



Egg yolk: A Rich Source of Antioxidants

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Did you know that eggs are rich in antioxidants?

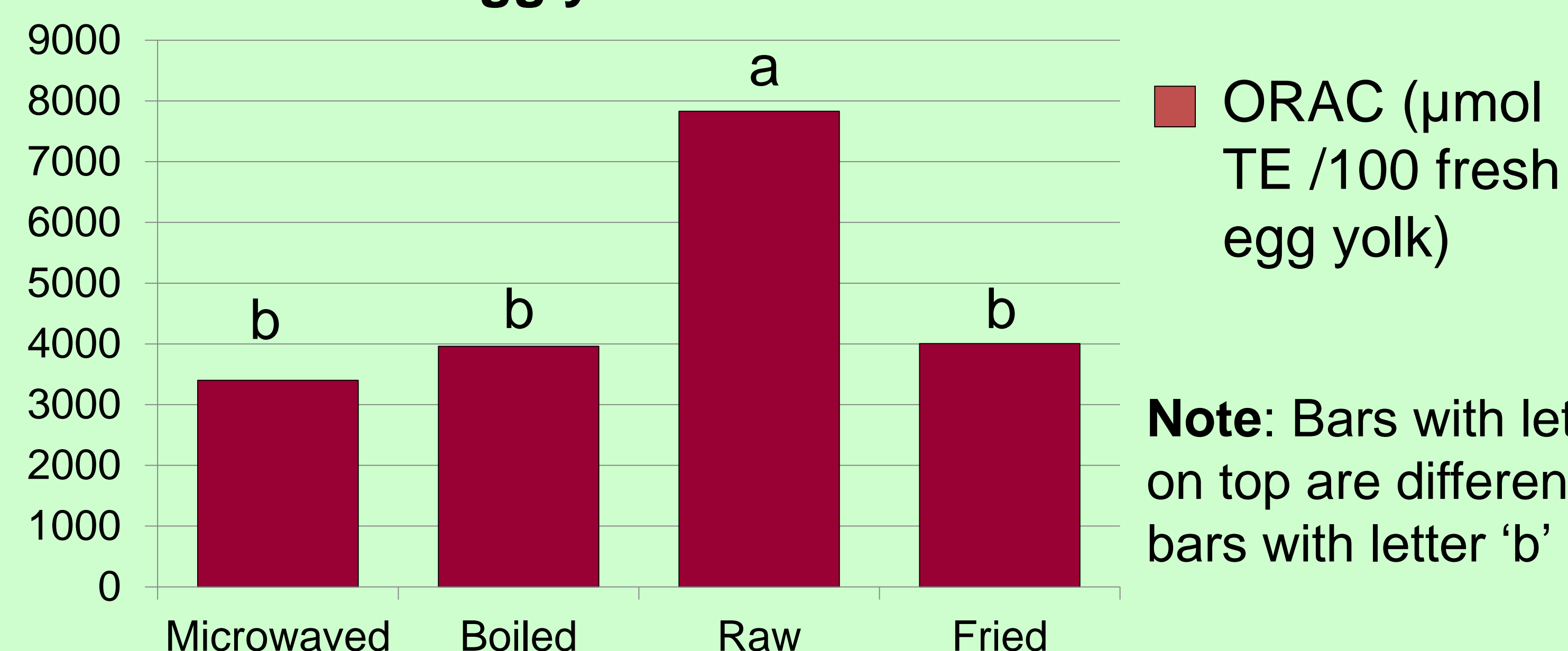
- Two egg yolks (~35 g, one serving) can provide antioxidants equal to half a serving of cranberry (~25 g) or half a serving of apple (~half of an apple) or 5 servings of tomato (5 tomatoes)
- The major phenolic-like antioxidants in egg yolk are tryptophan and tyrosine, two essential amino acids (also found as the major antioxidants in breast milk (Tsopmo and others))

What did we do in our experiment?

