

JOURNAL OF HALAL QUALITY AND CERTIFICATION

THE APPLICATION OF HALAL STANDARD IN DOLAR COMPANY D.O.O. KALESIJA

Husejin Keran¹, Adnan Kamerić², A. Zenunović³, Damir Aličić⁴

¹Faculty of Technology University of Tuzla, Urfeta Vejzagića 8, 75000 Tuzla, Bosnia and Herzegovina

²Dolar Company d.o.o., Miljanovci bb, Kalesija, Bosnia and Herzegovina

³Faculty of Technology University of Tuzla, Urfeta Vejzagića 8, 75000 Tuzla, Bosnia and Herzegovina

⁴Faculty of Technology University of Tuzla, Urfeta Vejzagića 8, 75000 Tuzla, Bosnia and Herzegovina

Corresponding author: Husejin Keran

E-mail address: husejinkeran123@gmail.com

Professional paper

ABSTRACT

This study presents the implementation of the HALAL standard in the slaughtering process at Dolar Company d.o.o., ensuring compliance with BAS 1049:2023. The primary objective is to provide consumers with confidence that the meat products align with their religious beliefs and practices. The implementation covers the entire process from ingredient sourcing to storage and transportation, preventing contamination with non-Halal substances. Special attention is given to defining critical control points in the feed for livestock, which could be a source of contamination. The paper highlights the applicability of legal documentation in meeting HALAL standard demands. The results demonstrate effective compliance with the standards, ensuring the production of Halal meat.

Keywords: HALAL standard, meat industry, haram

Introduction

The goal of this paper is to present the implementation process of the HALAL standard in the slaughtering of large livestock at Dolar Company d.o.o., with a focus on ensuring compliance with BAS 1049:2023. This includes detailing good animal husbandry practices, pre-slaughter management, and the identification of critical control points to prevent contamination with non-Halal substances.

Good animal husbandry practices

In the production of high-quality halal meat, the process begins with good husbandry practices on

the farm, taking into account management, the slaughter process and post-slaughter management, all the way to the table³. The production of halal meat according to halal system requires good animal husbandry practices particularly on the animal welfare aspect starting at the farm level. Animal welfare as stated by Krishnan and others⁴ are referring to the well-being of animals such as the animal care and humane treatment. Good production practice halal GMPH is the meat of animals that are allowed according to Islamic regulations, with the condition that they are properly fed and slaughtered in the manner prescribed by Sharia, it

implies plant-based nutrition without any components of animal origin. This criterion excludes the possibility of contamination with BSE (mad cow disease).

Pre-slaughter management

The animal must be humbly unloaded from the truck, well rested and have free access to water in the stalls before slaughter. It is important to feed animals on an empty stomach for at least 12 hours before slaughter in order to reduce the migration of bacteria from the gastrointestinal tract into the meat⁴. However, prolonged food deprivation for more than 24 hours is not humane^{5,6}. To ensure that the meat of animals intended for slaughter is fit for consumption, an ante-mortem examination by a competent veterinarian is of great help. Animal identification for traceability purposes, animal cleanliness, visible abnormalities, as well as indicators of animal welfare threats will be detected during the inspection⁷.

(Good Manufacturing Practice of Halal -) for meat and meat products, it implies the following conditions: 1. Separation of permitted from prohibited feed, 2. Separate accommodation and separate equipment for feeding animals, 3. Separate means of internal and external transport, 4. Separate area and equipment for slaughter, 5. Separate space and equipment in the process of storage and transport and 6. Separate space and equipment in retail and distribution¹.

Slaughtering process

Slaughtering is a vital step for meat quality, safety and animal welfare⁵. In accordance with the requirements of BAS 1049:2010³, the Halal standard is met and certification is carried out according to it by the Agency for Halal Quality Certification in Bosnia and Herzegovina¹. Taking into account that the standard is implemented in accordance with the valid regulations in this area in Bosnia and Herzegovina, it is very important to state that the goal of both is healthy meat after

slaughter. The process of slaughtering large cattle includes the following requirements:

- the animal to be slaughtered must be permitted and must be carefully treated,
- the animal must be healthy and alive, the person performing the act of slaughter must be a Muslim, mentally healthy and qualified for this activity,
- the words (in the name of Allah) must be spoken before slaughtering animals,
- the slaughtering tool must be sharp and must not be lifted from the animal until the act of slaughtering is finished, which means until the trachea, esophagus, and main arteries and veins of the neck region are cut, slaughtering is done from the front of the neck; no part may be removed before the end of the slaughter; the blood must be well drained; it is necessary to take appropriate hygienic measures on the slaughter line to avoid contamination of the meat¹.

