UNIVERSITAS GADJAH MADA
KAJIAN SOSIS AYAM FERMENTASI PROBIOTIK: Isolasi BAL Probiotik dan Aplikasinya untuk Meningkatkan Kualitas Sosis ayam Fermentasi Probiotik
ROISU ENY MUDAWAROCH, Dr. Ir. Setiyono, S.U.; Prof. Dr. Ir. Lies Mira Yusiati, SU., IPU.; Ir. Edi Suryanto, M.Sc.
Universitas Gadjah Mada, 2019 | Diunduh dari http://etd.repository.ugm.ac.id/

DAFTAR PUSTAKA

Agrawal, S. 2008. Techniques in Molecular Biology. Inter. book distributing co. Meerabai Marg. India. 1 - 96.

Ahmed, T., R. Kanwal and N. Ayub. 2006. Influence of temperature on growth pattern of *Lactococcus lactis*, *Streptococcus cremoris* and *Lactobacillus acidophilus* isolated from camel milk. Biotechnology.5: 481- 488.

Al-Ahmed, A.M. and T. Shimamoto. 2014. Isolation and molecular characterization of *Salmonella enterica*, *Escherichia coli* O157:H7 and *Shigella spp*. from meat and dairy products in Egypt. Int. J. Food Microbiol. 168 - 169: 57-62.

Altarugio R., I.H.B. Vellano, A.C.I. Moraes, E.L. Milbradt, R.L. Andreatti Filho, P.T.C. Guimarães-Okamoto, C.R. Padovani, and. A.S. Okamoto. 2018. In vitro probiotic selection and characterization of *Lactobacillus* spp. isolated from healthy domesticated Turkeys. The J. of App. Poultry Res. 27(1): 81 – 91.

Altschu, S.F., W. Gish, W. Miller, E.W. Myers and D.J. Lipman. 1990. Basic local alignment search tool. J. Mol. Biol. 215: 403–410.

American Meat Institute. 1982. Good Manufacturing Practices, Fermented Dry and Semi-Dry Sausages.Washington, DC: American Meat Institute.

AOAC, 2005. Official Methods of Analysis. 18th ed. AOAC International, Gaithersburg, MD.

Arief, I.I., B.S.L. Jenie, M. Astawan, K. Fujiyama and A.B. Witarto, 2015. Identification and probiotic characteristic of lactic acid bacteria isolat from Indonesia local beef. Asian. J. Anm. Sci. 9: 25 - 36.

Arief. I.I., Z. Wulandari, E.L. Aditia, M. Baihaqi, Noraimah, and Hendrawan. 2014. Physicochemical and microbiological properties of fermented lamb sausages using probiotic *Lactobacillus plantarum* IIa-2-12 as starter culture. Procedia Env. Sci. 20: 352 - 356.

Arihara, K. 2015. Probiotics. in: Toldra eds. Handbook of fermented meat and poultryvol. 2 pp.155 - 160.JohnWiley and Sons, Ltd . UK.

Arnaud, E., S.J. Santchurn, and A. Collignan. 2015. Fermented poultry sausages. In: F. Toldra eds. Handbook of Fermented Meat and Poultry vol. 2 pp. 329 - 344. Blackwell Publishing. USA.

Assaye, H. and M. Ashenafi. 2014. Microbiological profile of retail sliced dry sausages in Ethiopia. Inter. Food Res. J. 21(6): 2473 - 2479.

UNIVERSITAS GADJAH MADA
KAJIAN SOSIS AYAM FERMENTASI PROBIOTIK: Isolasi BAL Probiotik dan Aplikasinya untuk Meningkatkan Kualitas Sosis ayam Fermentasi Probiotik
ROISU ENY MUDAWAROCH, Dr. Ir. Setiyono, S.U.; Prof. Dr. Ir. Lies Mira Yusiati, SU., IPU.; Ir. Edi Suryanto, M.Sc.
Universitas Gadjah Mada, 2019 | Diunduh dari http://etd.repository.ugm.ac.id/

Astuti, 2010. Isolasi, karakterisasi dan aplikasi bakteri asam laktat dari saluran pencernaan ikan yang berpotensi menurunkan kadar kolesterol. Disertasi. Sekolah Pasca Sarjana Universitas Gadjah Mada Yogyakarta.

Awojobi K.O., S.M. Adeyemo, and O.O. Sanusi. 2016. Biosynthesis of antimicrobial compounds by lactic acid bacteria and its use as biopreservative in pineapple juice. Front. Sci. 6(1): 17 - 24.

Bachruddin, Z. 2018. Teknologi Fermentasi pada Industri Peternakan. UGM Press. Yogyakarta.

Bachruddin, Z., Supadmo, L.M. Yusiati, C. Hanim, A. Kurniawati, D.H.V. Paradhipta and Mayansari. 2013. Green livestock development: the role of lactic bacteria for improvement and utilisastion of total mixture forage. Proceeding 3rd International Seminar and 9th Biennial Meeting of AINI "The Role of Nutrition and Feed in Supporting Self Sufficiencyin Animal Products, Food Safety and Human Welfar. Pp 462 - 466.

Baka, A.M., E.J. Papavergou, T. Pragalaki, J.G. Bloukas, and P. Kotzekidou, 2011. Effect of selected autochthonous starter cultures on processing and quality characteristics of Greek fermented sausages. Food Sci. and Technol. 44: 54 - 61.

Bao, Y., Y. Zhang, Y. Zhang, Y. Liu, S. Wanga, X. Dong, Y. Wang, and H. Zhang. 2010. Screening of potential probiotic properties of *Lactobacillus fermentum* isolated from traditional dairy products. Food Cont. 21: 695 ‑ 701.

Barbut, S. 2015. Texture. In: F. Toldra eds. Handbook of Fermented Meat and Poultry vol. 2 pp. 207 - 213. Blackwell Publishing. USA.

Bhatia A, Rani U. 2008. Immunomodulatory effect of *S. thermophilus* : an experimental study. J Calicut Med. 6 : 2 - 10.

Bedani. R., A.D.S. Viera, E.A Rossi and S.M.I. Saad. 2014. Tropical fruit pulps decreased probiotic survival to in vitro gastrointestinal stress in synbiotic soy yoghurt with okara during storage. Food Sci. and Technol. 55(2): 436 - 443.

Begum, P.S, G. Madhavi **,** S. Rajagopal**,** B. Viswanath**,** M.A. Razak**,** V. Venkataratnamma. 2017. Probiotics as Functional Foods: Potential Effects on Human Health and its Impact on Neurological Diseases. Int J. Nutr Pharmacol Neurol Dis 2017; 7: 23-33

Bhatt, V.D., Y.H.Vaidya, P. D. Kunjadia and A.P. Kunjadia. 2012. Isolation And Charecterization Of Probiotic Bacteria From Human Milk. Int. J. of pharm. Sci. and health. 3(2) 62-72.

UNIVERSITAS GADJAH MADA
KAJIAN SOSIS AYAM FERMENTASI PROBIOTIK: Isolasi BAL Probiotik dan Aplikasinya untuk Meningkatkan Kualitas Sosis ayam Fermentasi Probiotik
ROISU ENY MUDAWAROCH, Dr. Ir. Setiyono, S.U.; Prof. Dr. Ir. Lies Mira Yusiati, SU., IPU.; Ir. Edi Suryanto, M.Sc.
Universitas Gadjah Mada, 2019 | Diunduh dari http://etd.repository.ugm.ac.id/

Bingol, E.B., G. Ciftcioglu, F.Y. Eker, H. Yardibi, O. Yesil, G.M. Bayrakal, and G. Demirel. 2014. Effect of starter cultures combinations on lipolytic activity and ripening of dry fermented sausages. Ita. J. Anim. Sci. 13: 776 - 781.

Blajman, J., C. Gaziano, M.V. Zbrun, L. Soto, D. Astesana, A. Berisvil, A.R. Scharpen, M. Signorini, and L. Frizzo. 2015. In vitro and in vivo screening of native lactic acid bacteria toward their selection as a probiotic in broiler chickens. Research in Veterinary Science 101: 50 - 56.

Boke, H., B. Aslim and G. Alp. 2010. The role of resistance to bile salts and acid tolerance of exopolysaccharides (eps) produced by yogurt starter bacteria. Arch. Biol. Sci., Belgrade. 62: 323 - 328.

Bowser, T.J., M. Mwavita, A. Al-Sakini, W. McGlynn and N.O. Maness. 2014. Quality and Shelf Life of Fermented Lamb Meat Sausage with Rosemary Extract. The Open F. Science J. 8: 22 – 31.

BPOM. 2013. Peraturan kepala badan pengawas obat dan makanan Republik Indonesia. No: 36 tahun 2013. Tentang Batas Maksimum Penggunaan Bahan Tambahan Pangan Pengawet.

Breed, R.S., E.G.D. Murray and N.R. Smith. 1957. Bergey's Manual Determinative Bacteriology pp 551-552. The williams & wilkins company. United States of America.

Brown, T.A. 2010.Gene Cloning And DNA Analysis An Introduction. Blackwell Publishing was acquired by John Wiley & Sons. 25 - 94.

Bushell, C. and M. Burns. 2012. Feasibility study into the use of DNA sequencing for the identification of probiotic bacteria. J. of the Assoc. of Public Anal. 40 28-38.

Campagnol, P.C.B., L.L.M. Fries, N.N. Terra, B.A. dos Santos, and A.S. Furtado. 2007. Salami sausage prepared with *Lactobacillus plantarum* fermented in porcine plasma culture medium. Ciênc. Tecnol. Aliment., Camp. 274: 883 - 889.

Cappuccino, J.G. and N. Sherman. 2014. Microbiology a Laboratory Manual. Pearson Education, Inc. United States of America. 55- 97.

Carson S, and D. Robertson. 2006. Manipulation and expression of recombinant DNA: a laboratory manual. Elsevier, Burlington. New York

Casaburi, A. M-C. Aristoy, S. Cavella, R. Di Monaco, D. Ercolini, F. Toldra, and F. Villani. 2007. Biochemical and sensory characteristics of traditional fermented sausages of Vallo di Diano (Southern Italy) as affected by the use of starter cultures. Meat Sci. 76: 295 - 307.