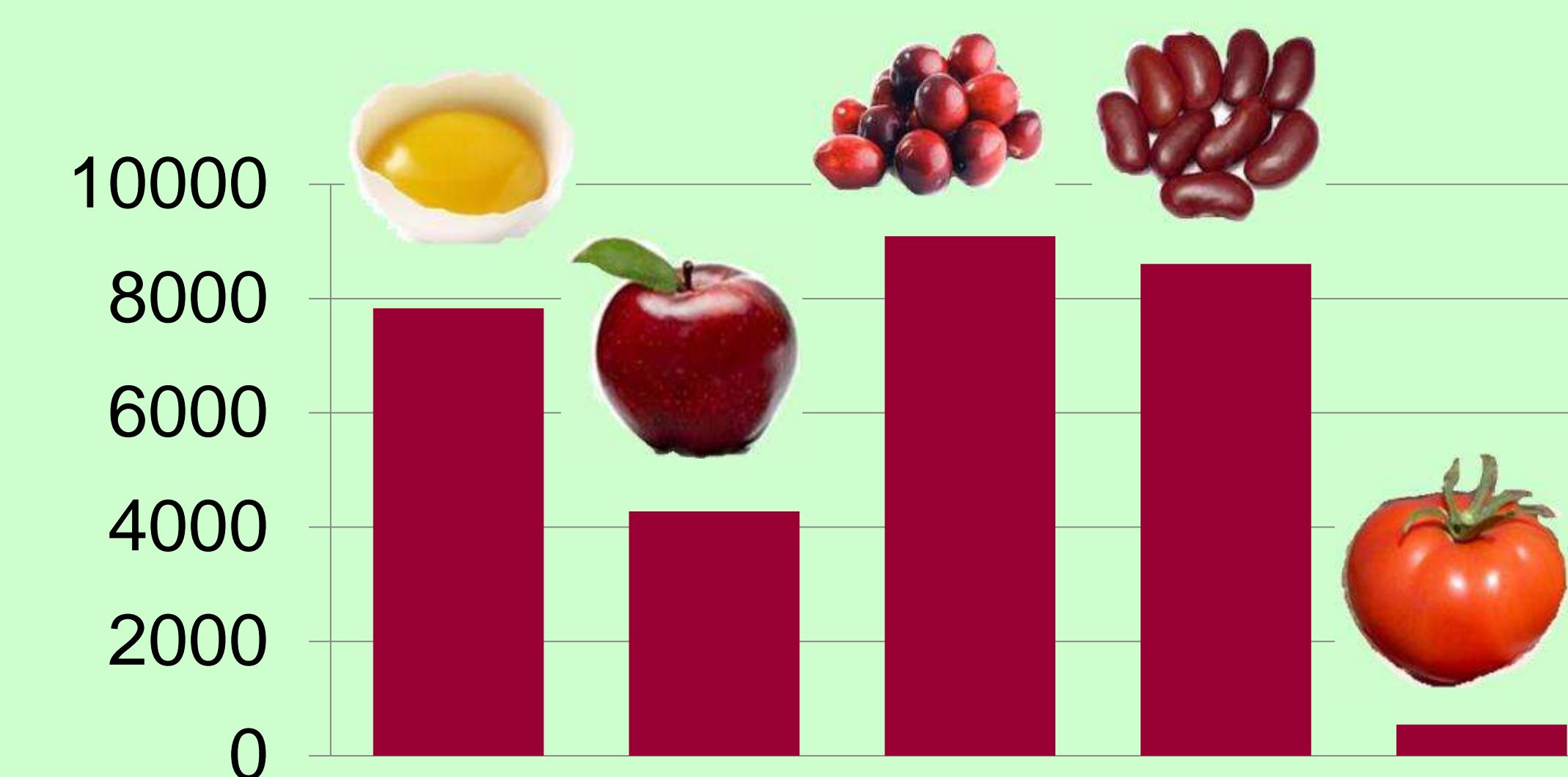
- We were interested in searching for new antioxidant compounds in egg yolk
- We also wanted to find how cooking methods would affect the antioxidants in egg yolk

What did we observe?

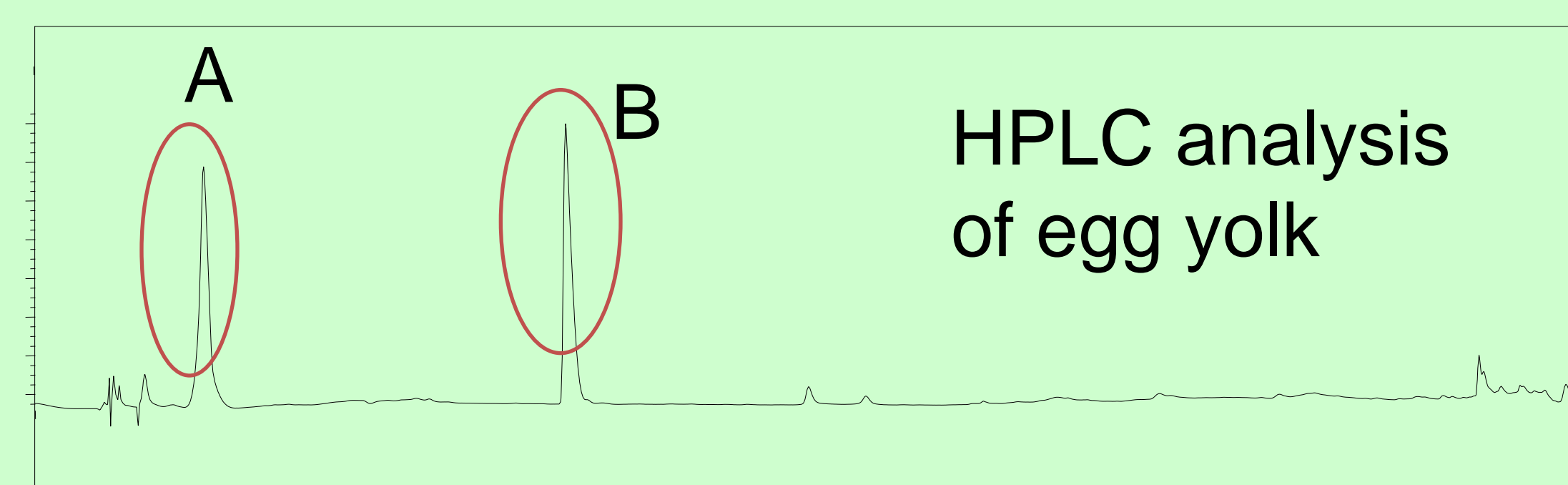
Antioxidant activity of cooked egg yolks



