



Antioxidant activity of table eggs

Mejo Remanan, Jianping Wu, Rene Jacobs

Introduction

Antioxidants protect the body from oxidative damage induced by free radicals and reactive oxygen species. The body has a complex antioxidant defense system to neutralize radicals and prevent cell damage and disease.

Studies have shown that the food derived antioxidants protects the body from chronic diseases and aging. Eggs are one of nature's most nutrient foods.

Can eggs be included in a healthy meal plan ?

Objectives

- To estimate the effect of cooking style on the antioxidant activity of eggs.
- To estimate the effect of gastric simulated enzyme digestion on the antioxidant activity of the eggs.
- To identify the potent antioxidant active peptides from the eggs.

Materials and Methods

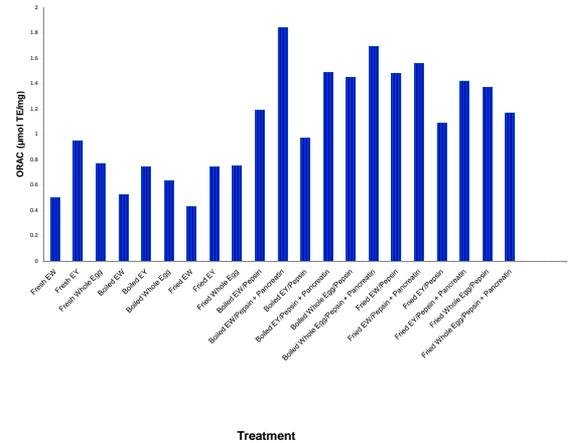
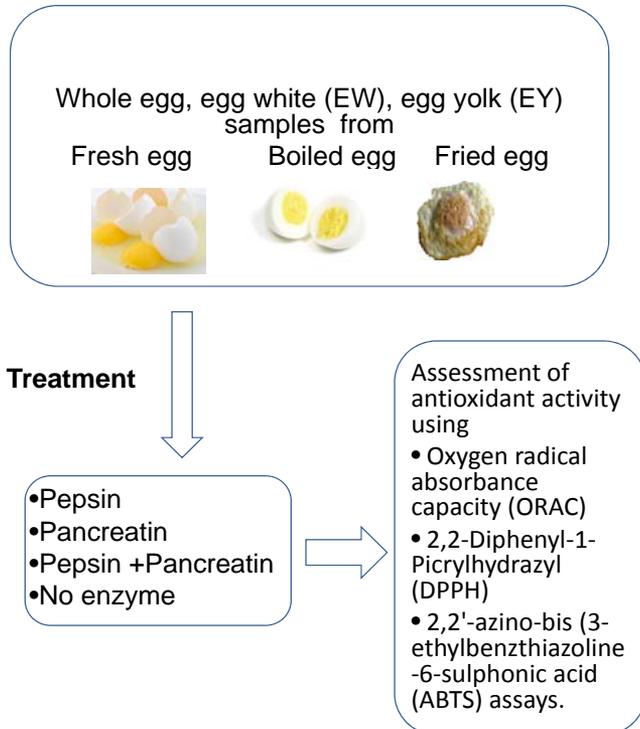


Figure 1. Antioxidant activity of different egg samples (using ORAC assay). Similar results were noticed with DPPH and ABTS assays.

Observations

- Cooking style (boiling & frying) have no significant effect on the antioxidant activity of egg white, yolk or whole eggs compared to fresh eggs.
- Enzyme digestion with pepsin followed by pancreatin increased antioxidant activity.

Future study

- Separation of the potent peptides with antioxidant activity from the eggs
- Purification and identification of novel antioxidant egg derived peptides.

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Contact information

Dr. Jianping Wu
Phone: (780) 492-6885
E-mail: Jianping.Wu@ales.ualberta.ca