

Culinary 112: Sanitation & Safety

Mid-Term Project: Menu Item Analysis

Dan Schulte

2. The Chef, the Recipe & the Risk

Noted Hawaii Chef: Sam Choy

Duck Breast – Spinach Salad with Ginger-Soy Vinaigrette

Recipe: 2 high risk ingredients (TCS foods)

- Duck Breast
- Baby Spinach*
 - Baby spinach is often packaged as a ready to eat ingredient pre-washed and prepped for service. Ready to eat foods are considered TCS ingredients.



3. Duck Breast – Spinach Salad with Ginger-Soy Vinaigrette

- 4 small *duck breasts*, trimmed and skin scored
- Salt and freshly ground black pepper
- 4 cups *baby spinach leaves*, cleaned
- 1 cup sliced button mushrooms
- Vinaigrette
 - 1 tablespoon peeled and minced fresh ginger
 - 2 tablespoons soy sauce
 - 2 tablespoons rice wine vinegar
 - 1/2 cup sesame oil





4. Procurement & Purchasing: Duck Breasts and Baby Spinach

Acquire from **approved reputable supplier**

When using reputable suppliers the risk for these two items is minimized

Duck breast, TCS food must always be kept at 41° F (5° C) or cooler

Baby Spinach, may be supplied in ready to eat form increasing risk

Receiving & Inspecting:



Duck Breast

- Inspect
 - Packaging Checked
 - Sealed?
 - Freshness dates?
 - Damage or pests?
 - USDA stamped?
 - Check Temperature (*avoid Time-Temperature abuse*)
 - 41° F (5° C) or cooler?
 - If frozen, signs of thawing & refreezing (e.g. ice crystals)
 - Confirm Quality

Baby Spinach

(ready to eat or fresh bunches?)

- Inspect
 - Packaging Checked
 - Sealed (*if ready to eat*)?
 - Freshness dates?
 - Damage or pests?
 - Check Temperature (*if ready to eat -avoid Time-Temperature abuse*)
 - 41° F (5° C) or cooler?
 - Confirm Quality

**Corrective Action: If food is damaged or temp. is not right...REFUSE IT!*

Storage

Coolers & Freezers to be regularly maintained and temperatures monitored

Duck Breast



- Identify use by date
 - Observe FIFO
 - Keep at 41° F (5° C) or cooler ...avoid
- ### Time-Temperature abuse
- Store on bottom shelf in cooler to prevent **Cross-Contamination** with *Salmonella* bacteria in case of package leaks
 - If packages opened, wrap or cover additional product

Baby Spinach

- Keep at 41° F (5° C) or cooler
...avoid

Time-Temperature abuse

- Store in separate cooler from meats/poultry or on top shelf (above) in cooler to prevent **Cross-Contamination** with other products

Corrective Action: If product use by date has expired...**THROW IT OUT!**

Preparation: The Recipe



- To prepare the vinaigrette: Combine all of the ingredients for the vinaigrette in a small saucepan. Cook over low heat for 5 minutes, or until warm.
- To prepare the **duck**: Season the duck breasts with salt and pepper and place in a very hot sauté pan over high heat with the skin side down first. Cook for 3 to 4 minutes on each side, or until the skin is golden brown and crispy and the duck is cooked medium.
- Remove the duck from the pan. Let the duck sit for 2 minutes and then slice on diagonal.
- To prepare the **spinach**: Place the spinach leaves in a large bowl, toss with half of the warm vinaigrette, and season to taste with salt and pepper.
- Place spinach leaves in the center of each plate and top with the mushrooms. Arrange the warm duck slices in the center of the spinach and spoon the remaining vinaigrette over the duck.
- Top off with fresh ground black pepper.