Antioxidant activity of egg yolk and some other foods (for 100g)



- Fresh egg yolk has the highest antioxidant activity
- Cooking reduces the antioxidant activity of egg yolk
- Antioxidant activity of egg yolk compared with several other food commodities

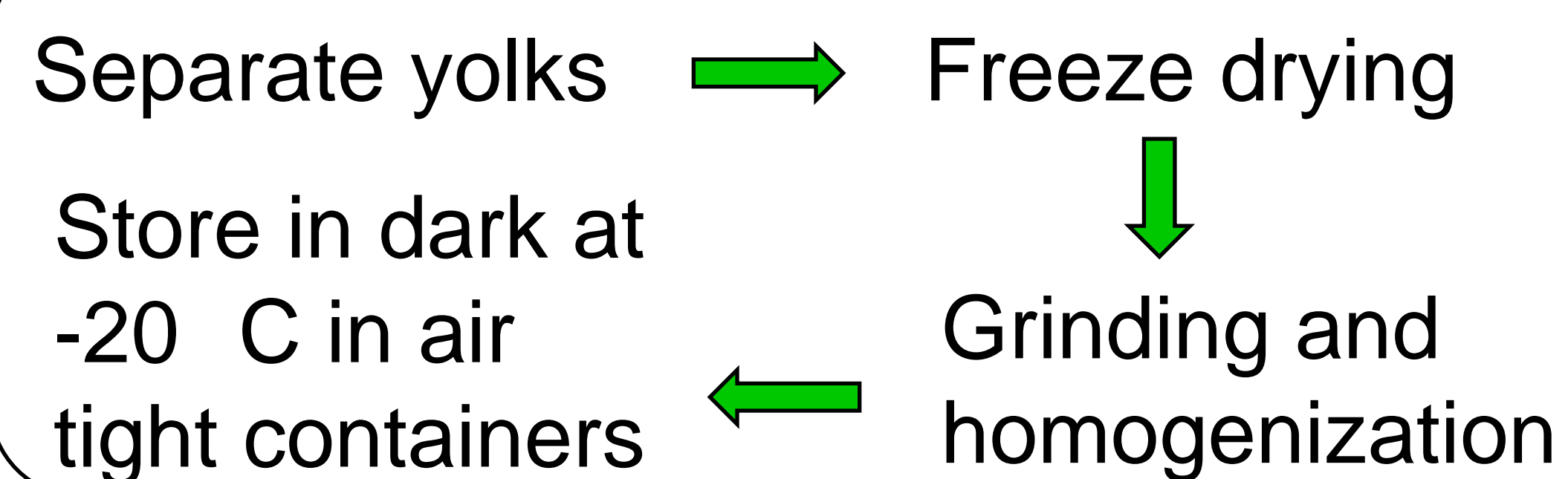


- We found that antioxidant activity of egg yolk is mainly due to two amino acids
- A: Tyrosine
- B: Tryptophan

What does this mean?

- In addition to well-known nutrients, eggs are rich in antioxidants
- Two amino acids, tryptophan and tyrosine, are two compounds in egg yolk with high antioxidant activity
- Cooking reduces the antioxidant activity of egg yolk
- Three different types of cooking show no difference among each other

Special thanks to...



Yolk sample extraction and analysis



Frying at 200 °C for 2 min. each side

Boiling in a water bath at 97 °C for 10 min.

Microwaving for 90 sec at high level heat (1100 W)

Raw yolks