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Artificial incubation of ostrich eggs

Abstract

Compared with other poultry, artificial incubation of ostrich eggs has its specificities, and includes the collection, determining freshness, hygiene, storage, pre-incubation heating and the very incubation of eggs. Observing all the factors during artificial incubation will provide for an optimum hatchability of ostrich eggs, which is the basic requirement in every breeding.

Key words: ostrich, production, egg incubation

Künstliche Inkubation von Straußiern

Zusammenfassung

Im Unterschied mit anderem Federvieh hat die künstliche Inkubation von Straußiern ihre Spezifität. Sie schließt Sammeln, Erkennen der Frische, Hygiene, Lagern, Einwärmen von Eiern vor der Inkubation und die Inkubation selbst, ein. Durch das Beachten aller Faktoren während der künstlichen Inkubation wird das optimale Eierschlüpfen der Schträuße gesichert, was Grundlagen für jede Zucht darstellt.

Schlüsselwörter: Strauß, Herstellung, Inkubation von Eiern

Incubación artificial de los huevos de avestruz

Resúmen

En comparación con otras aves de corral, la incubación artificial de los huevos de avestruz contiene sus particularidades, las que incluyen recolección, identificación de la frescura, higiene, almacenamiento, calentamiento de los huevos antes de la incubación y la misma incubación. Respetando todos esos parámetros de la incubación artificial aseguramos la eclosión optimal de los avestruces, lo que representa la base de cada crianza.

Palabras claves: avestruz, producción, incubación de huevos

Incubazione artificiale delle uova di struzzo

Sunto

Rispetto all'altro pollame, l'incubazione artificiale delle uova di struzzo cela alcune specificità e comprende la raccolta, il riconoscimento della freschezza, l'igiene, lo stoccaggio, il riscaldamento delle uova prima dell'incubazione e l'incubazione stessa. Con il rispetto di ogni singolo fattore compreso nel processo d'incubazione artificiale otterremo la cova ottimale dei pulcini, che è poi la premessa fondamentale per il successo di ogni allevamento.

Parole chiave: struzzo, produzione, incubazione delle uova

Kakvoća usoljenih srdele (*Sardina pilchardus*)

Levak, S., Kovačević, B., Njari, Ž., Cvrtić Fleck, Ž.

Stručni rad

Sažetak

Riba je oduvijek bila iznimno važna u prehrani ljudi. Razvijali su se različiti načini konzerviranja ribe. U ovom radu opisati tehnologiju proizvodnje usoljenih srdele. Analize su obavljene na uzorcima usoljenih srdele iz cjelokupnog sadržaja konzerve. Prilikom sekcije trbušne šupljine i mišićja ribe nisu nađeni paraziti. U prosjeku masti 8,92%, bjelanjčevina 8,40%. U proučavanju besprijetnosti svojstava usoljenih srdele ovog autohtonog proizvoda, potrebna je pravilna redoslijedom te skladištenja u prikladnim uvjetima i redovito kontrolirati.

KLjučne riječi: soljenje, slane srdele, kakvoća, sastav

Uvod

Kemijski sastav ribe općenito ovisi o vrsti, starosti, spolu, migraciji, uvjetima uzgoja i dobi. Zbog većeg postotka vode (80-90%) meso ribe je lako kvarljivo, a zbog manjka bjelanjčevine i podložnije fermentativnoj kvari. Masno tkivo je drugačijeg

zahvaljujući svojim gastronomskim i nutritivnim vrijednostima. Tijekom povijesti razvijali su se različiti načini konzerviranja ribe. U ovom radu opisati tehnologiju proizvodnje usoljenih srdele. Analize su obavljene na uzorcima usoljenih srdele iz cjelokupnog sadržaja konzerve. Prilikom sekcije trbušne šupljine i mišićja ribe nisu nađeni paraziti. U prosjeku masti 8,92%, bjelanjčevina 8,40%. U proučavanju besprijetnosti svojstava usoljenih srdele ovog autohtonog proizvoda, potrebna je pravilna redoslijedom te skladištenja u prikladnim uvjetima i redovito kontrolirati.

