

# How The Panelists Votes Chicken Ballotine With Analog Chicken Turkey and Duck

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**Abstract :-** Chicken as a raw material for Indonesian cuisine could be processed as many shapes and appearances, so many creations that could be made using raw chicken as materials. One of the recipe were from the time went the Dutch were in Indonesia, they were often presented this dishes in their parties for the Indonesian nobles also for the Dutch them selves in Indonesia or in the family of Indo-Dutch and Chinese descendant, it was dish known as “Ayam Kodok” in Indonesia. “Ayam Kodok” is a modification of western dishes named Chicken Ballotine. "It was a history of the idea of the Dutch and Western Society. In fact, in Western countries, making "Ayam Kodok" (naming in Indonesia), it turns out the contents of the dough is not only chicken, but also of beef, poultry meat and even fish (Gringoire and Saulnier, 2009). The essay used in this study is a test organoleptic, hedonic, Test, F test (ANOVA)/ Hypothesis. To test whether there are differences in the color, aroma, flavor and texture in the manufacture of Chicken Ballotine using turkey, ducks and turkeys and ducks there are differences in the color, aroma, flavor and texture in the manufacture of chicken ballotine using turkeys, ducks and turkeys and ducks. Overall from hedonic test, panelists accepted (like) the color, Aroma, flavor and texture of both control and treatment. Differences in the treatment and control contained in the color of chicken and turkey, chicken meat and flavor turkey mixture of duck meat, the texture of chicken and turkey meat and texture of chicken and duck meat turkey mixture. A panelist most dominant there in duck meat flavor the turkey mixture by an average of 4.25. The results of hypothesis testing, Ho accepted in color, aroma, flavor and texture in the manufacture of Chicken Ballotine using duck meat, while Ho rejected on the color, Aroma, flavor and texture in the manufacture of Chicken Ballotine using turkey and duck meat turkey mixture.

**Keywords:** *Chicken Ballotine, Turkey, Duck Meat, organoleptic test, Hedonic test, Anova test.*

## I. INTRODUCTION

Dishes made from chicken processing, has become part of the cuisine in Indonesia, in general. From fried chicken,

chicken curry to chicken *rica- rica*, tailored to the flavors and culture of each region in Indonesia. So people in big cities prefer with a side dish of chicken, opening opportunities for foreign franchise since decades ago for food business in Indonesia.

According to the expert culinary William Wongso (Tempo.com Travel, December 24, 2011), chicken ballotine only served in the days of Christmas, because its creation is complicated. "It's not everyday dishes, so it's usually made because there was an event", he said when contacted by electronic mail. But this time, not only the family of the house and the people who celebrate Christmas day who serves Chicken Ballotine, but people from among those who already know and flavor the chicken dish and also several catering services provide a menu of Chicken Ballotine booked, now Chicken Ballotine's are also frequently used as one of the conducting in the event of an engagement, and the application of some of the people in the big cities in Indonesia. Chicken Ballotine into a special meal for consideration of the difficulty of making that makes this dish special. Indonesia has not been commonly used in turkey meat for food dish, such as a Christmas tradition in western countries. Only a few restaurants that serves a menu of turkey meat, especially on the day of Thanks giving. William Wongso (Tempo.comTravel, December 24, 2001), said chicken ballotine made from an old chicken Flesh and bones removed, until only the skin left over. The chicken meat crushed and mixed with spices and then put back. Intact skin to form a chicken carcass is what causes so-called chicken ballotine. Chicken Ballotine presented in the form of a grill, having previously steamed first. *Ayam Kodok* is a modification of western dishes named chicken ballotine. "Its history of the idea of the Dutch. In fact, in western, *Ayam Kodok* (naming in Indonesia), called Chicken Ballotine, it turns out the contents of the mixture is not only chicken, but also of beef, poultry meat and even fish (Gringoire and Saulnier,2009).

Selected chicken as research for the made of ballotine (other than fish can be used to make ballotine), due primarily to the appropriate ISO 3924: 2009 that chicken is the skeletal muscle of a chicken carcass that is safe, feasible and

prevalent human consumption. In terms of quality, the meat has a higher nutritional value than other farm animals, and then chicken meat has protein content higher, the protein composition is excellent because it contains all the essential amino acids that are easily digested and absorbed by the body, but of chicken also has a fat content which is quite high compared to other farm animals (Surisdiarto and Koentjoko,1990:58).