UNIVERSITAS GADJAH MADA
KAJIAN SOSIS AYAM FERMENTASI PROBIOTIK: Isolasi BAL Probiotik dan Aplikasinya untuk Meningkatkan Kualitas Sosis ayam Fermentasi Probiotik
ROISU ENY MUDAWAROCH, Dr. Ir. Setiyono, S.U.; Prof. Dr. Ir. Lies Mira Yusiati, SU., IPU.; Ir. Edi Suryanto, M.Sc.
Universitas Gadjah Mada, 2019 | Diunduh dari http://etd.repository.ugm.ac.id/

Casquete, R., M.J. Benito, A. Martín, S. Ruiz-Moyano, J.J. Córdoba, and M.G. Córdoba. 2011. Role of an autochthonous starter culture and the protease EPg222 on the sensory and safety properties of a traditional Iberian dry-fermented sausage “salchichón”. Food Microbiol. 28: 1432 - 1440.

Cenci-Goga BT, P.V. Rossitto, P. Sechi, S. Parmegiani, V. Cambiotti, and J.S. Cullor. 2012. Effect of selected dairy starter cultures on microbiological, chemical and sensory characteristics of swine and venison (dama dama) nitrite-free dry-cured sausages. Meat Sci. 90: 599 - 606.

Cenci-Goga, B.T., M. Karama, P. Sechi, M.F. Iulietto, S. Novelli, R. Selvaggini, and S. Barbera. 2016. Effect of a novel starter culture and specific ripening conditions on microbiological characteristics of nitrate-free dry-cured pork sausages. Italian J. Anim. Sci. 15(3): 358 - 374.

Ceylan, E. and D.Y.C. Fung. 2000. Destruction of *Yersinia enterocolitica* by *Lactobacillus sake* and *Pediococcus acidilactici* during low-temperature fermentation of Turkish dry sausage susuk. J. Food Sci. 65 (5): 876 - 879.

Champomier-Vergès, M. and M. Zagorec. 2015. Spoilage microorganisms: risks and control.In: F. Toldra eds. Handbook of Fermented Meat and Poultry vol. 2 pp. 385 - 388. Blackwell Publishing. USA.

Chávez- martínez, A., M. Estrada-Gandarilla, A.L. Rentería-Monterrubio, M.A.G. Acevedo. Prevalence of lactic acid bacteria in sliced Cooked ham as an indicator of its shelf life. Vitae, 23(3): 167 – 172.

Chen, M.F. 2011. The mediating role of subjective health complaints on willingness to use selected functional foods. Food Quality and Pref. 22(1): 110 - 118.

Chen, W.W., N. Neipel and P.K. Sorger, PK (2010). Classic and contemporary approaches to modeling biochemical reactions Gen Dev . 24 (17): 1861–1875.

Chen, X., L. Jiapeng, T. Zhou, J. Li, . Yang, W. Chen, and Y.L. Xiong. 2015. Two efficient nitrite-reducing *Lactobacillus* strains isolated from traditional fermented pork nanx wudl as competitive starter cultures for chinese fermented dry sausage. Meat Sci. 121: 302 - 309.

Chenoll, E., M. C. Macian, and R. Aznar. 2003. Identification of *Canobacterium*, *Lactobacillus*, *Leuconostoc* and *Pediococcus* by rDNA-based techniques. Syst. Appl. Microbi. 26: 546 - 556.

UNIVERSITAS GADJAH MADA
KAJIAN SOSIS AYAM FERMENTASI PROBIOTIK: Isolasi BAL Probiotik dan Aplikasinya untuk Meningkatkan Kualitas Sosis ayam Fermentasi Probiotik
ROISU ENY MUDAWAROCH, Dr. Ir. Setiyono, S.U.; Prof. Dr. Ir. Lies Mira Yusiati, SU., IPU.; Ir. Edi Suryanto, M.Sc.
Universitas Gadjah Mada, 2019 | Diunduh dari http://etd.repository.ugm.ac.id/

Ciuciu Simion, A.M., C. Vizireanu, P. Alexe, I. Franco, and J. Carballo. 2014. Effect of the use of selected starter cultures on some quality, safety and sensorial properties of Dacia sausage, a traditional Romanian dry-sausage variety. Food Cont. 35: 123 - 131.

Cocconcelli, P.S. and C. Fontana. 2015. Bacteria. In: F. Toldra eds. Handbook of Fermented Meat and Poultry vol. 2 pp. 117 - 128. Blackwell Publishing. New York.

Cocconcelli, P.S. dan C. Fontana. 2010. Starter cultures for meat fermentation. In: F. Toldra eds. Handbook of Meat Processing pp 199 - 218.John Wiley and Sons. New Jersey.

Cocolin, L. and K. Rantsiou. 2012. Meat Fermentation. In: Hui, Y.M eds. Handbook of Meat and Meat Processing pp. 557 - 573. CRC Press. New York.

Coloretti, F., C Chiavari, E. Armaforte, S. Carri, and G.B. Castagnetti. 2008. Combined use of starter cultures and preservatives to control production of biogenic amines and improve sensorial profile in low-acid salami. J. Agric. Food Chem. 5: 11238 - 11244.

Consigliere, R., D. Meloni, and R. Mazzette. 2017. Key hurdles in the mediterranean-style dry fermented sausage “Salsiccia Sarda” as influenced by different ingredients related to product safety. J. Food Proces. and Preser. DOI: 10.1111/jfpp.13321.

Cotter, P.D. and C. Hill. 2003. Surviving the acid test: responses of gram-positive bacteria to low ph. Microbiol Mol Biol Rev. 67(3):429-453.

Dalla-Santa, O.R., R.E.F. de Macedo, H.S. Dalla Santa, C.M. Zanette, R.J.S. De Freitas, N.N. Terra. 2014[b]. Use of starter cultures isolated from native microbiota of artisanal sausage in the production of Italian sausage. Food Sci. Technol. Campinas, 34(4): 780 - 786

Dalla-Santa, O.R.D., D.C.A lvarez, H.S.D. Santa, C.M. Zanette, R.J.S. De Freitas, R.E.F. De Macedo, and N.N. Terra. 2014[a]. Microbiota of sausages obtained by spontaneous fermentation produced in the South of Brazil.Ciênc. Tecnol. Aliment. Campinas. 32(4): 653 - 660.

Dalmis, U. and A. Soyer. 2008.Effect of processing methods and starter culture *Staphylococcus xylosus and Pediococcus pentosaceus* on proteolytic changes in Turkish sausages sucuk during ripening and storage. Meat Sci. 80: 345 - 354.

UNIVERSITAS GADJAH MADA
KAJIAN SOSIS AYAM FERMENTASI PROBIOTIK: Isolasi BAL Probiotik dan Aplikasinya untuk Meningkatkan Kualitas Sosis ayam Fermentasi Probiotik
ROISU ENY MUDAWAROCH, Dr. Ir. Setiyono, S.U.; Prof. Dr. Ir. Lies Mira Yusiati, SU., IPU.; Ir. Edi Suryanto, M.Sc.
Universitas Gadjah Mada, 2019 | Diunduh dari http://etd.repository.ugm.ac.id/

Dalzini, E., E. Cosciani-Cunico, E. Pavoni, B. Bertasi, P. Daminelli, G. Finazzi, M. N. Losio, and G. Varisco. 2011. Study of growth potential of *Listeria monocytogenes* in low fat salami: an innovative Italian meat product. Italian J. Food Safety. 3: 2112 - 2116.

Davoodabadi, A., M.M.S. Dallal, E. Lashani, and M.T. Ebrahimi. 2015. Antimicrobial activity of *Lactobacillus* spp. isolated from fecal flora of healthy breast-fed infants against diarrheagenic *Escherichia coli.* Jundishapur J. Microbiol. 8(12): e27852.

De Macedo, R.E.F., S.B. Pflanzer and C.L. Gomes. 2012. Probiotic meat products. in E. Rigobelo eds. Probiotic in Animals pp. 85 - 102. Published: October 3rd 2012. DOI: 10.5772/3319. ISBN: 978-953-51-0777-4. Licensee InTech.

De Maere, H., I. Fraeye, E. De Mey, L. Dewulf, C. Michiels, H. Paelinck, andS. Chollet. 2016. Formation of naturally occurring pigments during the production of nitrite-free dry fermented sausages. Meat Sci. 114: 1 - 7.

De Mey, E., K. De Klerck, H. De Maere. 2014. The occurrence of N-nitrosamines, residual nitrite and biogenic amines in commercial dry fermented sausages and evaluation of their occasional relation. Meat Sci. vol. 96(1) 821‑828.

De Vuyst. L., G. Falony, and F. Leroy. 2008). Probiotics in fermented sausage. Meat Sci. 80(1):75-8

De Kaur S.G., A. Roy, G. Dogra, R. Kaushik, P. Yadav, R. Singh, T.K. Datta,and S.L. Goswami. 2010. A simple method for the efficient isolation of genomic dna from *Lactobacilli* isolated from traditional Indian fermented milk (*dahi*). Indian J Microbiol. 50(4): 412 - 418.

Departemen Kesehatan RI. 2012. Peraturan Menteri Kesehatan Republik Indonesia. No : 033/2012 tentang Bahan Tambahan Makanan.

Domínguez, R., P.E. Munekata, R. Agregan, and J. M. Lorenzo.2016. Effect of commercial starter cultures on free amino acid, biogenicamine and free fatty acid contents in dry-cured foal sausage. LWT - Food Sci. and Tech. 71: 47 - 53.

El Adab, S., I. Essid, and M. Hassouna. 2015. Microbiological, biochemical and textural characteristics of a tunisian dry fermented poultry meat sausage inoculated with selected starter cultures. J. Food Safety 35: 75 - 85.

El-Ghaish, S., M. Dalgalarrondo, Y. Choiset, M. Sitohy, I. IvANOVA, T. Haertle, and J. Chobert, 2010. Characterization of a new isolate of *Lactobacillus fermentum* IFO 3956 from Egyptian Ras cheese with proteolytic activity. Eur Food Res Technol. 230: 635 - 643.