Materials and methods

The Halal standard approved by the Institute for Standardization of Bosnia and Herzegovina is applied as such in the certification. In this part, certain documents are given that prove the implementation in Dolar Company d.o.o. The following picture shows an extract from the HALAL rules of procedure.

POSLOVNIK O HALAL KVALITETI

USKLAĐENO SA: HALAL STANDARDOM BAS 1049:2010, HrACCP SISTEMOM I
PRAVILNIKOM O AUDITU ZA HALAL KVALITETU

Picture 1. The part of Halal Manual

As the most important document for the process slaughtering of cattle is procedure for slaughtering and the next pictures show the part of that procedure.

- Altka za klanje mora biti oštra i ne smije se dizati sa životinje dok se čin klanja ne završi, a to znači dok se ne presječe dušnik, jednjak, te glavne arterije i vene vratne regije,
- Klanje se vrši s prednje strane vrata bez presjecanja kičmene moždine,
- Nijedan dio se ne smije otklanjati prije završetka klanja,
- Krv se mora dobro iscijediti,
- Potrebno je obezbijediti određene higijenske mjere da ne bi došlo do kontaminacije mesa.

Klanje se vrši ručno u visećem položaju ostrim nožem uz izgovaranje riječi Bismillah, Allahu Ekber. Rezanje vratnih žila mora uslijediti unutar 20 sekundi od podizanja životinje, a zarezane moraju biti obje karotide. U slučaju kvara i zastoja linije, radnik je dužan čim prije životinju ručno zaklati u što kraćem roku.

5.3. Okretanja prema Kibli

Postupak koji je propisan ali neobavezujući a ukoliko ga izostavimo postupak klanja ima valjanu ispravnost.

5.4. Sam čin klanja mora izvršiti musliman

Onaj koji vrši klanje mora biti:

- musliman koji praktikuje islam,
- punoljetan,
- fizički zdrav,
- mentalno sposoban,
- obučan za ovakvu vrstu posla;

5.5. Oštrina sječiva

Nož kojim se vrši klanje mora da bude izuzetno oštar, jer tupim nožem nije dozvoljeno vršiti šerijatsko klanje.

5.6. Izgovaranje Bismillah, Allahu ekber

Ispravnost halal klanja je uslovljena izgovaranjem Bismillah, Allahu ekber.

Picture 2. Description of process of slaughtering

The most important document in HALAL implementation is the plan for the monitoring of critical haram points and the following picture is

the presentation of HrCCP plan in slaughtering in Dolar Company d.o.o.

HrKKT	Procesni korak	Kritična vrijednost/ Ciljana vrijednost	NADZOR NAD HARAM KRITIČNIM KONTROLNIM TAČKAMA					Popravne (korektivne) radnje	Odgovoran	Zapis	Verifikacija
			Šta	Ko	Kako	Učestalost	Gdje				
HrKKT – 1 Hr – KRITIČNA KONTROLNA TAČKA	Klanje	Klanje mora biti takvo da ne muči stoku	Pravilno obaranje stoke	Poslovođa klaonice	Prije početka klanja podešava se i obara stoka kako bi se izvršilo HALAL klanje	Svako klanje,	U klaonici	U slučaju da klanje nije pripremljeno i obavljeno kako treba onda se takvo meso ne može smatrati HALAL mesom	Poslovođa klaonice	Evidencija preuzete stoke na liniji primarne tehnološke obrade, VETERINARSKI OBRASCI.	Svaki posao završi smje veteri inspe poslo klao pregled obrade evide ovjerav svo potpi

Picture 3. HrCCP plan

As very important part of process of HALAL implementation is the analyses which show the hygienic activates as part of HALAL system e.g. and those has to be done in laboratory which has the accreditation for ISO 17025, standard for

management of quality in laboratories. The following pictures show the reports from accredited laboratory.

IZVJEŠTAJ O ISPITIVANJU BROJ: M-3188/23

Odjel za veterinarsko javno zdravstvo
Mikrobiološka laboratorija

PODACI O POŠILJAOCU

Posiljalac: Vlasnik
Broj popratnog akta: 6x.7x/23 Datum popratnog akta: 27.11.2023. g.

PODACI O UZORKU

Vlasnik uzorka: Doo "Dolar company" klanonica Kalesija
Datum prijema: 27.11.2023. g. Datum uzorkovanja: 27.11.2023. g.
Lot: - Proizvođač: -
Uzorkovanje izvršio: Vlasnik Stanje uzorka: Podnesen za analizu
Datum proizvodnje: - Upotrebljivo do: -

REZULTATI ANALIZE

Ocjena usklađenosti data je u koloni "Odgovori", uzimajući u obzir mjernu nesigurnost. Izjava o usklađenosti nije u akreditiranom području.