Selected turkeys because according to Sunarti (2009), turkeys have cholesterol content is much lower than other meats (Muryadi, 2011), and in fiber turkey saved a lot of B vitamins (vitamin B3 and B6), also contains selenium which can help maintain health because of the high anti-oxidant. And the selection of duck meat because the tongue and tastes of Indonesian people has been incredible and getting pampered with a variety of dishes made from duck meat, which not only fried but baked. In addition to flavor savory and delicious, duck meat has a high nutritional content. Having a source of animal protein to meet 47% of the daily protein requirement, contains healthy fat (omega), and every 100 grams of duck meat contains 0.5 mg of riboflavin or satisfy 28% of daily needs of man, it contains vitamin B12 to prevent anemia (Astuti, 2011).

## II. MATERIAL AND METHOD

The method used in this research is the experimental method, with hypothesis :

Ho = there is no difference of color, aroma, flavor and texture in the manufacture of chicken ballotine using turkeys, ducks and turkeys and ducks.

H1 = there are differences in the color, aroma, flavor and texture in the manufacture of chicken ballotine using turkeys, ducks and turkeys and ducks.

According to Usman, et al (2009:239), a completely randomized design (CRD) is a method of research conducted by the method of manipulation or treatment of independent variables of the object under study and then observe, measure, and analyze the effect of such manipulation. Manipulation applied in this study is the use of 100% chicken meat, turkey meat 100%, 100% duck meat and mixed meat turkey and duck meat 50% to 50%, which will be assessed in terms of organoleptic and hedonic by the panelists.

This study also uses descriptive analysis, according Sugiyono, 2008. In this research, descriptive analysis conducted to provide an overview of data on organoleptic and hedonic of color, aroma, flavor and texture of the products tested. Mechanical Test hedonic according to Watts et. All (1989:66 ) is

*“Designed to measure degree of liking for a product. Category scales ranging from like extremely, through neither like nor*

*dislike, dislike extremely, with varying numbers of categories, are used. Panelists indicate their degree of liking for each sample by choosing the appropriate category”.*

So study these trials were not doing repetitions because consumers are already using 62 panelists were deemed to represent a sample of consumers to rate, and also consideration of conditions /circumstances test should be the same (in one day). The design of data analysis used by the normality test (to measure whether or not a normal distribution of data), test descriptive statistics (look for the results mean), test organoleptik, hedonic test and ANOVA).

Organoleptic or sensory test is a way of testing using human senses as the main tool for measuring reception power of the product. Organoleptic or sensory test is a way of testing using human senses as the main tool for measuring reception power of the product. (Winni Pudji:1998).

## III. THEORY

The literature review is an effort of researchers to review and develop a research problem that has been formulated with the theories, concepts, research results, and the documentation that has been there before. In research trials contents substitution of chicken, turkey and duck in the manufacture of Chicken Ballotine, it will be discussed :

### A. Poultry

According Edjeng Suprijatna (2005:5) birds (poultry) is a type of winged animals of the class Aves that have been domesticated and its way of life governed by humanity in order to provide economic value in the form of goods (meat and eggs) and services (revenue).

### B. Chicken

Broiler is chicken that is able to grow quickly so can result in the production of meat in a relatively short time (5-6 weeks). Chicken is a warm-blooded vertebrate animal with high Metabolic rates.

Actually these new broilers popular in Indonesia since the 1980, although the pure strains already known in the 1960 when farmers began to maintain it. Previously cut chicken was laying hens. Meat according to ISO 3924:2009 (regarding quality and the quality of chicken carcass) is the skeletal muscle of a chicken carcass that is safe, feasible and prevalent human consumption. In terms of quality, the meat has a higher nutritional value than other farm animals. Chicken meat has protein content higher, the protein composition is excellent because it contains all the essential amino acids that are easily digested and absorbed by the body, but of chicken also has a fat content which is quite high compared to other farm animals (Surisdiarto and Koentjoko,1990:58).