UNIVERSITAS GADJAH MADA
KAJIAN SOSIS AYAM FERMENTASI PROBIOTIK: Isolasi BAL Probiotik dan Aplikasinya untuk Meningkatkan Kualitas Sosis ayam Fermentasi Probiotik
ROISU ENY MUDAWAROCH, Dr. Ir. Setiyono, S.U.; Prof. Dr. Ir. Lies Mira Yusiati, SU., IPU.; Ir. Edi Suryanto, M.Sc.
Universitas Gadjah Mada, 2019 | Diunduh dari http://etd.repository.ugm.ac.id/

Erkkila, S. 2001. Bioprotective and Probiotic Meat Starter Cultures for the Fermentation of Dry Sausage. Academic Dissertation. University Food Technology. Helsinki.

Erkkila, S., and E. Petaja. 2000. Screening of commercial meat starter cultures at low pH and in the presence of bile salts for potential probiotic use. J. Meat Sci. 55: 297 - 300.

Esmaeilzadeh, P., S. Darvishi, K. Ebrahimi, F. Mirahmadi, and M. Vaziri. 2012. Consideration of lactic acid bacteria ability to reduce nitrite concentration in standard de man, rogosa and sharpe (MRS) broth-sodium nitrite medium during fermentation period. World App. Scien. J. 18 (3): 430 - 435.

Esmaeilzadeh, P., S. Darvishi, M.M. Assadi, F. Mirahmadi and F. Arashrad. 2013. Effect of lactic acid bacteria inoculation on nitrite concentration of fermented sausage in fermentation and ripening periods. Middle-East J. Sci. Research 13(11): 1455 - 1464.

Essid, I.and M. Hassouna. 2013. Effect of inoculation of selected *Staphylococcus xylosus* and *Lactobacillus plantarum* strains on biochemical, microbiological and textural characteristics of a Tunisian dry fermented sausage. Food Control (32): 707 - 714.

Fadda S. and G. Vignolo. 2015. Central and south american products. In: F. Toldra eds. Handbook of Fermented Meat and Poultry vol. 2 pp. 335 - 360. Blackwell Publishing. USA.

FAO. 2002. Evaluation of certain food additives. fifty-ninth report of joint FAO/WHO expert committee on food addition. Switzerland. Geneva.

FAO/WHO. Health and nutritional properties of probiotics in food including powder milk with live lactic acid bacteria. Http://www.fao.org/es /esn /food/foofandfood_probiocons_en.stm.2001

Fan, H., Y. Luo, X. Yin, Y. Bao, and L. Feng. 2014. Biogenic amine and quality changes in lightly salt- and sugar-salted black carp (*Mylopharyngodon piceus*) fillets stored at 4 °C. Food Chem. 159: 20 – 28.

Feiner, G. 2006. Meat products handbook pp 314 – 375. CRC Press. New York

Flores, M and A. Olivares. 2015. Flavor. in: F. Toldra eds. Handbook of fermented meat and poultry vol. 2pp.217 - 227. JohnWiley and Sons, Ltd . United Kingdom.

Flores, M. and F. Toldrá. 2011. Microbial enzymes for improved fermented meats. Trends in Food Sci. and Tech. 22: 81 - 90.

UNIVERSITAS GADJAH MADA
KAJIAN SOSIS AYAM FERMENTASI PROBIOTIK: Isolasi BAL Probiotik dan Aplikasinya untuk Meningkatkan Kualitas Sosis ayam Fermentasi Probiotik
ROISU ENY MUDAWAROCH, Dr. Ir. Setiyono, S.U.; Prof. Dr. Ir. Lies Mira Yusiati, SU., IPU.; Ir. Edi Suryanto, M.Sc.
Universitas Gadjah Mada, 2019 | Diunduh dari http://etd.repository.ugm.ac.id/

Fontana, C., P.S. Cocconcelli, and G. Vignolo. 2016. Monitoring the bacterial population dynamics duringfermentation of artisanal Argentinean sausages. Inter. J. Food Microbil. 103: 131 - 142.

Fontana, C., S. Fadda, P.S. Cocconcelli, and G. Vignolo. 2012. Lactic acid bacteria in meat fermentations**.** In. S. Lahtinen, A.C. Ouwehand, S. Salminen,A. Wright eds. Lctic Acid Bacteria. Microbiological and Functional Aspects pp. 247 - 259. CRC Press. New York.

García, A., K. Navarro, E. Sanhueza, S. Pineda, E. Pastene, M. Quezada, K. Henríquez, A. Karlyshev, J. Villena, and C. González. 2017. Characterization of *Lactobacillus fermentum* UCO-979C, a probiotic strain with a potent anti-Helicobacter pylori activity. Electr. J. Biotechnol 25: 75 - 83.

Garriga, M. and T. Aymerich, 2015. The microbiology of fermentation and ripening. In: F. Toldra eds. Handbook of Fermented Meat and Poultry vol. 2 pp. 107 - 115. Blackwell Publishing. USA.

Getty, K. R. and J. Cerveny. 2010. Dry and semi-dry fermentedand direct acidified sausage validation. Originally published as a National PorkBoard/ American Meat Sci. Ass. Fact Sheet. 11: 2 - 8 porkgateway.org.

Gill, C. 2014. Spoilage, factors affecting. in: M. Dikeman and C. Devine. Encyclopedia of Meat Sciences. Vol 3 pp. 388 - 393. Academic Press. UK.

Gonzales, B. and V. Diaz, 2002. The effect of nitrite and starter culture on microbiological quality of ‘‘chorizo’’—a Spanish dry cured sausage. Meat Sci. 60: 295 - 298.

Gonzalez, R.D., L.M. Tamagnini, P.D. Olmos, G.B. de Sousa, 2003. Evaluation of a chromogenic medium for total coliforms and *Escherichia coli* determination in ready-to-eat foods. Food Microbiol. 20: 60 - 604.

Govari, M. And A. Pexara. 2015. Nitrates and Nitrites in meat products. J. Hellenic Vet. Med. Society, 66, 127 - 140.

Grau, R., A. Andres, and J.M. Barat. 2015. Principles of drying. In: F. Toldra eds. Handbook of Fermented Meat and Poultry vol. 2 pp. 31 - 36. Blackwell Publishing. USA.

Greaser, L. and W. Guo, 2012. Postmorten muscle chemistry. In Y.H. Hui eds. Handbook of Meat and Meat Processing pp 63 - 79. CRC Press. New York.

Guarcello, R., M. De Angelis,L. Settanni,S. Formiglio,R. Gaglio,F. Minervini,G. Moschetti, and M. Gobbetti. 2016. Selection of amine-oxidizing dairy lactic acid bacteria andidentification of the enzyme and gene involved in the decrease of biogenic amines. Applied and Environ. Microbiol. 82(23): 6870 - 6881.

UNIVERSITAS GADJAH MADA
KAJIAN SOSIS AYAM FERMENTASI PROBIOTIK: Isolasi BAL Probiotik dan Aplikasinya untuk Meningkatkan Kualitas Sosis ayam Fermentasi Probiotik
ROISU ENY MUDAWAROCH, Dr. Ir. Setiyono, S.U.; Prof. Dr. Ir. Lies Mira Yusiati, SU., IPU.; Ir. Edi Suryanto, M.Sc.
Universitas Gadjah Mada, 2019 | Diunduh dari http://etd.repository.ugm.ac.id/

Gurtler, J.B. and T.L. Mai. 2014. Traditional preservatives – organic acids. In C. Batt and M. Tortorello eds. Encyclopedia of Food Microbiology pp. 1729 - 1737. Academic Press is an imprint Elsevier. New York.

Hammes W.P., D. Haller, and M.G. Ganzle. 2008. Fermented meat. In: E.R. Farnworh eds. Fermented of Functional Food pp 291 - 320. CRC Press, New York.

Han, Q., B. Kong, Q. Chen, F. Sun, H. Zhang. 2017. In vitro comparison of probiotic properties of lactic acid bacteria isolated from Harbin dry sausages and selected probiotics. J. Func. Foods 32: 391 - 400.

Hardison, R. 1999. The Evolution of Hemoglobin: Studies of a very ancient protein suggest that changes in gene regulation are an important part of the evolutionary story". American Scientist. 87(2): 126.

Hawk, P.P. 1976. Hawk physiological chemistry. 14th edition. Bernard L. Oser (ed) Tata MC. Graw Hill Pub. co. Ltd.

Heinz, G., and P. Hautzinger, 2010. Meat Processing Technology for Small-to Medium-Scale Producers. FAO. RAP Publication. Bangkok. 115 - 126.

Hierro, E., M. Fernandez, L. de la Hoz, and , J.A. Ordonez. 2015. Mediterranean Products. In: F. Toldra eds. Handbook of Fermented Meat and Poultry vol 2 pp. 301 – 312. Blackwell Publishing. USA.

Hingorani, M.M. Encyclopedia of Genrtics. 2001, Pages 1951-1952. Academic press. UK.

Hoa V.B., S. Hyun-Woo, K. Jin-Hyoung, C. Soo-Hyun, K. Yoon-Seok,H. Jun-Sang, P. Beom-Young, K. Hyun-Wook, K. Tae-Bin, and S. Pil-Nam. 2016. The effects of starter culture types on the technological quality, lipid oxidation and biogenic amines in fermented sausages. Lwt - Food Sci. and Technol. 74: 191 - 198.

Holand O. and H. Golstain, 2011. Animal that produce dairy food Reinder in Encyclopedia dairy Science. J.F. Fuquai, P.F. Fox. And P.L.H. Mcsweeny. Eds. Academic Press. UK.

Holck, A.L., L. Axelsson, T.M. Rode, M. Hoy, I. Mage, O. Alvseike, T.M. L'Abée-Lund, M.K. Omer, P.E. Granum, and E. Heir. 2011. Review. Reduction of verotoxigenic Escherichia coli in production of fermented sausages. Meat Sci. 89: 286 - 295.

