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Fresh meat color evaluation using a structured light imaging system - DTU Orbit (08/11/2017)

Fresh meat color evaluation using a structured light imaging system

The objective of this study was to investigate the efficacy of a computer vision system (CVS) with structured light for meat color assessment. Three muscles (longissimus dorsi (LD), semimembranosus (SM), and psoas major (PM)) from eight beef carcasses were obtained at 1 day postmortem, vacuum packaged and assigned to three aging periods (9, 16, and 23 days). After aging, steaks were cut and displayed for 7 days at 3 °C under light. The surface colors were evaluated by using a Minolta, the CVS and trained color panel. In general, the CVS was highly correlated to the sensory scores, and showed an equivalent meat color assessment compared to the colorimeter. The CVS had a significantly higher correlation with the panel scores for the lighter and more color stable samples compared to the colorimeter. These results indicate that the CVS with structured light could be an appropriate alternative to the traditional colorimeter by offering improved precision and accuracy over the colorimeter.

General information

State: Published
Organisations: Department of Applied Mathematics and Computer Science , Image Analysis & Computer Graphics, Purdue University
Authors: Trinderup, C. H. (Intern), Kim, Y. H. B. (Ekstern)
Pages: 100-107
Publication date: 2015
Main Research Area: Technical/natural sciences

Publication information

Journal: Food Research International
Volume: 71
Issue number: May
ISSN (Print): 0963-9969
Ratings:
BFI (2017): BFI-level 1
Web of Science (2017): Indexed Yes
BFI (2016): BFI-level 1
Scopus rating (2016): CiteScore 3.87 SJR 1.589 SNIP 1.682
Web of Science (2016): Indexed yes
BFI (2015): BFI-level 1
Scopus rating (2015): SJR 1.518 SNIP 1.641 CiteScore 3.66
Web of Science (2015): Indexed yes
BFI (2014): BFI-level 1
Scopus rating (2014): SJR 1.496 SNIP 1.761 CiteScore 3.52
Web of Science (2014): Indexed yes
BFI (2013): BFI-level 1
Scopus rating (2013): SJR 1.522 SNIP 1.818 CiteScore 3.68
ISI indexed (2013): ISI indexed yes
Web of Science (2013): Indexed yes
BFI (2012): BFI-level 1
Scopus rating (2012): SJR 1.597 SNIP 1.774 CiteScore 3.31
ISI indexed (2012): ISI indexed yes
Web of Science (2012): Indexed yes
BFI (2011): BFI-level 1
Scopus rating (2011): SJR 1.515 SNIP 1.701 CiteScore 3.42
ISI indexed (2011): ISI indexed yes
Web of Science (2011): Indexed yes
BFI (2010): BFI-level 1
Scopus rating (2010): SJR 1.356 SNIP 1.434
Web of Science (2010): Indexed yes
BFI (2009): BFI-level 1
Scopus rating (2009): SJR 1.46 SNIP 1.525
BFI (2008): BFI-level 2
Scopus rating (2008): SJR 1.299 SNIP 1.429

Scopus rating (2007): SJR 1.262 SNIP 1.688
Web of Science (2007): Indexed yes
Scopus rating (2006): SJR 1.017 SNIP 1.317
Web of Science (2006): Indexed yes
Scopus rating (2005): SJR 0.79 SNIP 1.347
Web of Science (2005): Indexed yes
Scopus rating (2004): SJR 0.834 SNIP 1.201
Web of Science (2004): Indexed yes
Scopus rating (2003): SJR 0.667 SNIP 1.089
Scopus rating (2002): SJR 0.691 SNIP 1.084
Scopus rating (2001): SJR 0.629 SNIP 0.808
Scopus rating (2000): SJR 0.474 SNIP 0.644
Web of Science (2000): Indexed yes
Scopus rating (1999): SJR 0.572 SNIP 0.645
Original language: English
Color, Meat, Colorimeter, Computer vision system, Correlation analysis, Muscle type, Aging
DOIs:
10.1016/j.foodres.2015.02.013
Source: PublicationPreSubmission
Source-ID: 119060367
Publication: Research - peer-review › Journal article – Annual report year: 2015