- *Chicken Ballotine*

Chicken ballotine according Gringoire and Saulnier (2009):

*“A Ballotine is traditionally a boned thigh part of the chicken, duck or other poultry stuffed with forcemeat and other ingredients. It is tied to hold its shape and sometimes stitched up with a trussing needle. A Ballotine is cooked by roasting, braising or poaching. A ballotine is often shaped like a sausage or re-formed to look like the leg. Often with a cleaned piece of bone left in the end”.*

Cooked by baking, braising (cooking with liquid and chunks of meat were great) or Poaching (cooking with the liquid temperature below the boiling point (80°C). A ballotine often shaped like a sausage or shaped to look like legs, often with cleaned piece of bone remaining in the final. In the use of materials according to Gringoire and Saulnier (2009):

*“Making a ballotine, a French dish, is a creative way to serve just about any kind of meat, fish or poultry. It is a piece of meat, sometimes the whole animal, as with duck or fish, that is completely boned. It is then stuffed with a variety of different stuffing choices, usually tied to secure the stuffing, and roasted or braised. Typically, the ballotine is served hot”.*

Making ballotine, in French cuisine, is a creative way to serve almost any kind of meat, fish or poultry. It was a piece of meat, sometimes whole animals, such as ducks or fish, which really reinforced. It is then filled with a variety of different options stuffing, usually bound to secure stuffing and roasted or braised. Typically ballotine served hot.



Picture 1. Boneless Chicken



Picture 2. Ballotine

- *Turkey and turkey meat*

Turkeys according to Dwi Sunarti (2009) is one kind of poultry which attracted many of the expatriates. The turkey is the name for two species of large-sized bird of the order Galliformes genus meleagris.

- *Ducks and duck meat*

Duck according to Carles Carboneras (1992) is the common name for several species of bird in the family Anatidae. In addition to the high nutritional content, duck meat also has advantages compared to other birds in the texture of the meat is firmer and more savory flavor.

- *Quality Foods*

According Soewarno Soekanto T (1991:63) "The quality is the level of good or bad thing". Determining the quality of food products are generally dependent on several factors including the color, shape, texture, aroma, and flavor in addition to the nutritional value of these foods. Quality assessment in this study using the organoleptic assessment or by sensing. Organoleptic tests in this study will be further explained as follows: color, aroma, texture and flavor.

IV. RESULT

Table.1.  
Tests of Normality

Quality of food	Shapiro-Wilk					
	Statistic	df	Sig.	Statistic	df	Sig.
	.099	62	.200*	.977	62	.285

a. Lilliefors Significance Correction.  
\*. This is a lower bound of the true significance.

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Explanation tabel 1, because the data is tested more than 50 (Haryadi, 2011:64), the data used is sig at the Kolmogorov-Smirnov, with the provision of data sig > 0.05 then the normal distribution of data. So this research has normal distributed data. This study had normal data. Normally distributed data is required to use a number of statistical tools. then the normal distribution of data, research can be done using statistical tools in this regard ANOVA test.

Table.2. The Average Value of the test Organoleptik

Product	Value Organoleptik			
	Color	Aroma	Flavor	Texture
Chicken	3.77	3.80	3.85	3.56
Turkey	3.82	3.69	3.82	3.70
Duck	3.16	3.30	3.50	3.51
Turkey and Duck	3.61	3.93	4.25	3.93

Panelist dominate select the contents of chicken and turkey with a brownish-white color. The average panelist judge the color of the control and treatment of meat brown to white (white is not too brown). So in terms of aroma, panelists stated that the chicken ballotine with duck turkey meat content is more fragrant than other meat content (different thin with chicken meat content). In terms of flavor, panelists stated that chicken ballotine with a meat content of a mixture of turkey duck more savory/ tastier than the meat content is another (slightly less to the content of chicken meat), in terms of texture, the panelists stated that chicken ballotine with the contents of the turkey and duck meat content more refined than the other (different thin with chicken content).

Assessment on taste, panelists placed a higher value on a combination of turkey and duck meat, turkey meat more juicy than chicken, especially in the thighs (Albert, 2016, downloadable from Kompas.com on March 24, 2017). Turkey taste more savory and delicious than chicken and duck,

probably related to the texture of turkeys, where panelists also gave higher ratings on the texture in the combined turkey and duck meat. Turkey breast meat section has a softer texture than chicken breast meat. Because softer, turkey breast meat so much easier creamed mouth. Turkey skin is thin, do not have the fat content at the bottom. So when eaten feels super crisp! Spices also completely absorbed because the thin layer of skin.

The duck is almost similar to a turkey, have a more savory flavor, texture is also thicker than the other birds. So based on a more savory flavor and texture that is more viscous be combined turkey and duck to get a higher valuation of the panelists. But also the possibility of panelists who were all Indonesian people, are all too familiar with the taste and texture of chicken meat, so as to feel the taste and texture of turkey and duck meat, get a different sensation.