Hospital X.F, E. Hierro E, M. Fernández M. 2012. Survival of *Listeria innocua* in dry fermented sausages and changes in the typical microbiota and volatile profile as affected by the concentration of nitrate and nitrite. Inter. J. Food Microbiol. 153: 395 - 401.

UNIVERSITAS GADJAH MADA
KAJIAN SOSIS AYAM FERMENTASI PROBIOTIK: Isolasi BAL Probiotik dan Aplikasinya untuk Meningkatkan Kualitas Sosis ayam Fermentasi Probiotik
ROISU ENY MUDAWAROCH, Dr. Ir. Setiyono, S.U.; Prof. Dr. Ir. Lies Mira Yusiati, SU., IPU.; Ir. Edi Suryanto, M.Sc.
Universitas Gadjah Mada, 2019 | Diunduh dari http://etd.repository.ugm.ac.id/

Hospital, X. F., E. Hierro, S. Stringer, and M. Fernández. 2016. A study on the toxigenesis by *Clostridium botulinum* in nitrate and nitrite-reduced dry fermented sausages. Intern. J. of Food Microbiol. 218: 66 –70.

Hospital, X.F., E. Hierro, and M. Fernández. 2014. Effect of reducing nitrate and nitrite added to dry fermented sausages on the survival of *Salmonella Typhimurium*. Food Research Inter. 62: 410 - 415.

Hospital, X.F., J. Carballo, M. Fernandez, J. Arnau, M. Gratacos and E. Hierro. 2015. Technological implications of reducing nitrate and nitrite levels in dry-fermented sausages: Typical microbiota, residual nitrate and nitrite and volatile profile. Food Cont. 57: 275 - 281.

Ilham, M., D. Fitria, dan P. Suryani. 2017. Preferensi konsumen memilih daging ayam broiler di Pasar Tradisional Kampar, Provinsi Riau. Prosiding Semnas Tekn. Peter. Dan Veter. pp 491- 500.

International Agency for Research on Cancer (IARC) - World Health Organization (WHO). 2010. Ingested Nitrate and Nitrite, and Cyanobacterial Peptide Toxins - IARC Monographs on the Evaluation of Carcinogenic Risks to Humans, Volume 94.

Ismail, Y.S., C. Yulvizar, and B. Mazhitov. 2018. Characterization of lactic acid bacteria from local cow´ s milk kefir. IOP Conf. Series: Earth and Env. Sci. 130 – 137.

Jain, D. and H.S. Chaudhary. 2014. Clinical significance of probiotics in human. Int J Nutr Pharmacol Neurol Dis. 4:11-22.

Jamaly, N., A. Benjouad and M. Bouksaim. 2011. Probiotic potential of *lactobacillus* strains isolated from known popular traditional moroccan dairy products. British Microbiol Research J. 1(4): 79 - 94.

Junren, Z., W. Rulan, H. Weilii, and Z. Rong. 2011. Study on isolation and identification of the lactic acid bacteria in airing wuchang fish and production performance of strains. Int. Conf. on Elec. & Mech. Eng. and Inform Tech. 497 - 501.

Kamenik, J. A. Salakova, R. Hulankov, M. Duskova, G. Borilova, O. Sedo, L. Staruch. 2018. Selected characteristics of dry fermented sausages prepared with quick-dry-slice (QDS process) technology and their comparison with traditional products. J. Food Process Preserv. 42: 1 - 10.

Kamenik, J., A. Saláková, G. Bořilová, Z. Pavlík, E. Standarová and L. Steinhauser. 2012. Effect of storage temperature on the quality of dry fermented sausage poličan. Czech J. Food Sci. 30 (4): 293 - 301.

UNIVERSITAS GADJAH MADA
KAJIAN SOSIS AYAM FERMENTASI PROBIOTIK: Isolasi BAL Probiotik dan Aplikasinya untuk Meningkatkan Kualitas Sosis ayam Fermentasi Probiotik
ROISU ENY MUDAWAROCH, Dr. Ir. Setiyono, S.U.; Prof. Dr. Ir. Lies Mira Yusiati, SU., IPU.; Ir. Edi Suryanto, M.Sc.
Universitas Gadjah Mada, 2019 | Diunduh dari http://etd.repository.ugm.ac.id/

Karimi R., A.M. Mortazavian, and A.G. Cruz. 2011. Viability of probiotic microorganisms in cheese during production and storage: A review. Dairy Sci Technol. 91: 283 - 308.

Karsha, P.V. and O.B. Laksmi. 2010. Antibacterial activity of black pepper (*Pipper ningrum* Linn.) with special reference to its mode of action on bacteria. Indian J. Natural Prod. and Resources. 1(2): 213 - 215.

Karsloglu, B., Ç. Ensoyu., N. Kolsarıcı, and K. Candoğan. 2014. Lipolytic changes in fermented sausages produced with turkey meat: effects of starter culture and heat treatment. Korean J. for Food Sci. Anim. Resc. 34: 40 - 48.

Kauffman, R.G. 2001. Meat composition. In Y H. Hui, W. Nip, R.W. Rogers, O.A. Young. Meat Science and Aplications. Pp. 1 20. Marcel Dekker, Inc. New York.

Kemp, S.E., T. Hollowood, and J. Hort. 2009. Sensory Evaluation A practical handbook. John Wiley & Sons, Ltd., Publication. 66 – 136.

Keramas G, D.D. Bang, M. Lund, M. Madsen, H. Bunkenborg, P. Telleman and C.B.V. Christensen. 2004. Use of culture, PCR analysis and DNA microarrays for detection of *Campylobacter jejuni* and *Campylobacter coli* from chicken faeces. J Clin Microbiol 47:3985–3991.

Kim, I., S. Jin, M. Yang, D. Uk Ahn, J. Park, and S. Kang. 2014. Effect of packaging method and storage time on physicochemical characteristics of dry-cured pork neck products at 10°C. Asian Australias. J. Anim. Sci. 27(11): 1623 - 1629.

Kimoto-nira, H., K. Mizumachi, M. Nomura, M. Kobayashi, Y. Fujita, T. Okamoto, I. Suzuki, N.M. Tsuji,J. Kurisaki and S. Ohmono. 2007. *Lactococcus sp*. As potential probiotic lactic acid bacteria. Review. Japan. Agr. Rese. Quar. 41: 181 - 189.

Klingberg,T. K. and B.B. Budde, 2006 The survival and persistence in the human gastrointestinal tract of five potential probiotic *Lactobacilli* consumed as freeze-dried cultures or as probiotic sausage.Int. J. F. Microbiol. 109:157 - 159.

Knorr D. 1998. Technology aspects related to microorganisms in functional foods. Trends Food Sci Technol. 9:295 - 306.

Kolozyn-Krajewska, D., and Z.J. Dolatowski. 2009. Probiotics in fermented meat products. Acta Sci. Pol.,Technol. Aliment. 8(2): 61 - 74.

UNIVERSITAS GADJAH MADA
KAJIAN SOSIS AYAM FERMENTASI PROBIOTIK: Isolasi BAL Probiotik dan Aplikasinya untuk Meningkatkan Kualitas Sosis ayam Fermentasi Probiotik
ROISU ENY MUDAWAROCH, Dr. Ir. Setiyono, S.U.; Prof. Dr. Ir. Lies Mira Yusiati, SU., IPU.; Ir. Edi Suryanto, M.Sc.
Universitas Gadjah Mada, 2019 | Diunduh dari http://etd.repository.ugm.ac.id/

Kongkiattikajorn, J. 2013. Potential of fermented sausage - associated lactic acid bacteria to degrade biogenic amines during storage. In: M. Kongo (eds.). Lactic Acid Bacteria - R & D for food, Health and Livestock Purposes (1st) pp. 658 - 670. IntechOpen. DOI: 10.5772/2825.

Kos, I., D. Bedeković, I. Širić, I. Vnučec, M. Pećina, A. Glumpak and K.C. Stanko. 2017. Technological characterization and consumer perception of dry fermented game sausages with bay leaf (*Laurus nobilis* L.) essential oil. J. of Cent. Eur. Agr. 18(4): 794 – 805.

Krockel, L. 2013. The Role of Lactic Acid Bacteria in Safety and Flavour Development of Meat and Meat Products**.** In: M. Kongo (eds).Lactic Acid Bacteria - R & D for food, Health and Livestock Purposes (1st) pp. 129 - 152. IntechOpen. DOI: 10.5772/2825

Kuda, T., M. Kataoka, M. Nemoto, M. Kawahara, H. Takahashi and B. Kimura. 2016. Isolation of lactic acid bacteria from plants of the coastal Satoumi regions for use as starter cultures in fermented milk and soymilk production. Food Sci. and Technol. 68: 202 - 207.

Kumar R, S. Grove, and V.K. Batish, 2012. Bile salt hydrolase (BSH) activity screening of *Lactobacilli:* In Vitro Selection of Indigenous *Lactobacillus* strains with potential bile salt hydrolysing and cholesterol-lowering ability. Probiotics antimicrob proteins. 4(3):162 - 72.

Kumar, A. and D. Kumar. 2015. Clinical microbiology Characterization of Lactobacillus isolated from dairy samples for probiotic properties. Anaerobe 33: 117 - 123.

Kumar, B.V., S.V.N. Vijayendra, and O.V.S. Reddy. 2015. Trends in dairy and non-dairy probiotic products - a review. J. Food Sci Technol 52(10): 6112 - 6124.

Kumar, L.M., W.Z. Saad, R. Mohamad, and R.A. Rahim. 2017. Influence of biofilm-forming lactic acid bacteria against methicillin-resistant *Staphylococcus aureus* (MRSA S547). Asian Pac J. Trop Biomed 7(12): 1107 - 1115.

Kurniawan, A. dan A.J. Effendi. 2014. Biodegradasi residu total petroleum hidrokarbon di bawah konsentrasi 1% (w/w) hasil proses bioremediasi.J. Manusia dan Lingkungan. 21(3): 286 - 294.

Kurniawan, A. dan A.J. Effendi. 2014. Biodegradasi residu total petroleum hidrokarbon di bawah konsentrasi 1% (w/w) hasil proses bioremediasi.J. Manusia dan Lingkungan. 21(3): 286 - 294.

