



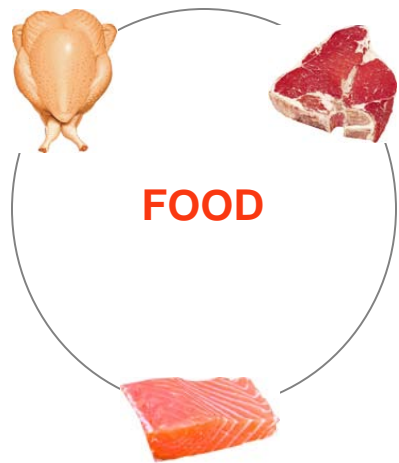
IPGDx

EFresh[®]



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EFresh[®]



Our Technology



Measures Food



Palatability



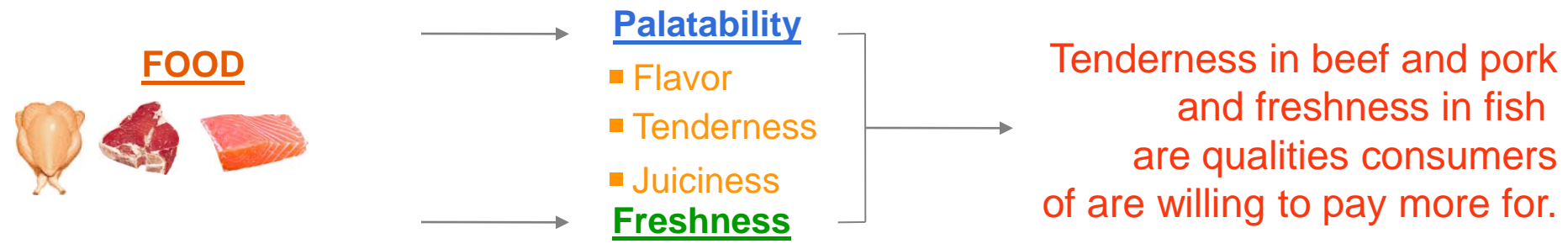
Freshness



? Previously Frozen

Introduction

• Food quality, flavor, and nutrient density represented by freshness and palatability are valuable natural qualities and important to all consumers.



Introduction



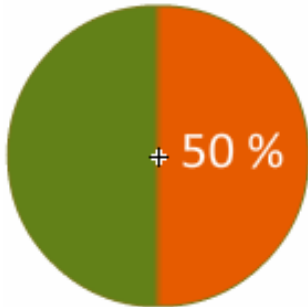
Fresh Beef



Frozen Beef

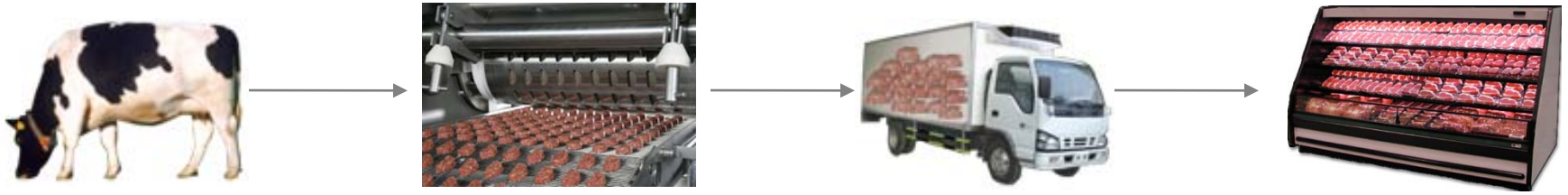


- Freezing impacts nutrient density and flavor.
- A food's overall quality establishes the market price.

