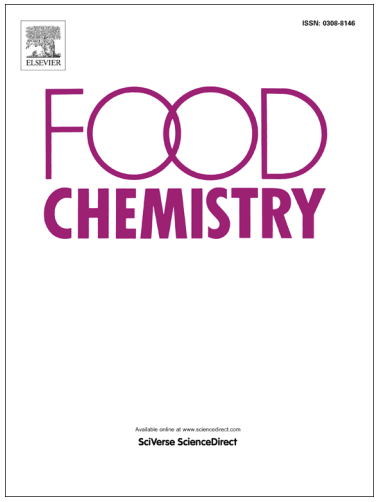

Role of Reactive Carbonyl Species in Non-Enzymatic Browning of Apple Juice During Storage

Laurianne Paravisini, Devin G. Peterson

PII: S0308-8146(17)31890-3
DOI: https://doi.org/10.1016/j.foodchem.2017.11.071
Reference: FOCH 22048

To appear in: *Food Chemistry*

Received Date: 6 October 2017
Revised Date: 16 November 2017
Accepted Date: 17 November 2017

Please cite this article as: Paravisini, L., Peterson, D.G., Role of Reactive Carbonyl Species in Non-Enzymatic Browning of Apple Juice During Storage, *Food Chemistry* (2017), doi: https://doi.org/10.1016/j.foodchem.2017.11.071

Role of Reactive Carbonyl Species in Non-Enzymatic Browning of Apple Juice During Storage

Laurianne Paravisini and Devin G. Peterson*

Department of Food Science and Technology, 317 Parker Food Science & Technology Building, The Ohio State University, 2015 Fyffe Rd., Columbus, OH 43210

* Corresponding author: peterson.892@osu.edu

Highlights

- Color and Reactive Carbonyl Species in apple juice were monitored for 10 weeks
- Browning development and RCS composition were significantly correlated
- Supplementation demonstrated a causality relationship between color and specific RCS
- Methylglyoxal and glyoxal were identified as browning precursors in apple juice
- Phloretin significantly inhibited browning formation in early storage

Keywords: apple juice, Reactive Carbonyl Species, shelf-life, Maillard reaction, browning