UNIVERSITAS GADJAH MADA
KAJIAN SOSIS AYAM FERMENTASI PROBIOTIK: Isolasi BAL Probiotik dan Aplikasinya untuk Meningkatkan Kualitas Sosis ayam Fermentasi Probiotik
ROISU ENY MUDAWAROCH, Dr. Ir. Setiyono, S.U.; Prof. Dr. Ir. Lies Mira Yusiati, SU., IPU.; Ir. Edi Suryanto, M.Sc.
Universitas Gadjah Mada, 2019 | Diunduh dari http://etd.repository.ugm.ac.id/

Kurćubić, V.S., P.Z. Mašković, J.M. Vujić, D.V. Vranić, S.M. Vesković-Moračanin, D.G. Okanović, and S.V. Lilić. 2014. Antioxidant and antimicrobial activity of Kitaibelia vitifolia extract as alternative to the added nitrite in fermented dry sausage. Meat Sci. 97(4): 459 - 467.

Kurt, S. 2016. The effects of grape seed flour on the quality of turkish dry fermented sausage (sucuk) during ripening and refrigerated storage. Korean J. Food Sci. An., Vol. 36(3): 300 - 308.

Kuzelov, A., M. Stojanovski and E. Milevska, 2013. Starter cultures and carrot fiber positively affect on weight loss and sensory characteristics of tea sausage. Bulgarian J. Agri. Sci. 19(6): 1378 - 1383.

Lawalata, H.J. L. Sembiring, and E.S. Rahayu. 2011. Molecular identification of lactic acid bacteria producing antimicrobial agents from bakasang, an Indonesian traditional fermented fish product. Ind. J. Biotech.16: 93 - 99.

Lawless, H.T. and H. Heymann. 2010. Sensory Evaluation of Food Principles and Practice. Springer New York Dordrecht Heidelberg London. 147 – 179.

Lehri, B.A.M. Seddon, and A.V. Karlyshev. 2017. *Lactobacillus fermentum* 3872 as a potential tool for combatting *Campylobacter jejuni* infections. Virulence. 8(8): 1753 - 1760.

Lengkey, H.A.W., R.L. Balia, I. Togoe, B.A. Taşbac, and M. Ludong. 2009. Isolation and identification of lactic acid bacteria from raw poultry meat.Biotec. in Animal Husbandry 25: 1071 - 1077.

Leroy, S., I. Lebert, and R. Talon. 2015. Microorganisms in traditional fermented meats. In: F. Toldra eds. Handbook of Fermented Meat and Poultry vol. 2 pp. 97 - 116. Blackwell Publishing. USA.

Li Y., and X. Zhou, 2015. Atlas of Oral Microbiology pp 41 – 65. Zhejiang University Press. Published by Elsevier Inc. NY.

Li, G. 2012. Intestinal Probiotics: Interactions with Bile Salts and Reduction of Cholesterol. Procedia Envi. Sci. 12: 1180 - 1186.

Liu, W. , Q. Bao,Jirimutu, M. Qing, Siriguleng,X. Chen, T. Sun, M. Li, J. Zhang, J. Yu, M. Bilige, T. Sun, and H. Zhang. 2012. Isolation and identification of lactic acid bacteria from Tarag in Eastern Inner Mongolia of China by 16S rRNA sequences and DGGE analysis. Microbiol. Research 167: 110 - 11.

Lorenzo, J.M., and D. Franco. 2012. Fat effect on physico-chemical, microbial and textural changes through the manufactured of dry-cured foal sausage lipolysis, proteolysis and sensory properties. Meat Sci. 92: 704 - 714.

UNIVERSITAS GADJAH MADA
KAJIAN SOSIS AYAM FERMENTASI PROBIOTIK: Isolasi BAL Probiotik dan Aplikasinya untuk Meningkatkan Kualitas Sosis ayam Fermentasi Probiotik
ROISU ENY MUDAWAROCH, Dr. Ir. Setiyono, S.U.; Prof. Dr. Ir. Lies Mira Yusiati, SU., IPU.; Ir. Edi Suryanto, M.Sc.
Universitas Gadjah Mada, 2019 | Diunduh dari http://etd.repository.ugm.ac.id/

Lorenzo, J.M.,M. Bedia, and B. Sancho. 2013. Relationship between flavour deterioration and the volatile compound profile of semi-ripened sausage. Meat Sci. 93(3): 614–620.

Lucera, A., C. Costa, A. Conte, and M.A. Del Nobile. 2012. Food applications of natural antimicrobial compounds. Front Microbiol. 3: 287 – 294.

Lücke, F.K. and P. Zangerl. 2014. Food safety challenges associated with traditional foods in German-speaking regions. Food Cont. 43: 217 - 230.

Madigan, M.T. and J.M. Martinko., J.M., 2012.Brock Biology of Microorganisms, United States of America : Pearson Education International. 151 - 254.

Magistrado P, M. Carcia, A. Raymundo. 2001. Isolation and polymerase chain reaction-base detection of *Campylobacter jejuni* and *Campylobacter coli* from poultry in Philippines. Int J. Food Microbiol 70:194–206

Majumdar, D. 2003. The blue baby syndrome: nitrite microbiological examination- Part 2: specific rules for poisoning humans. J. of Resonans, 10: 20-30.

Makarova, K. S. and E. V. Koonin. 2007. Evolutionary genomics of lactic acid bacteria. J. Bacteriol. 189:1199 - 1280.

Maksimovic, Z., A.N. Hulak, M. Vuko, V. Kovačević, I. Kos, M. Mrkonjić-Fuka . 2015. Lactic acid bacteria in traditional dry sausage production. Godina XVII MESO 6: 575 - 580.

McClements, J. and E.A. Decker. 2005. Lipid. in S. Damodaran, K.L. Parkin, O.R. Fennema eds. Fennema's Food Chemistry pp. 155 - 216. CRC Press. New York.

Meilianti, S., Y. Harahap, H. 2011. Analisis adduct DNA setelah pemberian natrium Nitrit dan dimetilamin secara Berulang pada tikus. Majalah Ilmu Kefarmasian. 8(1): 1 – 56.

Melo, T.A., T.F. dos Santos, L.R. Pereira, H.M. Passos, R.P. Rezende, and C.C. Romano. 2017. Functional Profile Evaluation of *Lactobacillus fermentum* TCUESC01: A New Potential Probiotic Strain Isolated during Cocoa Fermentation. BioMed Research International. 1 - 7.

Menconi, M., G. Kallapura, J.D. Latore, M.J. Morgan, N.R. Pumford, B.M. Hargis and G. Tellez. 2014. Identification and Characterization of Lactic Acid Bacteria in a Commercial Probiotic Culture. Biosci. Micro Food Health. 33(1): 25-30.

UNIVERSITAS GADJAH MADA
KAJIAN SOSIS AYAM FERMENTASI PROBIOTIK: Isolasi BAL Probiotik dan Aplikasinya untuk Meningkatkan Kualitas Sosis ayam Fermentasi Probiotik
ROISU ENY MUDAWAROCH, Dr. Ir. Setiyono, S.U.; Prof. Dr. Ir. Lies Mira Yusiati, SU., IPU.; Ir. Edi Suryanto, M.Sc.
Universitas Gadjah Mada, 2019 | Diunduh dari http://etd.repository.ugm.ac.id/

Menegas, L.Z., T.C. Pimentel, S. Garcia, and S.H. Prudencio. 2013. Dry-fermented chicken sausage produced with inulin and corn oil: Physicochemical,microbiological, and textural characteristics and acceptability during storage. Meat Sci. 93: 501 - 506.

Mills, E. 2014. Functional. in: M. Dikeman and C. Devine. Encyclopedia of Meat Sciences pp. 7 - 11.Academic Press. Unitd Kingkom.

Min, B. and D. Ahn. 2015. Packaging and storage. In: F. Toldra eds. Handbook of Fermented Meat and Poultry vol. 2 pp. 273 - 280. Blackwell Publishing. USA.

Miranda J.M., A. Samuel, C.G. Nebot A. Cepeda, and C.M. Franco. 2014. Technological Characterization of Lactic Acid Bacteria Isolated from Beef Stored on Vacuum-Packaged and Advanced Vacuum Skin Packaged System. J Food Process Technol 5:338. doi:10.4172/2157-7110.1000338

Modak, J.M. 2002. Haber process for ammonia synthesis" Resonance **7**: 69–77. doi : 10.1007 / bf02836187 .

Mohania, D., R. Nagpal, M. Kumar, A. Bhardwaj, M. Yadav, S. Jain, F. Marotta, V. Singh, O. Parkash, and H. Yadav. 2008. Molecular approaches for identification and characterization of lactic acid bacteria. J. Dig. Dis. 9: 190‑198.

Møller, J.K.S, S. Jongberg, and L.H. Skibsted. 2015. Color. In: F. Toldra eds. Handbook of Fermented Meat and Poultry vol. 2 pp. 193 - 206. Blackwell Publishing. USA.

Moonchai, S., W. Madlhoo, K. Jariyachavalit, H. Shimizu, S. Shioya, and S. Chauvatcharin. 2005. Application of a mathematical model and differential evolution algorithm approach to optimization of bacteriocin production by *Lactococcus lactis* C7. Bioprocess Biosyst. Eng. 28:15 - 26.

Muguerza, E., G. Fista, D. Ansorena, I. Astiasarán, and J.G. Bloukas. 2002. Effect fat level and partial replacement of pork backfat with olive oil on processing and quality characteristics of fermented sausages. Meat Sci.61(4): 397 - 404.

Muhialdin, B.J., Z. Hassan, S.K. Sadon, N.A. Zulkifli, and A.A. Azfar. 2011. Effect of pH and heat treatment on antifungal activity of *Lactobacillus fermentum* Te007, *Lactobacillus pentosus* G004 and *Pediococcus pentosaceus* Te010. Innov. Romanian Food Biotech. 8: 41 - 53.

