

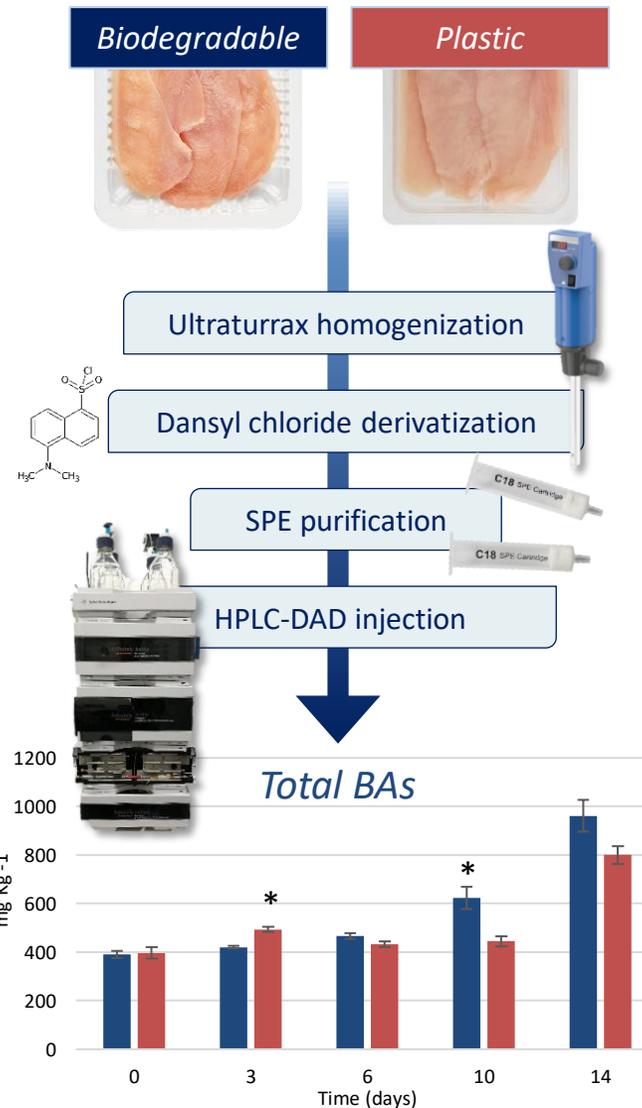
INTRODUCTION

Consumers' safety perception of organic products support the growth of the organic food market. GMOs, non-natural or synthetic substances and synthetic chemotherapy drugs are prohibited in organic farming [1]. In a circular economy perspective, a genuine food product needs an eco-friendly packaging.

Biogenic amines (BAs) are low molecular weight nitrogenous compounds. They are formed by bacterial decarboxylation of amino acids and so are used as chemical markers of food spoilage [2].

AIM of the study

Combine organic meat from an eco-sustainable farming with an eco-friendly compostable packaging solutions performing a shelf-life study.



EXPERIMENTAL

8 BAs (PUT, CAD, SPM, SPD, HIS, PHE, TYR and TRY) levels were monitored in organic chicken meat preserved in plastic and in biodegradable packaging. Analyses were performed at day 0, 3, 6, 10, and 14 (storage at 4°C), every time opening a new pack. BAs were extracted with an aqueous solution of Trichloroacetic acid 5%, purified with SPE cartridge and quantified through HPLC-DAD.

RESULTS

The studied BAs, during the shelf life of meat showed a similar trend for both packs. Biodegradable packaging can preserve organic chicken meat as a common plastic material with the advantage that it is completely biodegradable, compostable and sustainable for the environment

1) Commission Regulation (EC) No 889/2008 of 5 September 2008 laying down detailed rules for the implementation of Council Regulation (EC) No 834/2007 on organic production and labelling of organic products with regard to organic production, labelling and control.

2) Önal, S. E. K. Tekkeli, C. Önal. A review of the Liquid chromatographic methods for the determination of biogenic amines in foods. Anal. Methods 2013, 138, 509.