Preparation: Duck Breasts

- Workstation & all equipment to be cleaned & sanitized
- Exercise good personal hygiene
- If frozen, thaw in cooler at 41° F (5° C) or lower or submerge in running water at 70° F (21° C) or lower
- Avoid cross-contamination with raw poultry to avoid *Salmonella* contamination
- Avoid time-temperature abuse by cooking to the minimum internal: Poultry 165° F (74° C) for 15 seconds
- Check minimum internal cooking temperature with a calibrated thermometer
- *Corrective Action:* If minimum internal temperature is not reached following cooking times, continue to cook until temperature guidelines are met



Preparation: Spinach



Workstation & all equipment to be **cleaned & sanitized**

Do not allow for contact with surfaces exposed to raw meat/poultry to avoid **cross-contamination**

Exercise good **personal hygiene**

- *Norovirus & Hepatitis A concerns with ready to eat foods*
- *Shigella & E. coli from infected food handlers*

Clean & wash spinach thoroughly separating leaves as much as possible

Service

Holding warm vinaigrette is low risk due to high acidity

Use only properly **cleaned and sanitized** service plates and utensils

Servers to exercise good **personal hygiene**

Servers to hold plates by the bottom, flatware by the handles avoiding food contact surfaces

Food to be served immediately, this recipe is not meant to be held



5. Hazard Analysis I: Preventative Strategies

Approved Reputable Suppliers

TCS foods can cause foodborne illness

Reputable suppliers have approved inspections and a record of safe food handling practices

Personal Hygiene

Minimize risk of transmitting Viruses:

- Norovirus
- Hepatitis A

Minimize risk of transmitting Bacteria:

- *Staphylococcus*
- *Shigella*
- *E. coli*



Hazard Analysis II: Preventative Strategies

Cross-Contamination

- Salmonella
 - primary association with **duck** (poultry)
- E. coli
 - **spinach** (produce) contamination possible
- Shigella
 - **spinach**...possible from contact with contaminated water



Time-Temperature Abuse

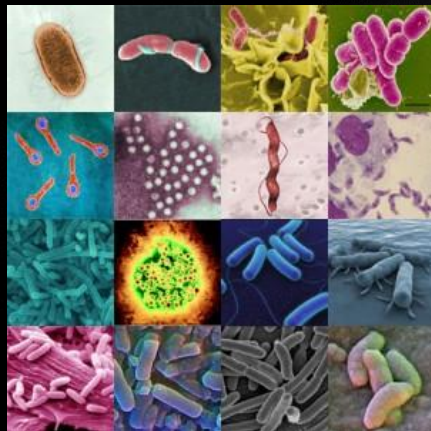
- Salmonella
 - **Duck** (poultry)
 - cook to proper minimum internal cooking temperature
 - *165 °F (74 °C) for 15 seconds*

Cleaning and Sanitizing

- Food contact surfaces...before and after use
- Anytime a new task or different food is handled
- After 4 hours

6. Pathogen Signs & Symptoms

- Virus:
 - Norovirus: Vomiting, diarrhea, nausea, abdominal cramps
 - Hepatitis A: Fever, general weakness, nausea, abdominal pain, jaundice
- Bacteria
 - Salmonella: Diarrhea, vomiting, abdominal cramps, fever
 - Shigella: Bloody diarrhea, abdominal pain/cramps, fever
 - E. Coli: Diarrhea (becomes bloody), abdominal cramps, kidney failure



7. Critical Control Point* & Risk Analysis

- Preparation Risks
 - **Cross-contamination** with raw **duck** and food contact surfaces
 - **Time-Temperature abuse** cooking **duck** to the proper minimum internal temperatures *
 - **Personal hygiene** with **spinach**
- Prevention:
 - **Clean and sanitize** all work surfaces using separate equipment for duck and spinach
 - Wash hands and wear gloves when handling food
 - Check food temperature, when required extend cooking time as needed



Risk Summary



Critical Control Point = Cooking Duck

- Effective cooking will kill pathogens present prior to that step

Spinach risk, while present, not as critical

Happy Cooking 😊

& Happy Eating!!!