UNIVERSITAS GADJAH MADA
KAJIAN SOSIS AYAM FERMENTASI PROBIOTIK: Isolasi BAL Probiotik dan Aplikasinya untuk Meningkatkan Kualitas Sosis ayam Fermentasi Probiotik
ROISU ENY MUDAWAROCH, Dr. Ir. Setiyono, S.U.; Prof. Dr. Ir. Lies Mira Yusiati, SU., IPU.; Ir. Edi Suryanto, M.Sc.
Universitas Gadjah Mada, 2019 | Diunduh dari http://etd.repository.ugm.ac.id/

Muktiningsih, F. Kurniadewi, I. Orchidea R.P. 2016. Isolasi, amplifikasi dan sekuensing fragmen 1,9 kilobasa gen *heat shock protein* 70 *salmonella enterica* serovar typhi. J. Kim. Dan Pend. Kim. 1(1): 32 - 40.

Munoz, R., M.V. Moreno-Arribas, B. de las Rivas. 2011. Lactic Acid Bacteria. In A.V. Carrascosa, R. Muñoz and R. González. Molecular Wine Microbiology. Elsevier 292 – 316

Naruszewicz, M.L., D. Johansson, Z. Downar, and H. Bukowska. 2002. Effect of *Lactobacillus plantarum* 299v on cardiovascular disease risk factors in smokers. Am J Clin Nutr. 76: 1249 - 1255.

Nigam, A., A. Kumar, H.V. Madhusudan, and N. Bhola. 2012. In-vitro screening of antibacterial activity of lactic acid bacteria against common enteric pathogens. iMedPub J.S. 1(4):1-6.

Nurhayati, S. 2008. Seleksi dan identifikasi bakteri asam laktat yang berproliferasi pada tembolok dan usus halus ayam kampung. Tesis. Program Pasca Sarjana Universitas Gadjah Mada Yogyakarta.

O'Sullivan, M.G. and J.P. Kerry. 2010. Meat Packaging in: F. Toldra eds. Handbook of Meat Processingpp 247 - 262.John Wiley and Sons. New Jersey.

Ockerman H.W. and L. Basu. 2015. Production and consumption of fermented meat products. In: F. Toldra eds. Handbook of Fermented Meat and Poultry vol. 2 pp. 7 - 12. Blackwell Publishing. USA.

Ockerman, H.W. and L. Basu. 2014. Other Ingredients. in: M. Dikeman and C. Devine. Encyclopedia of Meat Sciences. Vol 1 pp. 292 - 301. Academic Press. UK.

Olivares, A., J.L. Navarro, A. Salvador, and M. Flores. 2010. Sensory acceptability of slow fermented sausages based on fat content and ripening time. Meat Sci. 86: 251 - 257.

Oliveira, S.C., P.D. Stremel, E.C. Dechechi and M. Félix. 2017. Pereira Kinetic Modeling of 1-G Ethanol Fermentations in A. Jozala. Fermentation Processes. 93 - 111. Intech Open Limited The Shard 25th floor 32 London Bridge Street London, SE1 9SG, United Kingdom.

Özvural, E.B. and H. Vural. 2015. Fermented Sausages from Other Meats. in: F. Toldra eds. Handbook of fermented meat and poultry. Vol. 2 pp. 19 283 - 343. JohnWiley and Sons, Ltd . UK.

UNIVERSITAS GADJAH MADA
KAJIAN SOSIS AYAM FERMENTASI PROBIOTIK: Isolasi BAL Probiotik dan Aplikasinya untuk Meningkatkan Kualitas Sosis ayam Fermentasi Probiotik
ROISU ENY MUDAWAROCH, Dr. Ir. Setiyono, S.U.; Prof. Dr. Ir. Lies Mira Yusiati, SU., IPU.; Ir. Edi Suryanto, M.Sc.
Universitas Gadjah Mada, 2019 | Diunduh dari http://etd.repository.ugm.ac.id/

Paramithiotis, S., E.H. Drosinos, J.N. Sofos, and G.E. Nychas. 2010. Fermentation: microbiology and biochemistry. In: F. Toldra eds. Handbook of Meat Processing pp.185 - 198.John Wiley and Sons. New Jersey

Pfeiler, E.A. and T.R. Klaenhammer. 2007. The genomic of lactic acid bacteria.Trends Microbiol. 15: 546 - 553.

Pil-Nam, S., H.W. Seo, S.H. Cho, Y.S. Kim, J.H. Kim, J.S. Ham, B.Y. Park and H. Van Ba. 2016. Antioxidant and anti-foodborne bacteria activities of shiitake by-product extract in fermented sausages, Food Control.

Pringsulaka, O., N. Thongngam, N. Suwannasai, W. Atthakor, K. Pothivejkul, and A. Rangsiruji. 2012. Partial characterisation of bacteriocins produced by lactic acid bacteria isolated from Thai fermented meat and fish products. Food Contr. 23: 547 – 551.

Prpich, N.Z.P., M.P. Castro, M.E. Cayré, O.A. Garro, and G.M. Vignolo. 2015. Indigenous starter cultures to improve quality of artisanal dry fermented sausages from chaco Argentina. Inter. J. Food Sci. http://dx.doi.org/10.1155/2015/931970.

Pundir, R.K., S.R.N. Kashyap and A. Kaur. 2013. Probiotic potential of lactic acid bacteria isolated from food samples:an in vitro study. J. App. Pharm. Sci. 3:085 - 093.

Puolanne, E. and E. Petäjä-Kanninen, 2015. Principles of Meat Fermentation in: Toldra eds. Handbook of fermented meat and poultry vol 2 pp. 13 - 18. JohnWiley and Sons, Ltd . UK.

Purkhayastha, S.D., M.K. Bhattacharya, H.K. Prasad, H. Upadhyaya, K. Pal, and G.D. Sharma. 2015. Antimicrobial activity of *Lactobacillus fermentum*, a volvo vaginal isolate. Asian J. Pharm Clin Res. Vol 8 (2): 371 - 372.

Purnami, S., Syaifudin, M., dan Giyatmi. 2009. Penandaan DNA dengan 32p untuk Deteksi Resistensi *MycobacteriumTuberculosis* Terhadap Isoniazid. JFN, 3(1): 12-18.

Purwaningsih, S., J. Santosa, and R. Garwan. 2013. Perubahan fisiko-kimiawi, mikrobialdan histamin bakasang ikan cakalang selama fermentasi dan penyimpanan. J. Teknol dan Industri Pangan. 24(2): 168 - 178.

Radulović, Z., T. Petrović, V. Nedović, S. Dimitrijević, N. Mirković, M. Petrušić, and D. Paunović. 2010. Characterization of autochthonous *Lactobacillus paracasei* strains on potential probiotic ability. Mljekarstvo 60 (2): 86 - 93.

Rai, K.P., C. Zhan, and W. Xia. 2010, Effects of pure starter cultures on physico-chemical and sensory quality of dry fermented Chinese-style sausage. J. Food Sci. Technol. 472: 188 - 194.

UNIVERSITAS GADJAH MADA
KAJIAN SOSIS AYAM FERMENTASI PROBIOTIK: Isolasi BAL Probiotik dan Aplikasinya untuk Meningkatkan Kualitas Sosis ayam Fermentasi Probiotik
ROISU ENY MUDAWAROCH, Dr. Ir. Setiyono, S.U.; Prof. Dr. Ir. Lies Mira Yusiati, SU., IPU.; Ir. Edi Suryanto, M.Sc.
Universitas Gadjah Mada, 2019 | Diunduh dari http://etd.repository.ugm.ac.id/

Ranjan, S., G. Kishore, V.S. Jadon, J.P. Bhatt, and S. Gupta. 2010. Standardization of extraction of genomic DNA and PCR-RFLP conditions of Allium stracheyi: a high altitude plant. Academia Arena 2(7): 11 - 14.

Ranucci, D., A.R. Loschi, D. Miraglia, R. Stocchi, R. Branciari, and S. Rea. 2016. Effect of selected starter cultures on physical, chemical and microbiological characteristics and biogenic amine content in protected geographical indication *ciauscolo* salami. Ital. J. Food Saf. 18(5): 30 - 37.

Ratanaburee, A., D. Kantachote, W. Charernjiratrakul, and A. Sukhom. 2013. Enhancement of γ-aminobutyric acid GABA in Nham Thai fermented pork sausage using starter cultures of *Lactobacillus namurensis* NH2 and *Pediococcus pentosaceus* HN8. Inter. J. Food Microbiol. 167: 170 - 176.

Ratnayani, K., A. A. I. A. M. Laksmiwati, dan M. Sudiarto. 2015. Penentuan laju reaksi maksimal (vmaks) dan konstanta michaelis-menten (km) enzim lipase pankreas pada substrat minyak kelapa, minyak sawit, dan minyak zaitun. Jurnal Kimia 9 (1): 93-97.

Ray, B., and A. Bhunia. 2008. Fundamental Food Microbiology. 4th[ed]. CRC. Press.New York. 225 - 242.

Riaz, S., S.K. Nawaz, and S. Hasnain. 2010. Bacteriocins Produced by *L. Fermentum* and *L. Acidophilus* Can Inhibit Cephalosporin Resistant *E. Coli.* Braz J. Microbiol.. 41(3): 643 - 648.

Roberfroid, M.B. 2000. Defining functional foods. In G.R. Gibson and C.M. Williams (eds.), Functional foods Concept to product pp 2 - 28.CRC Press. England.

Roberts, H., and H. Dainty, 1996. Nitrite and nitrate as food additives: rationale and mode of action. In M. Hill eds. Nitrates and Nitrites In Food and Water pp. 113- 124. Woodhead Publishing Cambridge England.

Robinson. P.K. 2015. Enzymes: principles and biotechnological applications. Essays Biochem. 59: 1 – 41. doi: 10.1042/BSE0590001.

Romadhon, Subagiyo, and S. Margino. 2012. Isolasi dan karakterisasi bakteri asam laktat dari usus udang penghasil bakteriosin sebagai agen antibakteria pada produk-produk hasil perikanan. J. Saintek Perikanan. 8(1): 59 – 64.