ID broj uzorka	Naziv uzorka	Oznaka uzorka	Količina
8461/23	Bris trupa	6x (plečka)	1

Datum početka ispitivanja: 28.11.2023. g. Datum završetka ispitivanja: 01.12.2023. g.

Parametar	Utvrđena vrijednost	Ref. Vrijednost	Jed. mjere /količina	Odgovara	Metoda ispitivanja
Enterobacteriaceae	< 1 cfu/cm ²	m=3x10 ³ cfu/cm ² M=3x10 ³ cfu/cm ²	cfu/cm ²	-	* BAS ISO 21528-2:2018
Aerobne mezofilne bakterije	< 1 cfu/cm ²	m=3x10 ³ cfu/cm ² M=10 ³ cfu/cm ²	cfu/cm ²	-	* BAS EN ISO 4833-2:2014 BAS EN ISO 4833-2/Cor 1:2015

ID broj uzorka: 8461/23
Naziv uzorka: Bris trupa
Oznaka uzorka: 7x but
Količina: 1

Datum početka ispitivanja: 28.11.2023. g. Datum završetka ispitivanja: 01.12.2023. g.

Parametar	Utvrđena vrijednost	Ref. Vrijednost	Jed. mjere /količina	Odgovara	Metoda ispitivanja
Enterobacteriaceae	< 1 cfu/cm ²	m=3x10 ³ cfu/cm ² M=3x10 ³ cfu/cm ²	cfu/cm ²	-	* BAS ISO 21528-2:2018
Aerobne mezofilne bakterije	7,9x10 cfu/cm ²	m=3x10 ³ cfu/cm ² M=10 ³ cfu/cm ²	cfu/cm ²	-	* BAS EN ISO 4833-2:2014 BAS EN ISO 4833-2/Cor 1:2015

ND - nije definisano referentnim dokumentom; (-) uzorak odgovara usklađen sa specifikacijom ne uzimajući u obzir mjernu nesigurnost; mjerna nesigurnost (S)
Izjava se samo na rezultata veće od M.

Referentni dokumenti:
1- Uputstvo o sistemu uzimanja uzoraka, laboratorijskim metodama i ciljnim količinama za određivanje mikrobioloških kriterija u hrani životinjskog porijekla („Službene novine Federacije BiH“, broj 101/12); cfu-broj kolonija

Ocjena rezultata ispitivanja:

* označava akreditiranu metodu;
** označava neakreditiranu metodu;
Rezultati ispitivanja se uključuju odnose na dostavljeni i ispitivani uzorak. JU Veterinarski Zavod TK Tužila je odgovoran za sve informacije koje se daju u izvještaju o ispitivanju, osim kada se informacija dobije od posiljalca i ako ona može da utiče na validnost rezultata, u tom slučaju se JU Veterinarski Zavod TK Tužila oslobi odgovornosti. Ovaj dokument se može umnožavati isključivo u cjelosti i služi samo za službene potrebe. Nije dozvoljena uporaba u bilojane svrhe.

BAS EN ISO/IEC 17025
BATA
ACCREDITATION
LI-01

IZVJEŠTAJ O ISPITIVANJU BROJ: M-3608/23

Odjel za veterinarsko javno zdravstvo
Mikrobiološka laboratorija

PODACI O POŠILJAOCU

Posiljalac: Vlasnik
Broj popratnog akta: 6x.7x/23 Datum popratnog akta: 21.12.2023. g.

PODACI O UZORKU

Vlasnik uzorka: Doo "Dolar company" klanonica Kalesija
Datum prijema: 21.12.2023. g. Datum uzorkovanja: 21.12.2023. g.
Lot: - Proizvođač: -
Uzorkovanje izvršio: Vlasnik Stanje uzorka: Podnesen za analizu
Datum proizvodnje: - Upotrebljivo do: -

REZULTATI ANALIZE

Ocjena usklađenosti data je u koloni "Odgovori", uzimajući u obzir mjernu nesigurnost. Izjava o usklađenosti nije u akreditiranom području.

ID broj uzorka	Naziv uzorka	Oznaka uzorka	Količina
9538/23	Bris trupa	6x (but)	1

Datum početka ispitivanja: 22.12.2023. g. Datum završetka ispitivanja: 25.12.2023. g.

