70
	<i>Sara Sousa, Susana Machado, Cristina Soares, Elsa Vieira, Valentina F. Domingues, Ana P. Carvalho, Manuela Correia, M. João Ramalhosa, Teresa Oliva-Teles, Simone Morais, Cristina Delerue-Matos</i>	
PC4	GC-MS identification of oligosaccharides produced by nonenzymatic transglycosylation reactions	71
	<i>Soraia P. Silva, Ana S.P. Moreira, M. Rosário M. Domingues, Dmitry V. Evtugin, Elisabete Coelho, Manuel A. Coimbra</i>	
PC5	Chemical characterization of three <i>Thymus</i> species: <i>T. herba-barona</i>, <i>T. pseudolanuginosus</i> and <i>T. caespititius</i>	72
	<i>Andrea F. Afonso, Olívia R. Pereira, Artur M.S. Silva, Susana M. Cardoso</i>	
PC6	Phytochemicals of <i>Salvia africana</i> and <i>Salvia elegans</i> and <i>Salvia officinalis</i> 'Icterina'	73
	<i>Andrea F. Afonso, Olívia R. Pereira, Artur M.S. Silva, Susana M. Cardoso</i>	
PC7	Applying an API HPLC Related Substances Monograph Method to an Inhalation Drug Product	74
	<i>Andreia Costa, Rúben Chaves, Sofia Silva</i>	
PC8	Perfil cromatográfico em ácidos gordos de seis génotipos de <i>Portulaca olerace</i> L.: uma fonte alternativa de ómega-3	75
	<i>Ângela Fernandes, Spyridon A. Petropoulos, Anestis Karkanis, Lillian Barros, Georgia Ntatsi, Konstantinos Petrotos, Christos Lykas, Ebrahim Khah, Isabel C.F.R. Ferreira</i>	
PC9	Fatty acids profile contribution for the discrimination of olive oil production year	76
	<i>Nuno Rodrigues, Susana Casal, António M. Peres, José A. Pereira</i>	
PC10	Monitoring fructooligosaccharides production using <i>Aspergillus aculeatus</i> by HPLC-ELSD	77
	<i>Aelina Lama, Sara Silvério, Ana C.A. Veloso, Lígia R. Rodrigues, Teresa Dias, António M. Peres</i>	
PC11	Selection of SPME fiber for the identification of the pheromone rhynchophorol by GC/MS	78
	<i>Arão C. Viana, Ingrid G. Ramos, Ananda M. Carvalho, Edeilza L. dos Santos, Janice I. Druzian</i>	
PC12	Similaridade da farinha da casca do maracujá amarelo (<i>Passiflora edulis flavicarpa</i>) com pectina e ácido galacturônico comerciais por CLAE/IR	79
	<i>Emanuela M. Coelho, Arão C. Viana, Luciana C. de Azevedo, Janice I. Druzian</i>	
PC13	Optimization of an analytical method for the determination of underivatized triclosan and related compounds by gas chromatography-triple quadrupole mass spectrometry	80
	<i>Cátia Magro, Davide Mendes, Marco Silva, Alexandra Ribeiro, Eduardo Mateus</i>	
PC14	Development and validation of an HPLC method for quantification of the biocide Ecomea®	81
	<i>Cátia Vilas-Boas, Sara Cravo, Emília Sousa, Madalena Pinto, Marta Correia-da-Silva</i>	
PC15	Efeito do processamento no perfil lipídico do feijão mangalô (<i>Phaseolus lunatus</i>) germinado	82
	<i>Clícia M.J. Benevides, Sónia Soares, Maria A. Nunes, Rita C. Alves, Maria Beatriz P.P. Oliveira</i>	
PC16	Vitamin E profile of green (<i>in natura</i>) seeds from different species of legumes	83
	<i>Cátia Araújo, Rita C. Alves, Sílvia Bessada, Anabela S.G. Costa, Clícia M.J. Benevides, Graça Soveral, M. Beatriz P.P. Oliveira</i>	
PC17	RP-HPLC analysis of 21 amino acids in edible seaweeds from the Portuguese coast after OPA/FMOC derivatization	84
	<i>Cristina Soares, Elsa Vieira, Susana Machado, Manuela Correia, M. João Ramalhosa, Valentina F. Domingues, Ana P. Carvalho, Teresa Oliva-Teles, Simone Morais, Cristina Delerue-Matos</i>	
PC18	Ion source-MS parameters optimization for pharmaceuticals compounds	85
	<i>Paula Paíga, Luís M.S. Silva, Cristina Delerue-Matos</i>	

PC-05

Chemical characterization of three *Thymus* species: *T. herba-barona*, *T. pseudolanuginosus* and *T. caespititius*

Andrea F. Afonso^{a,b}, Olívia R. Pereira^c, Artur M.S. Silva^a, Susana M. Cardoso^{a,*}

^aQOPNA, Department of Chemistry, University of Aveiro, 3810-193 Aveiro, Portugal.

^bPublic Health Laboratory of Bragança, Local Health Unit, 5300-146 Bragança, Portugal.

^cDepartment of Diagnostic and Therapeutic Technologies, School of Health Sciences, Polytechnic Institute of Bragança, 5300-121 Bragança, Portugal.

*susanacardoso@ua.pt

The genus *Thymus*, belonging to *Lamiaceae* family, is rich in medicinal and aromatic species and well-known by several health promoting activities [1,2]. Despite this genus has been extensively studied, some species remain unexploited. In this study, *Thymus herba-barona*, *Thymus pseudolanuginosus* and *Thymus caespititius* decoctions were screened for their phenolic constituents by ultra-high performance liquid chromatography coupled to diode array detector and an electrospray mass spectrometer (UHPLC-DAD-ESI-MSn) operating in negative mode.

The three aqueous extracts were rich in caffeic acid derivatives, mainly rosmarinic acid (MW 359) and its structural isomers, that accounted for 55.8 ± 2.8 mg/g in *T. herba-barona* and 40.2 ± 0.9 and 43.2 ± 3.2 mg/g in *T. pseudolanuginosus* and *T. caespititius*, respectively. In turn, other depsides were differently distributed in the three Thyme extracts: while dihydro-salvianolic acid B (MW 716 Da) and caffeoyl rosmarinic acid were particularly representative in *T. herba-barona*, salvianolic acids K ([M-H]⁻ at m/z 555 493 359) and B ([M-H]⁻ at m/z 717 519 475) were found in moderate amounts in *T. caespititius* extract. On the other hand, *T. pseudolanuginosus* was clearly distinguished by its richness in the flavone luteolin-O-glucuronide ([M - H]⁻ at m/z 461 → 285).

Overall, this work is an important contribution for the phytochemical characterization of these three *Thymus* species, which are poorly explored.

Table 1. Identification and quantification of main UHPLC eluting fractions by UHPLC-DAD-MSn of *T. herba-barona*, *T. pseudolanuginosus*, and *T. caespititius* aqueous extracts.

	[M-H] ⁻	T. h-b	T. p	T. c
Rosmarinic acid	359	55.8 ± 2.8	40.2 ± 0.9	43.2 ± 3.2
Luteolin-O-glucuronide	461	$10.5 \pm 0.2^*$	54.1 ± 0.6	17.3 ± 1.1
Dedihydro-Salvianolic Acid B	715	10.8 ± 0.1	-	-
Salvianolic Acid B	717	-	-	6.9 ± 0.5
Salvianolic Acid K	555	D	-	10.5 ± 0.1
Caffeoyl Rosmarinic acid	537	10.5 ± 0.06	D	D

*Structural isomer; D: detected

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