

**JAMINAN KUALITI MAKANAN HALAL: DARI LADANG KE
PRODUK MAKANAN
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ABSTRAK

JAMINAN KUALITI MAKANAN HALAL: DARI LADANG KE PRODUK MAKANAN

Kajian ini memfokuskan tentang jaminan kualiti halal yang merangkumi perbezaan kualiti daging sembelihan halal dan tidak halal, keberkesanan sistem dan kefungsian badan pensijilan Halal di Sabah serta kepekaan pengguna terhadap sistem pensijilan halal di Malaysia. Purata isipadu darah terkeluar, peratusan kehilangan darah (% berat hidup ayam) dan nilai pH 24 jam postmortem ayam halal adalah 94.68ml, 3.79% dan 5.73, manakala ayam bukan halal adalah 90.06ml, 3.55% dan 5.83. Tiada perbezaan signifikan ($p>0.05$) diperolehi antara dua perlakuan. Purata jumlah kiraan plat dan jumlah yis dan kulat awal daging dada halal adalah 5.90 dan 5.51 log CFU/g, manakala daging dada bukan halal adalah 6.01 dan 5.65 log CFU/g, tapi tiada perbezaan yang signifikan ($p>0.05$) diperolehi antara dua perlakuan. Daging tidak halal mempunyai bilangan mikrob yang lebih tinggi pada akhir penyimpanan *Salmonella* spp. adalah berkemungkinan wujud pada daging halal dan bukan halal setelah 10 jam penyimpanan pada suhu bilik. Tiada perbezaan pada skor atribut bau, tekstur dan penerimaan keseluruhan antara dua perlakuan bagi tahap kesegaran sampel ayam pada akhir semua suhu penyimpanan. Namun, terdapat perbezaan yang signifikan ($p<0.05$) pada warna daging di mana daging halal adalah lebih kuning dan kurang merah daripada daging bukan halal, tetapi tiada perbezaan pada kecerahan daging antara dua perlakuan. Daging halal lebih terima daripada daging tidak halal. Bagi penguatkuasaan dan keberkesanan pensijilan halal, terdapat kelemahan sistem rekod dan pemantauan halal oleh JHEAINS di Sabah, termasuk perbezaan garispanduan dan syarat Penyembelih Haiwan Islam serta skala premis rumah sembelih berbanding JAKIM. Kesemua rumah sembelihan di dalam kajian ini mematuhi sistem dokumentasi pensijilan halal dan pemprosesan ayam halal. Soalselidik pengguna mendapati 76.9% pengguna peka dengan Pensijilan Halal Malaysia, serta 50.0% pengguna mengetahui JHEAINS sebagai Badan Pensijilan Halal Negeri Sabah. Kepekaan lebih tinggi di kalangan Muslim dengan 56.3% berbanding 31.3% Bukan Muslim. Ujian korelasi menunjukkan perkaitan signifikan di antara status perkahwinan dengan kepekaan pengguna terhadap pensijilan halal ($r = -0.121$; $p < 0.05$). Manakala ujian Khi Kuasa Dua (χ^2) menunjukkan terdapat perbezaan signifikan di antara tahap pendidikan dengan kepekaan pengguna, $p<0.05$.

ABSTRACT

The main objectives of this study is to observe the impact of slaughtering method (halal and non-halal) to meat quality, compliance and function of halal certification and consumer's awareness about Malaysia Halal Certification. The mean of bled-out volume, percentage of blood loss (% chicken alive weight) and 24-hour postmortem pH for halal chickens were 94.68ml, 3.79% and 5.73, while for non-halal chickens were 90.06ml, 3.55% and 5.83. There were no significant differences ($p>0.05$) for both treatments. The mean of initial total plate count and total yeast and mould for halal breast fillets were 5.90 dan 5.51 log CFU/g, while the non-halal breast fillets were 6.01 dan 5.65 log CFU/g, but no significant differences ($p>0.05$) were found. Non-halal meat had slightly higher microbial counts at the end of storage; however this increasing rate of microbial number and deterioration rate of shelf life were influent by the initial microbial number present on the meat. *Salmonella spp.* may be present on the halal and non halal meat after 10-hour storage at room temperature. There were no significant differences in breast fillet odour, texture and overall acceptance in the freshness tests of breast fillets in the end of all storage. However, there was a significant difference in meat colour, where the halal fillets were more yellowish and reddish than non-halal fillets, but no difference in the lightness of meat was noted between the two treatments. Halal breast fillets were preferred over non-halal breast fillets by the panellists. While for compliance, functional and awareness of Malaysian Halal Certification, there were weaknesses in filing record system and halal monitoring by JHEAINS, including differentiation of guidelines and terms of Islamic Animal Slaughter and slaughterhouse scales compared to JAKIM. The entire slaughterhouses in this study were complying with halal certification documentation system and halal chicken processing. Consumer's survey results show 76.9% consumer were aware of Halal Malaysia Certification, and 50.0% of consumer knows JHEAINS as the Halal Certification Body for Sabah State. The awareness was higher with Muslims 56.3% compared to 31.3% for Non Muslim. Meanwhile 12.4% of the respondent did not know at all. Correlation test shows significant correlation between marital status and consumer awareness on halal certification at $p = 0.05$ and $r = -0.121$, and $p < 0.05$. Besides, Chi Square test (χ^2) shows significant differences between education level with consumer awareness, $p < 0.05$.