KLjučne riječi: soljenje, slane srdele, kakvoća, sastav

Tablica 1. Udio vode, masti i bjelanjčevine u srdelama (Šoša, 1989.; Anon. 2003.)

SRDELA	VOĐA	MASTI	BJELANČEVINA
SARDINE	66,8 – 78,1 %	0,9 – 17,2 %	15,4 – 17,6 %
1500 kcal / 1kg; 6,3 MJ			

Table 1 the content of water, fat and protein in sardines

SRDELA	VOĐA	MASTI	BJELANČEVINA
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pa se specifično kvari (Grubišić, 1990.; Cvrtić, 2006.; Popović i sur., 2012.). U nutritivnom pogledu, riba je važan izvor hranjivih tvari, pogotovo bjelanjčevine. Riblje bjelanjčevine, koje predstavljaju glavni materijal za dobivanje mesa, su lakše probavljive, bolje su probavljive, bolji su nutritivni i zdravstveno bogatiji od mesa drugih vrsta. Riblje bjelanjčevine su lakše probavljive, bolje su probavljive, bolji su nutritivni i zdravstveno bogatiji od mesa drugih vrsta. Riblje bjelanjčevine su lakše probavljive, bolje su probavljive, bolji su nutritivni i zdravstveno bogatiji od mesa drugih vrsta.

U ovom radu opisati tehnologiju proizvodnje usoljenih srdele. Analize su obavljene na uzorcima usoljenih srdele iz cjelokupnog sadržaja konzerve. Prilikom sekcije trbušne šupljine i mišićja ribe nisu nađeni paraziti. U prosjeku masti 8,92%, bjelanjčevina 8,40%. U proučavanju besprijetnosti svojstava usoljenih srdele ovog autohtonog proizvoda, potrebna je pravilna redoslijedom te skladištenja u prikladnim uvjetima i redovito kontrolirati.

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Quality of salted sardine (*sardina pilchardus*)

Abstract

Fish has always been extremely important in human nutrition due to its culinary and nutritional values. Throughout history, different methods of conserving fish have been developed in order to preserve its quality, the best known being curing in salt. The objective of this study was to describe the production technology of salted sardines harvested from the open seas, and to determine the chemical composition and quality of the finished product. Analyses were performed on samples of salted sardines taken from a 5-kilo can. Fish were sampled randomly from the entire content of the can. In the sensory analysis, all examined samples of fish were of satisfactory quality. The analysis of the fish abdominal cavity and muscles found no parasites. The mean value of fish mass was 22.97 g. The average amount of water was 46.61%, 8.92% of fat, 8.40% of protein and the analysed samples contained 22.54% of salt. The results indicate that the irreproachable sensory properties of salted sardines depend on the proper handling of fish after harvesting as well as on the processing methods. To obtain this traditional product, it is necessary to use high quality raw material (fresh fish of impeccable quality), cure it in pure salt in proper sequence, store it in appropriate conditions and check it regularly.

Key words: salt, salted sardines, quality, chemical composition

Qualität der Salzsardinen (*Sardina pilchardus*)

Zusammenfassung

Fisch war immer außerordentlich wichtig in menschlicher Ernährung, dies dank seiner gastronomischen und nutritiven Werten. In der Geschichte wurden verschiedene Konservierungsarten für Fisch entwickelt, um die Qualität der Fische zu bewahren. Die bekannteste Art ist das Einsalzen. Das Ziel dieser Arbeit wäre, die Herstellungstechnologie der eingesalzene Sardinen zu beschreiben, die im offenen Meer eingefangen wurden, sowie die chemische Zusammensetzung und die Qualität des Endproduktes zu bestimmen. Die Analysen wurden auf Mustern von eingesalzene Sardinen aus der 5 kg Dosen, durchgeführt. Die Fische sind zu Musterprobe durch die Methode der zufälligen Auswahl aus dem Gesamthalt der Dose genommen. Gelegentlich der sensorischen Untersuchung waren alle Fische von zufriedenstellender Qualität. Bei der Untersuchung der Bauchhöhle und der Muskeln wurden keine Parasiten vorgefunden. Der Mittelwert der Fischmasse betrug 22,97 g. Die durchschnittliche Menge betrug: Wasser 46,61 %, Fett 8,92 %, Eiweißstoffe 8,40 %. In den untersuchten Mustern wurde die Menge von 22,54 % Salz bestimmt. Die bekommenen Resultate weisen darauf hin, dass die Vollkommenheit der sensorischen Eigenschaften der eingesalzene Fische von der richtigen Behandlung der Fische nach dem Fang und von der Bearbeitungsmethode abhängt. Um dieses autochthone Erzeugnis zu gewinnen ist es nötig, qualitativ gute Rohstoffe (frische Fische von bester Qualität) zu verwenden, das reine Salz ordnungsgemäß beizugeben, geeignet zu lagern und regelmäßig zu kontrollieren.

