

XXV ENCONTRO GALEGO-PORTUGUÉS DE QUÍMICA

SANTIAGO DE COMPOSTELA (SPAIN)

20-22 Noviembre 2019

Ciudade da Cultura (GAIAS)

Trabajando por la sostenibilidad en la salud, el ambiente y
la seguridad alimentaria

20 al 22 de noviembre de 2019

Edificio CINC. Ciudad de la Cultura

Santiago de Compostela-Galicia (España)



**Colegio Oficial de
Químicos de Galicia**



**SOCIEDADE
PORTUGUESA
DE QUÍMICA**



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QUÍMICOS DE GALICIA**

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PROGRAMA DEL ENCONTRO

DÍA	hora	SALAS			
		PLENARIAS	A	B	C
		A			
20	10:00-12:00	INSCRIPCIÓN Y RECEPCIÓN			
	12:00-12:30	SESIÓN DE APERTURA. Sala A			
	12:30 -13:30	CONFERENCIA PLENARIA APERTURA. Sala A			
	13:30-15:00	COMIDA			
	15:00		QS01	QO01	QA01
	15:15		QS02	QO02	QA02
	15:30		QS03	QO03	QA03
	15:45		QS04	QO04	QA04
	PAUSA: 5 minutos				
	16:05		QS05	QO05	QA05
	16:20		QS06	QO06	QA06
	16:35		QS07	QO07	QA07
	16:50		QS08	QO08	QA08
	17:05-18:00	CAFÉ - POSTERS			
	18:00-18:45	CP1			
	18:45		QS09	QO09	ALM01
	19:00		QS10	EDU03	ALM02
	19:15		QS11	QO10	ALM03
	19:30		QS12	ELC01	ALM04
	19:45		QS13	ELC02	ALM05

día	hora	SALAS				
		PLENARIAS	A	B	C	
		A				
21	10:00		QS14	NN01	AMB01	
	10:15		QS15	NN02	AMB02	
	10:30		QS16	NN03	AMB03	
	10:45		QS17	NN04	AMB04	
	PAUSA: 5 minutos					
	11:05		QS18	NN05	AMB05	
	11:20		QS19	NN06	AMB06	
	11:35		QS20	NN07	AMB07	
	11:50		QS21	NN08	AMB08	
	12:05-12:45	CAFÉ - POSTERS				
	12:45-13:30	CP2				
	13:30-15:00	ALMUERZO-COMIDA				
	15:00		QS22	NN09	AMB09	
	15:15		QS23	BB01	AMB10	
	15:30		QS24	BB02	AMB11	
	15:45		QS25	BB03	AMB12	
	BB04					
	16:05		QS26	BB04	AMB13	
	16:20		QS27	BB05	AMB14	
	16:35		QS28	QA12	AMB15	
	16:50		ALM06	QA13	AMB16	
	17:05-17:45	CAFÉ - POSTERS				
	17:45 - 18:30	CP3				
	18:30		ALM07	QF01	AMB17	
	18:45		ALM08	QF02	AMB18	
	19:00		ALM09	QF03	AMB19	
	19:15		ALM10	QF04	IND01	
	19:30		ALM11	QF05	IND02	
19:45				IND00		
21:00	CENA DEL ENCONTRO					

día	hora	SALAS				
		PLENARIAS	A	B	C	
		A				
22	10:00		ALM12	QF06	IND03	
	10:15		ALM13	QF07	IND04	
	10:30		ALM14	QF08	IND05	
	10:45		ALM15	QF09	IND06	
	PAUSA: 5 minutos					
	11:05		ALM16	QF10	CAT01	
	11:20		ALM17	QF11	CAT02	
	11:35		ALM18	POL01	CAT03	
	11:50		ALM19	POL02	CAT04	
	12:05		ALM20	POL03	CAT05	
	12:20-12:45	PAUSA- CAFÉ				
	12:45-13:30	CP4				
	13:30-15:00	ALMUERZO-COMIDA				
	15:00		ALM21	QI01	QT01	
	15:15		ALM22	QI02	QT02	
	15:30		ALM23	QI03	QT03	
	PAUSA 5 minutos					
	15:50		ALM24	QI04	QA09	
	16:05		QT04	EDU01	QA10	
	16:20		BB00	EDU02	QA11	
	PAUSA: 5 minutos					
	16:40	ACTO DE CLAUSURA				

The use of seaweed in daily diets as a source of nutrients

Paula García-Oliveira^{1,2}, Anxo Carrerira-Casais^{2,3}, Eliana Pereira^{2,*}, Cristina Caleja², Catarina Lourenço-Lopes¹, Lillian Barros², Jorge Pérez-Juste³, Miguel A. Prieto¹, Jesus Simal¹, Isabel C.F.R. Ferreira²

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Seaweed plays an important role in the biosphere being responsible for most of the production in aquatic ecosystems [1]. Although commonly consumed since ancient times in Asia, their consumption has been increasing in Europe and North America [2]. These species are known for their excellent nutritional value, especially as a protein sources and low lipid and caloric content. In addition, they are rich in several bioactive compounds, such as vitamins, essential fatty acids and phenolic compounds, providing important health benefits to consumers [3].

This work aims to determine ash, proteins, fat, carbohydrates and energy contents, as also the composition in free sugars, organic acids and fatty acids of some seaweeds species, namely *Himanthalia elongate* L., S.F. Gray; *Laminaria ochroleuca* Bach.Pyl.; *Saccharina latissima* L.; *Porphyra* sp. C.Agardh; *Palmaria palmata* (L.) Kuntze, and *Undaria pinnatifida* (Harvey) Suringar.

The nutritional aspects were determined using official methodologies for food analysis, while free sugars were identified by HPLC-RI, organic acids by UPFLC-PDA and fatty acids by GC-FID.

Proteins stood out as the main macronutrients present, with values that oscillated between 6 and 30 g/100 g of dry weight (dw) for *S. latissima* and *Porphyra* sp., respectively. On the other hand, a low lipid content was evident in all the studied seaweed species with values below 1 g/100 g dw, as well as low carbohydrates' content. The energy values ranged from 218 and 370 kcal/100 g dw for *L. ochroleuca* and *Porphyra* sp, respectively.

Furthermore, several compounds of interest were identified, namely free sugars and organic acids, in this case being oxalic acid the only molecule present in all species. Saturated, unsaturated and polyunsaturated fatty acids were also determined, showing a clear heterogeneity of concentrations depending on the species.

The present study demonstrates the high potential of these seaweed species as an alternative source of non-animal protein, as well as some molecules with bioactive properties. Thus, the incorporation of this food into the daily diet will contribute for the improvement of a number of functionalities.

Agradecimientos

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