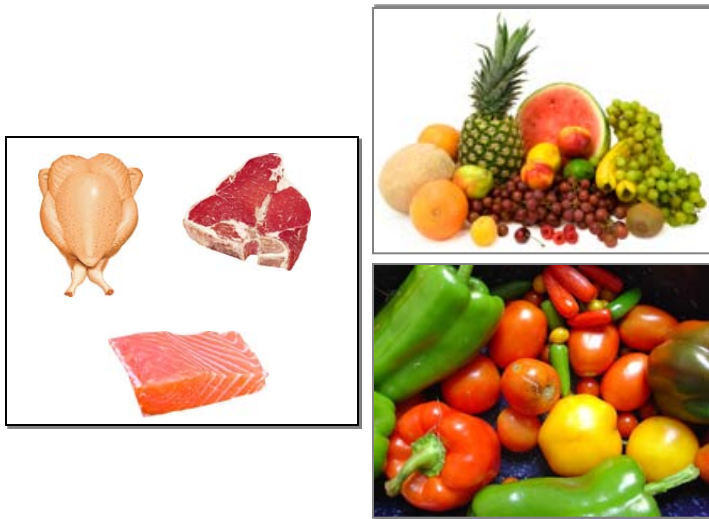


- At least one-half of meat, fish and fowl that is sold as fresh has been previously frozen!

Introduction



- As the food travels through the "Food Supply Chain" changes take place in the cellular structure.



Customer

- How fresh is it?
- When should I use it?
- Is it an entree or stock?
- Is it capable of providing nutrition and expected flavor?



measures

Freshness

Palatability

Can be objectively measured

Immediate results

Non-destructive measurement

Vitality Index®

is the measured value

Directly corresponds to changes in tenderness, juiciness, flavor and freshness as food changes.



- Food events which effect food freshness and palatability.



Processing



Preservation



Transportation



Preparation

Lifespan of Freshness



- Each food has it's own Lifespan of Freshness.
- Freshness and palatability (juiciness - tenderness - flavor) change throughout the lifespan.
- The measured value changes over time and conditions: storage, package and preservation.

The Technology

Impedance Plethysmography

- The study of this electrical/biological measurement is well established, the properties and it's parameters are clearly understood.

Freshness begins and ends on a cellular level, EFresh® measures cell membranes.



- A safe electrical circuit is applied to a biological system entity, or a portion of a previously living piece of food (meat, fish, poultry, fruits & vegetables).
- Measurement of electrical values correspond directly to freshness and palatability.
- Clearly illustrate changes in cells and cell membranes; these results are the most basic level of measurement of physiology.

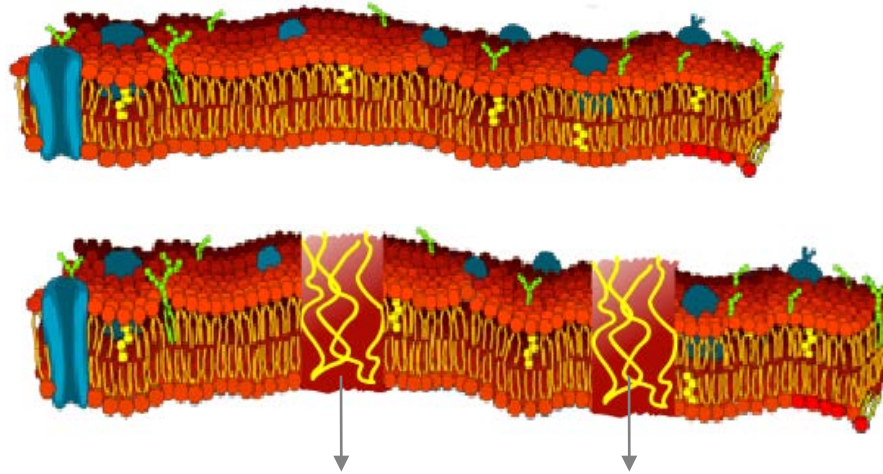
The Technology

- Food freshness and palatability can be objectively measured.