Roushan-Zadeh, S., M.H. Eskandari, S.S. Shekarforoush, and A. Hosseini. 2014. Phenotypic and genotypic diversity of dominant lactic acid bacteria isolated from traditional yoghurts produced by tribes of Iran. Iranian J. Vet. Research. 15(4): 347 - 352.

UNIVERSITAS GADJAH MADA
KAJIAN SOSIS AYAM FERMENTASI PROBIOTIK: Isolasi BAL Probiotik dan Aplikasinya untuk Meningkatkan Kualitas Sosis ayam Fermentasi Probiotik
ROISU ENY MUDAWAROCH, Dr. Ir. Setiyono, S.U.; Prof. Dr. Ir. Lies Mira Yusiati, SU., IPU.; Ir. Edi Suryanto, M.Sc.
Universitas Gadjah Mada, 2019 | Diunduh dari http://etd.repository.ugm.ac.id/

Rubio, R., A. Jofré, B. Martín, T. Aymerich, and M. Garriga, 2014. Characterization of lactic acid bacteria isolated from infant faeces as potential probiotic starter cultures for fermented sausages. Food Microbiol. 38: 303 - 311.

Ruiz, J. and T. Perez-Palacios. 2015. Inggrediens. in: Toldra eds. Handbook of fermented meat and poultry vol. 2 pp. 55 - 68. John Wiley and Sons, Ltd . UK

Ruiz, J.N., N.D.M. Villanuev, C.Silvia Favaro-Trindade, and C.J. Contreras-Castillo. 2014. Physicochemical, microbiological and sensory assessments of Italian salamisausages with probiotic potential. Sci. Agric. 71: 204 - 211.

Ruiz-Moyano, S., A. Martín, M.José Benito, A. Hernández, R. Casquete, and M.G. Córdoba. 2011 Application of *Lactobacillus fermentum* HL57 and *Pediococcus acidilactici* SP979 as potential probiotics in the manufacture of traditional Iberian dry-fermented sausages. Food Microbiol. 28: 839 - 847.

Sakaridis, I., N. Soultos, C. Batzios, I. Ambrosiadis and P. Koidis. 2012. Lactic acid bacteria isolated from chicken carcasses with inhibitory activity against *Salmonella* sp. and *Listeria monocytogenes.* Czech J. Food Sci. 32(1): 61 - 68.

Santos, C. dos, L.C. Roseiro, A. Gomes, H. Gonçalves, M. Sol and A. Partidário. 2012. Influence of curing salts and storage conditions in proteolysis and lipid oxidation stability of a low acidity dry fermented sausage produced with DFD meat. J. Food Process Technol. 3: 1 - 4.

Santos, E.C.C. dos, A.C. Neto, V.S. Castro, R.C.T. Carvalho, and E. E. de SouzaFigueiredo. 2017. Evaluation of the sanitary conditions of head meat, esophagus, diaphragm meat, and boning scrap processing. J. Food Quality. 1-4. https://doi.org/10.1155/2017/3230596.

Sarika A.R., A.P. Lipton, M.S. Aishwarya, and R.S. Rachana. 2017. Lactic Acid Bacteria from Marine Fish: Antimicrobial Resistance and Production of Bacteriocin Effective Against *L. monocytogenes* In Situ. J Food Microbiol Saf Hyg 2: 128. doi:10.4172/2476-2059.1000128

Satria, H., D. Herasari and S. D. Yuwono. 2011. Fermentation kinetic of cellulase production by actinomycetes acp-7 isolate in solid state rice straw medium). J. Kimia Kemasan, 33(2): 152 – 159.Adams, M. 2010. Fermented meat products. In: Tamang, J. P., and K. Kailasapathy eds. Fermented Foods and Beverages of the World pp. 309 - 322. CRC Press Taylor and Francis Group. New York.

Savitri, M., V. Kumar, A. Kumari, K. Angmo, and T.C. Bhalla. 2017. Isolation and characterization of lactic acid bacteria from traditional pickles of Himachal Pradesh, India. J Food Sci Technol. 54(7): 1945–1952.

UNIVERSITAS GADJAH MADA
KAJIAN SOSIS AYAM FERMENTASI PROBIOTIK: Isolasi BAL Probiotik dan Aplikasinya untuk Meningkatkan Kualitas Sosis ayam Fermentasi Probiotik
ROISU ENY MUDAWAROCH, Dr. Ir. Setiyono, S.U.; Prof. Dr. Ir. Lies Mira Yusiati, SU., IPU.; Ir. Edi Suryanto, M.Sc.
Universitas Gadjah Mada, 2019 | Diunduh dari http://etd.repository.ugm.ac.id/

Scetar, M., E. Kovacic, M. Kurek, and K. Galic, 2013. Shelf life of packaged sliced dry fermented sausage under different temperature. Meat Sci. 93: 802 - 809.

Schiraldi, C. and M. de Rosa. 2014. Mesophilic Organisms. In E. Drioli and L. Giorno (eds.), Encyclopedia of Membranes pp 1- 2. Springer-Verlag Berlin Heidelberg

Seefeldt, L.C., I.G. Dance, and D.R. Dean. 2004. Substrate interactions with nitrogenase: Fe versus Mo. Biochemistry. 43(6):1401-9.

Shi, L.H., K. Balakrishnan, K. Thiagarajah, N.I.M. Ismail, and O.S. Yin. 2016. Beneficial Properties of Probiotics. Trop. Life Sci. Res. 27(2): 73–90.

Sigh V.P., V. Pathak, and A.K. Verma. 2012. Fermented Meat Products: organoleptic qualities and biogenic amine Review. Amer. J. Food Technol. 7: 278 - 288.

Silva, A.P.R. da, D.A. Longhi, F. Dalcanton, and G.M.F. de Aragão. 2018. Modelling the growth of lactic acid bacteria at different temperatures. Braz. arch. biol. technol. vol.61: 1 - 11.

Soeparno, 2015. Ilmu dan Teknologi Daging. Gadjah Mada University Press. Yogyakarta.

Sohlia, V. and A.S. Bawa. 2010. Poultry ham. In G. Legarreta eds. Handbook of Poultry Science and Technology Vol. 2 pp. 209 - 232. John Wiley & Sons, Inc. New Jersey.

Soriano-Santos, J. 2010. Chemical composition and nutritional content of raw poultry meat. In. I.C. Legarreta and Y.H. Hui eds.Handbook of Poultry Science and Technology pp. 467 - 532.John Wiley & Sons, Inc., Publication.

Soyer, A., A. H. Ertas, and U. Uzumcuoglu. 2005. Effect of processing conditions on the quality of naturally fermented Turkish sausages (sucuks). Meat Sci. 69(1): 135 - 141.

Sriphochanart, W. and W. Skolpap. 2011. The Use of selected lactic acid bacteria starter cultures for improved Thai sausage fermentation.J. Food Procesing and preservation. 35(3): 291 - 298.

Stajic, S., M. Perunovic, N. Stanišic, M. Žujovic and D. Živkovic´ 2012. Sucuk (Turkish-Style Dry-Fermented Sausage) Quality As An Influence of Recipe Formulation and Inoculation of Starter Cultures. J. Food Proces. and Preser. 2:1 - 11.

Stanbury, P., A. Whitaker and S.J. Hill. 2017. Principles of Fermentation Technology. Pp 21-74. Pergamon press Ltd. England.

UNIVERSITAS GADJAH MADA
KAJIAN SOSIS AYAM FERMENTASI PROBIOTIK: Isolasi BAL Probiotik dan Aplikasinya untuk Meningkatkan Kualitas Sosis ayam Fermentasi Probiotik
ROISU ENY MUDAWAROCH, Dr. Ir. Setiyono, S.U.; Prof. Dr. Ir. Lies Mira Yusiati, SU., IPU.; Ir. Edi Suryanto, M.Sc.
Universitas Gadjah Mada, 2019 | Diunduh dari http://etd.repository.ugm.ac.id/

Stone, H. and J.L. Sidel. 2004. Sensory Evaluation Practices. Elsevier Academic Press. 145 – 199.

Sudarmadji. S., B. Haryono, dan Suhardi. 2007. Analisa Bahan Makanan dan Pertanian. Liberty Yogyakarta. Yogyakarta.

Sun, Q., F. Sun, D. Zheng, B. Kong, Q. Liu. 2014. Complex starter culture combined with vacuum packaging reduces biogenic amine formation and delays the quality deterioration of dry sausage during storage. Food Cont. 100: 58 – 66.

Talon, R. and S. Leroy. 2014. Fermented meat products and the role of starter cultures. In C. Batt and M. Tortorello eds. Encyclopedia of Food Microbiology pp. 870 - 874. Academic Press is an imprint of Elsevier. New York.

Taufiq, T.T, N.S.S. Anindita, dan Widodo. 2017. Bakteri asam laktat asal saluran pencernaan manusia. In Widodo eds. Bakteri Asam Laktat Strain Lokalpp 22 - 42. Gadah Mada Univessity Press. Yogyakarta.

Tokatli, M., G. Gülgör, S.B. Elmaci, N.A. Egleyen, and F. Özçelik. 2015. In vitro properties of potential probiotic indigenous lactic acid bacteria originating from traditional pickles. BioMed Research Intern. Article ID 315819, 1 - 8.

Toldra, F. andM. Flores. 2014. Dry and semidry. In C. Batt and M. Tortorello eds. Encyclopedia of Food Microbiology pp 248 – 255. Academic Press is an imprint of Elsevier. New York.

Trzaskowska, M., D. Koozyn-Krajewska, K. Wójciak, and Z. Dolatowski. 2014. Microbiological quality of raw-fermented sausages with *Lactobacillus casei* LOCK 0900 probiotic strain. Food Control. 35: 184 - 191.

Tsai,C., P. Lin, Y. Hsieh, Z. Zhang, H. Wu, and C. Huang. 2014. Cholesterol-Lowering Potentials of Lactic Acid Bacteria Based on Bile-Salt Hydrolase Activity and Effect of Potent Strains on Cholesterol Metabolism In Vitro and In Vivo. Sci. World J. I: 1 – 10.

