

Application of the technique sous vide cooking in the United States

INTRODUCTION

Key stages:

1. Raw food with other ingredients or not.
2. Packed in heat-stable plastic bags.
3. Cooking in thermostatic water bath or steam-convection ovens.
4. Controlled time and temperature for each food
5. Serve or conserve under refrigeration.

The most important advantages:

- ✓ High sensory quality → foods with high tenderness, very juicy and tasty
- ✓ Cook food in its own juices → negligible water and flavor loss by evaporation
- ✓ Reducing oxidation flavors by the oxygen absence
- ✓ Increasing the shelf-life → removes the risk of recontamination during storage and reduces aerobic bacteria growing
- ✓ Allows an almost-perfect reproducibility
- ✓ Heat transference is more efficient
- ✓ Pasteurization at lower temperatures

RESTAURANTS

- Goussault became one of the pioneers of the technique in the United States.
- Goussault founded the sous vide school CREA (Centre for Research and Studies of Food)
- There are differences between the North American chefs as Tomas Keller and Catalans chefs Joan Roca and Tony Botella
- Prestigious restaurants have adopted sous vide cooking
- Is one of four culinary preparation methods trend of 2014

FOOD SERVICE

Advantages of food service sous vide

- Reduction of energy
 - Superior organoleptic and nutritional product quality
 - Reduction in raw material costs
- **Cuisine Solutions** is the leading provider of sous vide food products in the United States.

UNITED STATES GOVERNMENT

Comparison of the legal American framework with European's

- Rapid introduction of technology in the legal framework
- Great specificity of sous vide cooking application
- Time and temperature values more permissive compared with the European legal framework
- Facilitates its application to producers or sellers of these foods

RESEARCH

Culinary research

- CREA
- Modernist Cuisine

Food safety research

- Baldwin, Juneja & Snyder
- USHHS → FDA
- USDA → ARS

CONCLUSIONS

Strong impact in many areas

Differentiate two main lines of evolution:

- **Culinary and gastronomic branch** : rapid expansion in the world of restaurants, influence of Bruno Goussault
- **Scientific and technical branch** : high involvement in research for food safety, high specificity for the correct application of cooking, strong interest in providing information to the food operators, legal framework adapted to new food trends of society.

There are many aspects to explore yet in scientific research and gastronomy.