Fresh



Frozen



Cell membrane break down

EFresh®



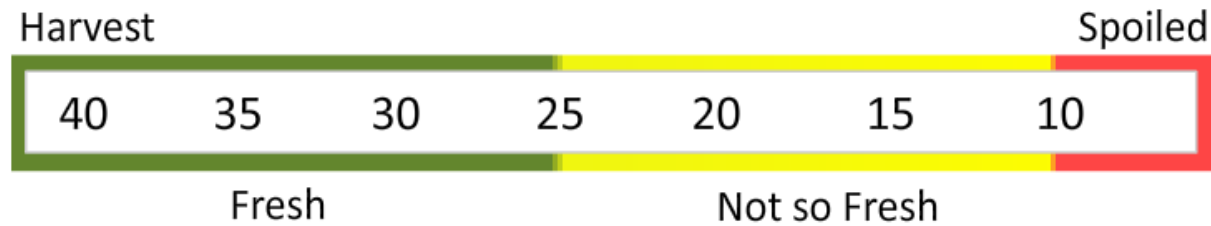
- Measures changes of cell membranes.
- Clear reflection of food freshness and palatability.
- Meat tenderness can be monitored throughout the aging process.
- Food that has been previously frozen and thawed can be detected.

How it works

- The measured value is compared to the scale of that type of food to grade the results.

Fresh Beef

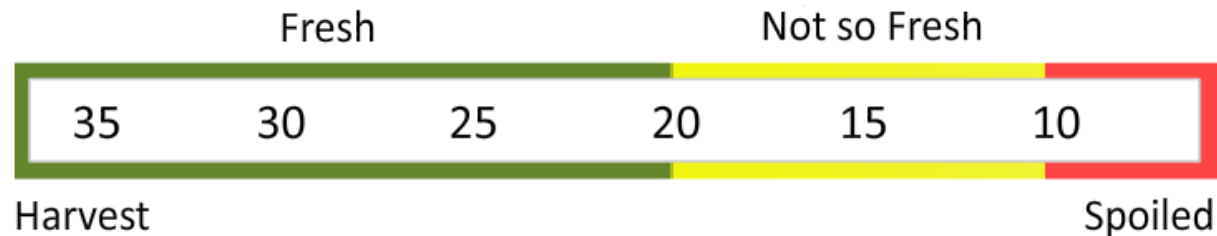
Range is 45 to 10



- With 45 degrees at harvest
- Yet with proper aging beef may be best below 15 degrees, although fresh beef can be sorted by tenderness as well.

Fish

Range 35 to 10



- Best flavor when freshest and not previously frozen.
- As an entree rather than a supporting role when it is >20.

Value Proposition

EFresh[®] measures freshness and palatability by illustrating the foods' cell membranes where freshness begins and ends.