Tyopponen, S., A. Markkula, E. Petaja, M.L. Suihko, and T. Mattila-Sandholm. 2003. Survival of *Listeria monocytogenes* in North European type dry sausages fermented by bioprotective meat starter cultures. Food Control 14: 181 - 185.

USDA. 2011. Principles of Preservation of Shelf-Stable Dried Meat Products . https://www.google.co.id/search?ei=M5QLW-0Kdeb9QPkz5_wAQ&q=FSRE+Shelf-Stable&oq=FSRE+Shelf-Stable&gs_l=psy-ab.3..0i22i30k1 j0i8i13i30k1l5.270075.271441.0.273451.1.1.0.0.0.0.444.444.4-1.1.0....0...1c.1.64.psy-ab..0.1.416....0.9IsOKHF8oeg. Diakses Pebruari 2018.

UNIVERSITAS GADJAH MADA
KAJIAN SOSIS AYAM FERMENTASI PROBIOTIK: Isolasi BAL Probiotik dan Aplikasinya untuk Meningkatkan Kualitas Sosis ayam Fermentasi Probiotik
ROISU ENY MUDAWAROCH, Dr. Ir. Setiyono, S.U.; Prof. Dr. Ir. Lies Mira Yusiati, SU., IPU.; Ir. Edi Suryanto, M.Sc.
Universitas Gadjah Mada, 2019 | Diunduh dari http://etd.repository.ugm.ac.id/

USDA-FSIS (United States Department of Agriculture/Food Safety and Inspection Service). 2005. Food Standards and Labeling Policy Book. Washington, DC: USDA-FSIS.http://www.fsis.usda.gov/OPPDE/larc/Policies/Labeling_Policy_Book_082005.pdf

Utami, R., E. Widowati, and A. Kamil. 2012. The kinetic study of lactic acid fermentation by *Lactococcus lactis* FNCC 0086 in media of cashew apple juice (*Anacardium occidentale* L.) with variation of nitrogen sources. J. Tek. Hasil Pert. 5(2): 48 – 55.

Van Ba, H., S. Hyun-Woo, K. Jin-Hyoung, C. Soo-Hyun, K. Yoon-Seok, H. Jun-Sang, P. Beom-Young, K. Hyun-Wook, K. Tae-Bin, S. Pil-Nam. 2016. The effects of starter culture types on the technological quality, lipid oxidation and biogenic amines in fermented sausages. Food Science and Technology 74: 191 - 198.

Vasiee, A.R., F.T. Yazdi, A. Mortazavi, and M.R. Edalatian. 2014. Isolation, identification and characterization of probiotic *Lactobacilli spp*. from Tarkhineh. Inter. Food Research J. 21(6): 2487 - 2492.

Vasileva, D., B. Aleksica, A. Tarbukc, M. Dimitrijevica, N. Karabasila, N. Cobanovica, and N. Vasiljevicb. 2015. Identification of lactic acid bacteria isolated from Serbian traditional fermented sausages Sremski and Lemeski kulen. Procedia Food Sci. 5: 300 - 303.

Vaughan, E.E., M.C. de Vries, E.G. Zoetendal, K. Ben-Amor, A.D.L. Akkermans and W. M. de Vos. 2002. The Intesinal LAB. Antonie van Leeuwenhoek 82: 341 - 352.

Verluyten, J., W. Messens, and De Vuyst L. 2003. The curing agent sodium nitrite, used in the production of fermented sausages, is less inhibiting to the bacteriocin-producing meat starter culture Lactobacillus curvatus LTH 1174 under anaerobic conditions. Appl Environ Microbiol. 69: 3833 - 3839.

Vidal-Carou, M.C., M.T. Veciana-Nogués, M. Luz Latorre-Moratalla, and S. Bover-Cid. 2015. Biogenic amines: risks and control. In: F. Toldra eds. Handbook of Fermented Meat and Poultry vol. 2 pp. 413 - 428. Blackwell Publishing. USA.

Vignolo, G., C. Fontana, and S. Fadda. 2010. Semidry and Dry Fermented Sausages In: F. Toldra eds. Handbook of Meat Processing pp. 379 - 398.John Wiley and Sons. New Jersey.

Vignolo, G., F. Gecilia, and S. Fadda. 2015. Semi dry and dry sausages. In: F. Toldra eds. Handbook of Fermented Meat and Poultry vol. 2 pp. 129 - 138. Blackwell Publishing. USA.

UNIVERSITAS GADJAH MADA
KAJIAN SOSIS AYAM FERMENTASI PROBIOTIK: Isolasi BAL Probiotik dan Aplikasinya untuk Meningkatkan Kualitas Sosis ayam Fermentasi Probiotik
ROISU ENY MUDAWAROCH, Dr. Ir. Setiyono, S.U.; Prof. Dr. Ir. Lies Mira Yusiati, SU., IPU.; Ir. Edi Suryanto, M.Sc.
Universitas Gadjah Mada, 2019 | Diunduh dari http://etd.repository.ugm.ac.id/

Vos, D.P., G.M. Garrity, D. Jones, N.R. Krieg, W. Ludwig, F.A. Rainey, K.H. Schleifer, and W.B. Whitman. 2009. Bergey`s Manual of Systematic Bacteriology. Springer Dordrecht Heidelberg. New York, USA.

Wang, C., T. Chang , H. Yang, and M. Cui. 2015. Antibacterial mechanism of lactic acid on physiological and morphological properties of Salmonella Enteritidis, Escherichia coli and Listeria monocytogenes. Food Control. 47: 231 - 236.

Wang, X.H., H.Y. Ren, D.Y. Liu, W.Y. Zhu, and W. Wang. 2013. Effects of inoculating *Lactobacillus sakei* starter cultures on the microbiological quality and nitrite depletion of Chinese fermented sausages. Food Control 32: 591 - 596.

Watson J. and S. Holmes. 2008. Split Plot Designs. In: G. Casella eds. Statistical Design pp. 171 - 241. Springer Science Business Media. New York.

Wright, A.V and L. Axelsson. 2012. Lactic acid bacteria: an Introduction. In. S. Lahtinen, A.C. Ouwehand, S. Salminen, A. Wright eds. Lctic Acid Bacteria. Microbiological and Functional Aspects pp. 1 - 48. CRC Press. New York.

Wu, S., W. Wang, D. Y, W. Zhang, Y. Li, Z. Sun, J. Wu, H. Meng, and H. Zhang. 2009. Proteomics analysis of Lactobacillus casei Zhang, a new probiotic bacterium isolated from traditional home-made koumiss in inner Mongolia of China. Molecular & Cellular Proteomics 8(10): 2321- 2338.

Wu, Y.C., S.P. Chi, and S. Christienas. 2015. Cassing. In: F. Toldra eds. Handbook of Fermented Meat and Poultry vol. 2 pp. 89 - 97. Blackwell Publishing. USA.

Yarbrough, J.M., J. B. Rake, and R. G. Eagon.1980. Bacterial inhibitory effects of nitrite: inhibition of active transport, but not of group translocation, and of intracellular enzymes. Appl. and Envir. Microbiol.39: 831 - 834.

Yoshikazu I, S. Ikue, and S. Seiichi. 1994. Identification and Characteristics of Lactic Acid Bacteria Isolated from Masai Fermented Milk in Northern Tanzania. J. Biosci, Biotech.logy, and Biochemistry. 58 (4): 660-664.

Yim, D., K. Jang, and K. Chung. 2016. Effect of Fat Level and the Ripening Time on Quality Traits of Fermented Sausages. Asian Australas. J. Anim. Sci. 29(1): 119-125.

Yuksekdag, Z.N. and B. Aslim. 2010. Assessment of potential probiotic and starter properties of *Pediococcus* spp. isolated from Turkish-type fermented sausages (Sucuk). J. Microbiol. Biotech. 20: 161 - 168.

Yuliana, N. 2008. Growth Kinetic of Lactic Acid Bacteria, Isolate T5 Originated from Tempoyak. J. Tek. Industri dan Hasil Pert. 13(2): 108-117.

UNIVERSITAS
GADJAH MADA
**KAJIAN SOSIS AYAM FERMENTASI PROBIOTIK: Isolasi BAL Probiotik dan Aplikasinya untuk Meningkatkan
Kualitas Sosis ayam Fermentasi Probiotik**
ROISU ENY MUDAWAROCH, Dr. Ir. Setiyono, S.U.; Prof. Dr. Ir. Lies Mira Yusiati, SU., IPU.; Ir. Edi Suryanto, M.Sc.
Universitas Gadjah Mada, 2019 | Diunduh dari http://etd.repository.ugm.ac.id/

Yunilas, L. Warly and E. Mirwandhono. 2014. Toward probiotict food product from meat through isolation and identification lactic acid bacteria as probiotic culture stater. Int. J. of Adv Eng. Inf. Tech. 4(2): 80 - 83

Zao, L., Y. Hu, and W. Chen. 2015. Antibacterial mechanism and activities of black pepper chloroform extract. J. Food Sci Technol 52(12): 8196 - 8203.

Zeng, X., W. Xia, Q. Jiang, and F. Yang. 2013. Effect of autochthonous starter cultures on microbiological and physico-chemical characteristics of Suan yu, a traditional Chinese low salt fermented fish. Food Cont. 33: 344 - 351.

Zeng, X., W. Xia, Q. Jiang, and L. Guan, 2015. Biochemical and sensory characteristics of whole carp inoculated with autochthonous starter cultures. J. Aquatic Food Product Tech. 24: 52 - 67.

Zhao, L., Y. Jin, C. Ma, H. Song, H. Li, Z. Wang, S. Xiao. 2011. Physico-chemical characteristics and free fatty acid composition of dry fermented mutton sausages as affected by the use of various combinations of starter cultures and spices. Meat Sci. 88: 761 - 766.

Zhou, X and Y. Li. 2015. Atlas of Oral Microbiology. From Healthy Microflora to Disease. Academic Press. 41 - 65.

Zukál, E. and K. Incze. 2010. Drying**.** in: F. Toldra eds. Handbook of Meat Processing pp.219 - 229.John Wiley and Sons. New Jersey

.