Parametar	Utvrđena vrijednost	Ref. Vrijednost	Jed. mjere /količina	Odgovara	Metoda ispitivanja
Salmonella spp.	Nije detektovano	n.n. /cm ²	cfu/cm ²	-	* BAS EN ISO 6579-1:2018 BAS ISO 6579-1/A1:2021

ID broj uzorka: 9538/23
Naziv uzorka: Bris trupa
Oznaka uzorka: 7x (plečka)
Količina: 1

Datum početka ispitivanja: 22.12.2023. g. Datum završetka ispitivanja: 25.12.2023. g.

Parametar	Utvrđena vrijednost	Ref. Vrijednost	Jed. mjere /količina	Odgovara	Metoda ispitivanja
Salmonella spp.	Nije detektovano	n.n. /cm ²	cfu/cm ²	-	* BAS EN ISO 6579-1:2018 BAS ISO 6579-1/A1:2021

ND - nije definisano referentnim dokumentom; (-) uzorak odgovara usklađen sa specifikacijom ne uzimajući u obzir mjernu nesigurnost; mjerna nesigurnost (S)
Izjava se samo na rezultata veće od M.

Referentni dokumenti:
1- Uputstvo o sistemu uzimanja uzoraka, laboratorijskim metodama i ciljnim količinama za određivanje mikrobioloških kriterija u hrani životinjskog porijekla („Službene novine Federacije BiH“, broj 101/12); cfu-broj kolonija

Ocjena rezultata ispitivanja:

Zaključak (izjava o usklađenosti):

Napomena:

Datum izrade Izvještaja: 26.12.2023. g.

* označava akreditiranu metodu;
** označava neakreditiranu metodu;
Rezultati ispitivanja se uključuju odnose na dostavljeni i ispitivani uzorak. JU Veterinarski Zavod TK Tužila je odgovoran za sve informacije koje se daju u izvještaju o ispitivanju, osim kada se informacija dobije od posiljalca i ako ona može da utiče na validnost rezultata, u tom slučaju se JU Veterinarski Zavod TK Tužila oslobi odgovornosti. Ovaj dokument se može umnožavati isključivo u cjelosti i služi samo za službene potrebe. Nije dozvoljena uporaba u bilojane svrhe.

BAS EN ISO/IEC 17025
BATA
ACCREDITATION

Picture 4. Results about performing of activities defined by HALAL standard in Dolar Company d.o.o.

Dscussion

The discussion on the application of HALAL standards in the slaughter of large livestock includes a number of key aspects that require careful consideration. One of these aspects is ethical factors. Many people consider the issue of ethics to be central to the debate on halal slaughter. There are different views on whether the halal method of slaughter is a humane method. Some argue that the quick cut characteristic of halal slaughter reduces the animal's suffering, while others dispute this view, arguing that it can lead to stress and suffering. This dilemma raises important questions about moral responsibility towards animals and the need for a balanced approach that takes into account both animal welfare and religious obligations.

Religious aspects also play a key role in this discussion. Halal slaughter is based on Islamic principles that prescribe certain procedures for killing animals for food. This includes saying Bismillah (in the name of Allah) before slaughter and using sharp knives to ensure quick and

efficient slaughter. The discussion could focus on the interpretation of Islamic regulations on slaughter and how they apply in a modern context. It is important to consider how religious norms shape the practice of slaughter, but also how they can be reconciled with modern animal welfare standards and ethical principles.

Legal and regulatory aspects play a key role in ensuring fairness and compliance in the slaughter industry. In many countries there are regulations that regulate halal slaughter to ensure that animals are killed by humane methods. These regulations may vary across countries and jurisdictions. The question could be how these regulations affect the practice of halal slaughter and how they are implemented. Clear legal regulation is essential to ensure that slaughter is performed in a manner that respects both religious and ethical standards. The economic impact of the halal food and slaughter industry is also an important aspect. The halal industry is becoming increasingly important globally, which has a significant economic impact. The discussion could include issues such as the economic benefits of the halal industry, market demands and challenges, and the

potential economic consequences of halal slaughter regulations. Understanding the economic dynamics of the industry can help shape policies and strategies that support sustainability and prosperity in this area.

Technological advances also have a significant impact on the practice of halal slaughter. The development of robotics and technologies that enable automated slaughtering can change the way slaughtering is carried out and how halal standards are adhered to. Discussion could focus on how these technological advances affect the practice of halal slaughter and how they can be reconciled with religious and ethical principles. It is important to ensure that technological progress supports humane and religious values and does not undermine animal welfare.

