## Accepted Manuscript

Effect of processing on aggregation mechanism of egg white proteins

Negar Gharbi, Mohsen Labbafi

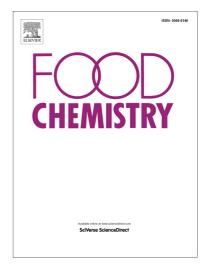
PII: S0308-8146(18)30097-9

DOI: https://doi.org/10.1016/j.foodchem.2018.01.088

Reference: FOCH 22277

To appear in: Food Chemistry

Received Date: 6 August 2017 Revised Date: 10 January 2018 Accepted Date: 11 January 2018



Please cite this article as: Gharbi, N., Labbafi, M., Effect of processing on aggregation mechanism of egg white proteins, *Food Chemistry* (2018), doi: https://doi.org/10.1016/j.foodchem.2018.01.088

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.

ACCEPTED MANUSCRIPT

Effect of processing on aggregation mechanism of egg white proteins

Negar Gharbi<sup>a</sup>, Mohsen Labbafi<sup>a\*</sup>

<sup>a</sup> Department of Food Science and Technology, Razi Food Chemistry Lab, College of Agriculture and

Natural Resources, University of Tehran, Karaj, Iran

\*Corresponding author: Email: mlabbafi@ut.ac.ir; P. O. Box: 31587-77871, Tel: +98-26-32248804.

First author email address: n\_gharbi@alumni.ut.ac.ir

**Abstract** 

Egg white proteins (EWPs) are important components of many food products. To obtain optimal

functionality, EWP aggregation needs to be controlled. Different treatments can lead to the formation

of aggregates in diverse ways, depending on the parameters of the treatments. Recent articles on the

effects of processing (heat treatment, alkali treatment, pulsed electric field, high pressure, ultraviolet

irradiation, and high intensity ultrasound) on the aggregation of EWPs are reviewed. The relationships

between the processing parameters and the aggregation mechanisms are discussed. The information

may be helpful in controlling the aggregation mechanisms during the processing.

**Keywords** 

Aggregate, egg white protein (EWP), ovalbumin (OV), ovotransferrin (OT), lysozyme (LY),

sulfhydryl-disulfide exchange (SH-SS exchange).

1. Introduction

Egg white (EW) is well-known for its excellent nutritional and functional attributes (foaming, gelation,

and emulsifying) (Mine, 2002). Ovalbumin (OV) is the main protein in EW (54%), and its isoelectric

1

## Download English Version:

## https://daneshyari.com/en/article/7585609

Download Persian Version:

https://daneshyari.com/article/7585609

Daneshyari.com