Whereas the combined aroma of turkey and duck meat also get the highest score made sense that in view of both the meat flavor is more savory aroma that came out was "sweet" when finished in baked.

Table 3. The Average Value of a test like and Panelist's Favorite

Product	Value of a test like			
	Color	Aroma	Flavor	Texture
Chicken	3.72	3.59	3.85	3.88
Turkey	3.82	3.59	3.77	3.77
Duck	3.16	3.38	3.59	3.51
Turkey and Duck	3.61	4.08	4.25	3.93

Judging from the results of the hedonic test, the color of chicken and turkey content, panelists prefer like a white color to turkey than other. In terms of aroma, more inclined panelists stated that the chicken ballotine with a mixture of turkey duck content is more fragrant than other meat (different thin with chicken and turkey content) and preferably panelists, that in terms of flavor, more inclined panelists stated that the chicken ballotine with turkey duck content of the mixture is preferred over other content. In terms of texture, Panelist prefer turkey and ducks meat compare to chicken.

The panelists assessment of organoleptic and hedonic the same, proving that the panelists give consistent answers. Automatically when the organoleptic assessment of color turkey rated higher, the panelists preferred the color in turkey than chicken and duck meat. Similarly, the assessment aroma, flavor and texture, panelists gave the highest score on the combined turkey and duck, and also prefer the aroma, flavor and texture of the meat combined.

Tabel.4. Similarities (S) and Differences (D)

	Turkey	Duck	Turkey and Duck
Color	(D) 0.001<0.05	(S) 0.354>0.05	(S) 0.292>0.05
Aroma	(S) 0.237>0.05	(S) 0.11>0.05	(S) 0.011>0.05
Flavor	(S) 0.470>0.05	(S) 0.848>0.05	(D) 0.000<0.05
Texture	(D) 0.001<0.05	(S) 0.045>0.05	(D) 0.000<0.05

The color of chicken, duck, turkey and duck and turkey mixture no difference, then Ho is accepted. However, the color of chicken and turkey seen no difference (probability value 0.001 <0.05), and Ho accepted.

Although through color homogeneity test control and equal treatment, but on average the respondents think a little differently. it is probably caused by the heat of the oven temperature is uneven (oven used do not have a clue temperature) more and hotter temperatures, and because of differences in cooking time and the contents on the chicken ballotine has a different texture of the meat. to the hypothesis of chicken and chicken turkey, Ho is rejected.

The arome of chicken, turkey and duck, and mixture there of there is no difference, the Ho is accepted. The flavor of chicken with duck and turkey is no difference, the Ho is accepted, but the taste of chicken meat with a mixture of duck and turkey is no difference, the Ho is rejected. This is due to a mix of turkey and duck meat has flavor were equally strong/strong while the chicken is already a daily diet of the panelists that are already accustomed to the taste of the chicken.

Textures of turkey and chicken meat with a mixture of turkey and duck, there is a difference and Ho is rejected. Basically, turkey meat has a texture that is harder, while the duck is tender, after turkey mixed with duck, still feels hard.

**V. Discussion**

After doing some analysis of any data, it can be known suggestions of what is needed, that is expected to be useful as input a better future, namely :

Making Ballotine requires patience and expertise, especially on the job took and put out a chicken bone, so the price is relatively expensive at around 300,000 to 600.000 IDR for one chicken, then despite the panelists sampled prefer ballotine with the analog of the turkey, but it will make the price more expensive.

If you want to make a Chicken Ballotine with the contents of the duck meat, should be soaked with salt water or lemon juice this is done so that the flavor and aroma of the Chicken Ballotine duck meat content is not fishy and aroma fresh.

For the Chicken Ballotine with duck content at this stage of the mixing process should not be too in the mix for too long because of the nature of the duck is finely and if stirred too long will be destroyed and affect the texture into itself,

To get a good flavor in the manufacture of chicken ballotine then need additional seasoning and nutmeg on the content of her special chicken ballotine on the content of the duck and also mixing reply evenly, thus avoiding any parts there is no flavor (plain).

## VI. CONCLUSION

Panelists preferred the chicken ballotine with a mix contents turkey and duck, because they feel more savory than the taste of chicken, turkey and duck. Indonesian people is basically a lot of cooking and enjoy the rich cuisine dishes flavor, both sweet, salty, and spicy, which is derived from the many cultures that exist in Indonesia

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