

Accepted Manuscript

Title: Identification and Quantification of Proteins at Adsorption Layer of Emulsion Stabilized by Pea Protein Isolates

Authors: Ting Xiong, Xiangdong Ye, YanTing Su, Xi Chen, Hui Sun, Bin Li, Yijie Chen



PII: S0927-7765(18)30368-0
DOI: <https://doi.org/10.1016/j.colsurfb.2018.05.068>
Reference: COLSUB 9387

To appear in: *Colloids and Surfaces B: Biointerfaces*

Received date: 2-1-2018
Revised date: 29-4-2018
Accepted date: 30-5-2018

Please cite this article as: Ting Xiong, Xiangdong Ye, YanTing Su, Xi Chen, Hui Sun, Bin Li, Yijie Chen, Identification and Quantification of Proteins at Adsorption Layer of Emulsion Stabilized by Pea Protein Isolates, *Colloids and Surfaces B: Biointerfaces* <https://doi.org/10.1016/j.colsurfb.2018.05.068>

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

Identification and Quantification of Proteins at Adsorption Layer of Emulsion Stabilized by Pea Protein Isolates

Ting Xiong^a, Xiangdong Ye^b, YanTing Su^b, Xi Chen^{c,d}, Hui Sun^b, Bin Li^{a,e},
Yijie Chen^{a,e,*}

^aCollege of Food Science and Technology, Huazhong Agricultural University, Wuhan 430070, People's Republic of China

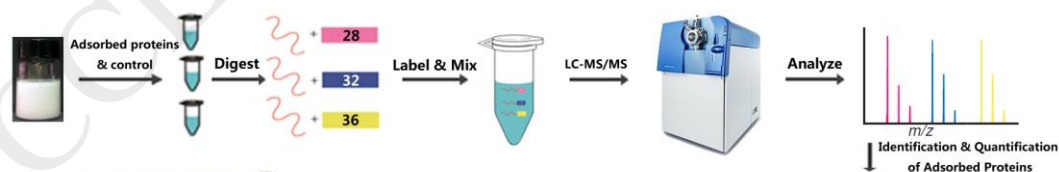
^bCollege of Life Sciences, Wuhan University, Wuhan 430070, People's Republic of China

^cMedical Research Institute, Wuhan University, Wuhan 430070, People's Republic of China

^dWuhan Institute of Biotechnology, Wuhan 430070, People's Republic of China

^eKey Laboratory of Environment Correlative Dietology, Ministry of Education, Huazhong Agricultural University, Wuhan 430070, People's Republic of China

Graphical abstract



Sequence Alignment & Residue Hydrophobicity Analysis

Table1. Proteins of the globulins and albumins identified in PPI-control and Ads. (Adsorbed proteins) by RP/LC-ESI-MS/MS and their relative abundance.

SN	Accession	Name	Mass (kDa)	Fold of change (Interface/Control)	STDEV	Significance	Up/Down
1	P11911.2	Vicilin precursor	22.231	1.414	0.131	*	↑
2	CAF25233.1	Vicilin partial	47.298	1.684	0.445	*	↑
3	CAF25232.1	Vicilin partial	47.279	2.164	0.773	*	↑
4	CBK38921.1	Vicilin 47kDa	49.464	1.550	0.295	**	↑
5	CBK38923.1	Vicilin 47kDa	49.664	1.177	0.176	**	↑
6	P02855.1	Provicilin (Type A)	31.340	1.423	0.074	**	↑
7	CAB82855.1	Convicilin	72.063	0.679	0.048	**	↓
8	CAP06107.1	Convicilin partial	19.240	0.010	0.001	**	↓
9	P13915.2	Convicilin precursor	68.990	1.043	0.019	**	↑
10	1718472A	Convicilin	12.400	0.227			
11	1K5C_F	Pislegumin Chain F	44.872	1.838	0.238	*	↑
12	CAA47809.1	Legumin (minor small)	38.990	0.559	0.004	**	↓
13	P14194.1	Legumin B	38.990	0.072	0.021	**	↓
14	P15838.1	Legumin A2 precursor	39.270	1.268	0.108	**	↑
15	P05092.1	Legumin J precursor	56.895	1.523	0.243	**	↑
16	S26688	Legumin K	1.167	0.041		**	↓
17	P08688.1	Albumin-2 (PAI)	26.238	1.537	0.073	**	↑
18	P02926.1	Albumin-1 precursor	13.912	0.808	0.107	*	↓
19	P02930.1	Albumin-1 E precursor	13.778	0.387	0.042	**	↓
20	P02929.1	Albumin-1 D precursor	13.916	0.693	0.143	*	↓
21	P02931.1	Albumin-1 F precursor	13.913	0.988	0.050	**	↓

Fold of change (Interface/Control) were calculated by ratio of IEM to LEM. The up arrow represents the fold of change is greater than 1, while the down arrow represents the fold of change is less than 1. *, p < 0.05; **, p < 0.01 (n = 3).

Download English Version:

<https://daneshyari.com/en/article/6980101>

Download Persian Version:

<https://daneshyari.com/article/6980101>

[Daneshyari.com](https://daneshyari.com)