Schlüsselwörter: Einsalzen, Salzsardinen, Qualität, chemische Zusammensetzung

La calidad de sardina salada (*Sardina pilchardus*)

Resúmen

El pescado siempre ha constituido un papel importante de la dieta humana por sus características gastronómicas y valores nutritivos. Durante la historia se usaron diferentes métodos de conservación del pescado con el fin de conservar su calidad, y el método más conocido es la salazón. El objetivo de este artículo fue describir la tecnología de la producción de las sardinas saladas cogidas en la alta mar y determinar la composición química y la calidad del producto final. Los análisis fueron hechos en las muestras de la sardina salada de las hojalatas del volumen de 5 kg. El pescado fue muestreado por el método aleatorio del contenido total de la hojalata. El análisis sensorial mostró que todas las muestras son de calidad satisfactoria. Durante la revisión de la cavidad abdominal y la musculatura del pescado no fueron encontrados los parásitos. El valor medio del pescado fue 22,97 g. La cantidad promedio del agua fue 46,61%, de grasa 8,92% y de proteína 8,40%. En las muestras analizadas fue detectado 22,54% de sal. Los resultados obtenidos apuntan que las calidades sensoriales perfectas de la sardina salada dependen del manejo apropiado del pescado después de la pesca y del método de la elaboración. Para obtener este producto autóctono es necesario usar materia prima de calidad (el pescado fresco de calidad impecable), hacer la secuencia correcta del salazón con la sal pura, almacenarlo en las condiciones apropiadas y controlar regularmente.

Palabras claves: salazón, sardinas saladas, calidad, composición química

la qualità delle sardine (*Sardina pilchardus*) sotto sale

Sunto

Il pesce, grazie alle sue proprietà gastronomiche e nutrizionali, è sempre stato molto importante nell'alimentazione umana. Nel corso dei secoli l'uomo ha sviluppato diverse tecniche di conservazione del pesce, mirate a garantire la preservazione delle sue qualità. Il metodo di conservazione più noto è la salatura. L'obiettivo di questo lavoro è descrivere la tecnologia di produzione delle sardine sotto sale pescate in mare aperto ed accertare la composizione chimica e la qualità del prodotto finito. Le analisi hanno interessato campioni di sardine sotto sale confezionate in latte da 5 kg. I pesci sono stati campionati mediante il metodo della scelta casuale (randomizzazione) dall'intero contenuto delle latte. Sottoposti ad esame sensoriale, i pesci campionati si sono tutti dimostrati di qualità soddisfacente. L'ispezione della cavità addominale e dei muscoli non ha evidenziato la presenza di parassiti. È stato misurato un valore ponderale medio dei pesci campionati pari a 22,97 g, per una quantità media di acqua pari al 46,61%, di grassi pari all'8,92% e di proteine pari all'8,40%. Nei campioni esaminati è stata accertata una quantità di sale pari al 22,54%. I risultati ottenuti ci portano a concludere che l'impeccabile qualità delle proprietà sensoriali delle sardine sotto sale dipende dal corretto trattamento del pesce dopo la pesca e dal metodo di lavorazione cui sono sottoposte. Per ottenere questo prodotto autoctono è necessario impiegare materia prima – pesce – di qualità (pesce fresco di primissima qualità), salarlo con sale puro nel rispetto del corretto ordine di salatura, stoccarlo in condizioni adatte e controllarlo con regolarità.

Parole chiave: salatura, sardine sotto sale, qualità, composizione chimica

Ractopamine – Growth promoter in meat and meat products

Pleadin¹, J.