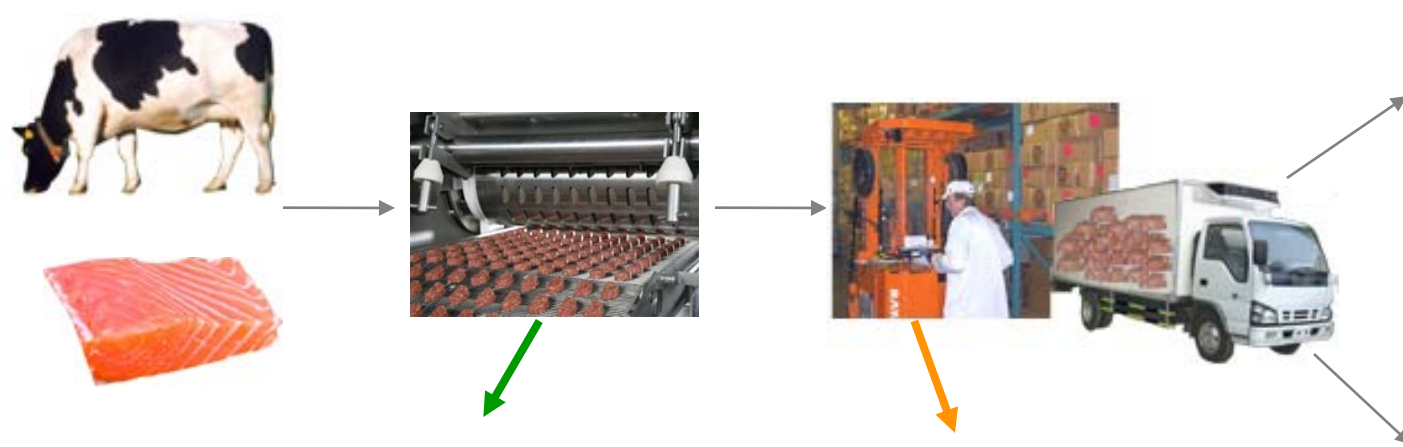
Retailers

Restaurants

Grocers

- EFresh[®] technology can be utilized to increase efficiencies at several touch points in the food supply chain.
- The technology can be used stand-alone or integrated into a variety of platforms; scales, display and storage containers.

Touch points (throughout the food chain)



Retailers

Restaurants

Grocers

Processing Plants

To distinguish the top 20% of tender beef.

Wholesalers & Transportation

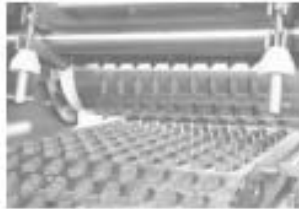
Verify food safety and palatability as part of transport process.



Inside a processing center



Inside a truck



Retailers

Restaurants

Grocers



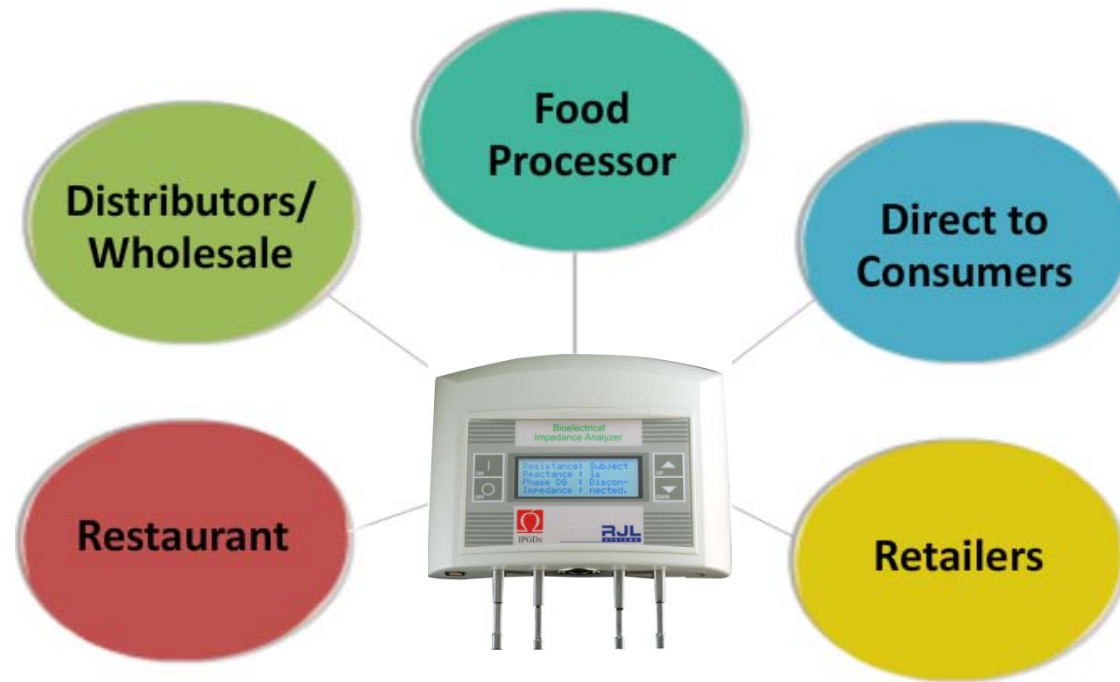
Direct to Consumers



Restaurant



Value Proposition



- Development of paradigm shift in food industry towards improved quality for each link of value chain.
- Improving the food supply by providing the highest quality food products available.
- Committed to improved quality of food.
- Improve financial margins along value chain spectrum.



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