In addition to the above aspects, advances in anesthesia, surveillance and monitoring, alternative slaughter methods, genetic engineering and sustainable food production are also important factors that should be taken into account in this discussion. Overall, it is important to ensure that different perspectives and views are taken into account in order to achieve a comprehensive and informative dialogue on the application of HALAL standards in livestock slaughtering.

Conclusion

The implementation of the HALAL standard at Dolar Company d.o.o. has been shown to be comprehensive and effective, ensuring compliance with BAS 1049:2023. The detailed procedures, documentation, and hygienic analyses confirm that the company meets the necessary standards to provide Halal meat products. The discussion highlights the ethical, religious, legal, and economic implications of HALAL practices, emphasizing the importance of balancing animal welfare with religious obligations. Furthermore, technological advancements present both opportunities and challenges for the future of HALAL slaughter.

Overall, the successful implementation at Dolar Company d.o.o. serves as a model for other organizations in the meat industry seeking to adopt HALAL standards.

References

1. Čengić, F. Jašić M., Sakić A., Muhamedbegović, B. Halal slaughtering, Halal quality certification agency, https://www.halal.ba/images/Radovi/halalkl_anje.pdf
2. Ferguson, D.M., Bruce, H.L., Thompson, J.M., Egan, A.F., Perry, D., Shorthose, W.R. 2001. Factors affecting beef palatability – farmgate to chilled carcass. Australian Journal of Experimental Agriculture, 4 1, 879-891
3. HALAL standard, 2010 (2023) Institute za standardizaciju BIH, BAS 1049
4. Krishnan, S., Mohamad-Haniff, M.A., Muhammad-Nabil, A., Muhammad-Nazrin, A.K. 2017. Halal food: study on non-muslim acceptance. American Journal of Economics, 7 (1), 41-45
5. Grandin, T. 2017. Slaughter-dressing of livestock. Retrieved 6 December 2017 from <https://meat.tamu.edu/anisc-307-honors/slaughter-livestock/>
6. Nakyinsige, K., Fatimah, A., Aghwan, Z., Zulkifli, I., Goh, Y., Sazili, A. 2014. Bleeding efficiency and meat oxidative stability and microbiological quality of New Zealand white rabbits subjected to halal slaughter without stunning and s stun-killing. Asian-Australasian Journal of Animal Sciences, 27 (3), 406–413
7. Lahti, P., Soini, J. 2014. Ante-mortem inspection. In: T. Ninios, J. Lunden, H. Korkeala and M. Fredriksson-Ahomaa (Eds.), Meat Inspection and Control in the Slaughterhouse, John Wiley & Sons Ltd., UK, 19-28.

PRIMJENA HALAL STANDARDA U DOLAR COMPANY D.O.O. KALESIJA

Husejin Keran¹, Adnan Kamerić², A. Zenunović³, Damir Aličić⁴

¹Tehnološki fakultet Univerziteta u Tuzli, Urfeta Vejzagića 8, 75000 Tuzla, Bosna i Hercegovina

²Dolar Company d.o.o., Miljanovci bb, Kalesija, Bosna i Hercegovina

³Tehnološki fakultet Univerziteta u Tuzli, Urfeta Vejzagića 8, 75000 Tuzla, Bosna i Hercegovina

⁴Tehnološki fakultet Univerziteta u Tuzli, Urfeta Vejzagića 8, 75000 Tuzla, Bosna i Hercegovina

Autor za korespondenciju: Husejin Keran

E-mail adresa: husejinkeran123@gmail.com

SAŽETAK

Primjena HALAL standarda u procesu klanja krupne stoke osigurava da meso i mesni proizvodi budu u skladu sa zahtjevima definiranim u BAS 1049:2023. Glavni cilj implementacije HALAL-a je pružiti potrošačima povjerenje da je meso koje konzumiraju u skladu s njihovom religijom, uvjerenjima i praksama. Uz metode klanja, halal certificiranje u mesnoj industriji također pokriva aspekte kao što su izvor sastojaka, skladištenje i transport kako bi se spriječila kontaminacija ne-halal tvarima. Ovaj rad ima za cilj prikazati proces implementacije HALAL standarda u klanju krupne stoke u Dolar Company d.o.o. Kalesija. Definiranju kritičnih kontrolnih haram tačaka posvećuje se posebna pažnja, jer hrana za stoku može biti osnovni razlog kontaminacije halal proizvoda. Također je važno spomenuti primjenjivost zakonske legislative sa zahtjevima HALAL standarda definiranim u BAS 1049:2023.

Ključne riječi, HALAL standard, mesna industrija, haram