Review

Abstract

Ractopamine is the substance from the group of β -adrenergic agonists, xenobiotic of new generation with evidenced activity as growth promoter in farm animals. Application of ractopamine in pigs in the final stages of fattening resulted in increased body weight and lean meat, reduced amount of fat, accelerating the metabolism of animals and the speed of their fattening. The pharmacological and toxicological effects of ractopamine in humans are still not fully known, but some data suggest that consumption of meat and meat products derived from animals to which ractopamine was applied can result with clinical effects and adverse consequences on human health. Application of ractopamine on farm animals results with accumulation of its residues in the internal organs and pigmented tissues. Although the use of substances with anabolic effect is permitted in many countries of the world, the European Union prohibited the application of substances with anabolic effect on farm animals, and also of ractopamine. Therefore, through the annual plans prescribed by the competent authorities continued the monitoring of residues of these substances, by sampling of various animals biological materials on farms and in slaughterhouses, and using sensitive and selective analytical techniques for their detection, with the aim of carrying out a more effective control of abuse of substances that achieve an anabolic effect.

Key words: ractopamine, β -adrenergic agonists, growth promoter, farm animals, residues

Introduction

Modern meat industry is today mainly driven by the requirements and desires of consumers, and not, as it decades ago was the case, by the requirements imposed by the production and processing of meat. Consumers require that meat and meat products are lean or contain the least possible amount of fat. In the same way, legal entities that deal with packaging and processing of meat from suppliers demanded that they delivered carcasses of animals with which treatment can be obtained the highest possible yield with less tranching. In order to meet the expectations of today's market, these circumstances led the livestock industry to begin using β -adrenergic agonists (β -agonists), and their use in the meat industry has divided experts worldwide.

The characteristic structure of these substances is very similar to the catecholamines epinephrine and norepinephrine, which are a natural component of the animal body, and which are in medicine and veterinary medicine particularly used as tocolytic agents as also bronchodilators and cardiotonics in treating a pulmonary disease (Meyer Rinke, 1991; Courtheyn et al., 2002). In addition to the legitimate use, in the past was also evidenced many cases of β -agonists abuse, which sought to improve the composition of animal carcasses in terms of reducing the fat content due to increased muscle mass, thus producers realized greater economic benefits (Peter and Scanes, 1990; Anderson et al., 2009; Moody et al., 2000).

Among β -agonists, ractopamine is pharmacologically classified as a phenethanolamine that presents xenobiotic of new period evidenced as growth promoting agent (EFSA, 2009). In comparison to some other β -agonists ractopamine is not intended for use in humans for any

medical purposes. The more probable route of exposure to ractopamine in humans is through the consumption of meat and meat products from animals which have been fed with this anabolic agent which caused the persistence of residues. If it is given to pigs in the final stages of fattening to aim at the final weight gain of an additional 50 kg, ractopamine increases the amount of lean meat and in carcasses of animals reduces the amount of fat, increasing both speed pig fattening, as well as the speed of their metabolism (Anderson et al. 1989; Merkel et al. 1987; Watkins et al., 1990; Williams et al. 1994; Pleadin et al., 2012).

This response of the body is systematically observed in five major species whose meat was consumed by humans, and wherein the sheep and cattle showed greater response than turkeys, pigs showed greater than broiler chickens (Mersmann, 1998; Moody et al., 2000). Biochemical basis of ractopamine effects lies in increasing the retention of nitrogen and protein synthesis, facilitating the suppression of lipolysis and lipogenesis (Apple et al. 2007; Armstrong et al. 2004a; Carr et al. 2005a; Mills, 2002; Mitchell et al. 1990; Mitchell, 2009).

The metabolic effect of ractopamine is similar in pigs, cattle, laboratory animals and humans. It is a cardiac stimulator and has the effect of restricting blood vessels and quickening the heart. In comparison to other beta-agonists such as salbutamol and clenbuterol that can be used in therapeutic purposes, ractopamine is not as toxic to humans, but long-term misuse of ractopamine may still result in potentially harmful side effects (EFSA, 2009). However, clenbuterol among β -agonists is known to have a much longer half-life in blood than ractopami-

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