

DAFTAR PUSTAKA

- Bawane. (2012). An Overview on Stevia: A Natural Calorie Free Sweetener . *International Journal of advantages in Pharmacy, Biology and Chemistry*, 2277-4688.
- Beadle J.R, S. J. (1989). Process for manufacturing tagatose, US5002612A.
- C Toledo, R. P. (2006). Subcritical Water extraction and determination of Nifedipine in pharmaceutical formulation Drug, Cosmetics, Forensic Sciences. *J Of AOAC International Vol. 89 No. 2*.
- Cheetam, W. (1993). Bioconversion of D-dalactose into D-tagatose. *Enzyme Microb. Technol. 15*, 105-108.
- Chouayekh H, B. W. (2007). Characterization of an L-arabinose isomerase from the lactobacillus plantarum NC8 strain showing pronounced stability at acidic pH. *FEMS Microbiol Lett. , 260-267*.
- D Trimbur, G. K. (1994). Characterization a psychrotropic Arthrobacter gene and its cold active B-galactosidase. *Appl Environ Microbiol*, 4544-4552.
- D.W Lee, C. E. (2005). Distinct metal dependence for catalytic and structural functions in the L-Arabinose Isomerases from the mesophilic Bacillus Halodurans and the Thermophilic geobacillus stearothermophilus. *Arch Biochem biophys*, 333-343.
- Dijkmans J, G. D. (2013). Productive sugar isomerization with highly active Sn in dealuminated B zeolites. *Green Chemistry*, 2777-2785.
- Drabo P, D. I. (2018). Catalytic isomerization of galactose into tagatose in the presence of bases and Lewis acids. *Catalysis Communications*, 24-28.
- F. Jorgensen, H. O. (2004). Enzymatic conversion of D-Galactose to D-tagatose : heterologous expression and characterization of a thermostable L-Arabinose isomerase from Thermoanaerobacter mathararii. *Appl Microbiol Biotechnol*, 816-822.
- Federation, I. D. (2015). *idf diabetes atlas*. Brussels: International Diabetes Federation. Fina
- Amreta Laksmi, a. e. (2022). Expression and characterization of thermostable D-allulose 3-epimerase from Arthrobacter psychrolactophilus (Ap DAEase) with potential catalytic activity for bioconversion of D-allulose from d-fructose.

International Journal of Biological Macromolecules.

- Fina Amreta, L., & al, e. (2022). Expression and Characterization of thermostable D-allulose 3-epimerase from *Artgrobacter psychrolactophilus* (Ap DAEase) with potential catalytic activity for bioconversion of D-allulose from D-fructose. *International journal of biological micromolecules* 214, 426-438.
- G Feller, N. E. (1994). Temperature dependence of growth, enzyme secretion and activity of psychrophilic antarctic bacteria. *Journal Microbiol Biotechnol*, 477-479.
- GM Singh, D. G. (2013). *the age-specific quantitative effects of metabolic risk factors on cardiovascular diseases and diabetes.*
- H.J Kim, O. D. (2005). Purification and Characterization of and L-Arabinose Isomerase from an isolated strain of *Geobacillus thermodenitrificans* producing D-tagatose. *J Biotechnol*, 162-173.
- H.P Modarres, M.-N. (2016). Protein Thermostability Engineering. *RSC Adv* 6, 115252-115270.
- Hichem, C., & al, e. (2007). Characterization of an L-Arabinose Isomerase from the *Lactobacillus plantarum* NC8 strain showing pronounced stability at acidic pH . *FEMS Microbiology Letters*, 260-267.
- Ibrahim, O. (2018). A new low calorie sweetener D-Tagatose from lactose in cheese whey as a nutraceutical value-added product. *Journal of food health and technology innovations*, 11-28.
- Illanes, A. (2008). Enzyme Biocatalysis: Principles and Applications. *Springer, Netherlands.*
- Irina D., R. P. (2016). Catalytic isomerization of biomass-derived aldoses: A review. *ChemSusChem*, 547-561.
- J Loveland, G. K. (1994). Characterization of psychrotropic microorganisms producing B-Galactosidase activities . *Appl Environ Microbiol*, 12-18.
- J Loveland-Curtze, S. P. (1999). Biochemical and phylogenetic analyses of psychrophilic isolates belonging to the *Arthrobacter* subgroup and description of *Arthrobacter psychrolactophilus*, sp. *Nov Arch Microbiol*, 355-363.
- J.H Koh, C. K. (2016). Synbiotic impact of tagatose on viability of *Lactobacillus rhamnosus*

- strain GG mediated by the phosphotransferase system (PTS). *Food Microbiol*, 7-13.
- J.W. Kim, K. Y. (2003). Production of tagatose by a recombinant thermostable L-Arabinose Isomerase from *Thermus* sp. IM6501. *Biotechnol Lett* , 963-967.
- Jorgensen, H. S. (2004). Enzymatic conversion of D-galactose to D-tagatose: Heterologous expression and characterization of a thermostable L-arabinose isomerase from *Thermoanaerobacter mathranii*. *Applied Microbiology and Biotechnology*, 816-822.
- Kemenkes, R. I. (2019). *Buku Pedoman Manajemen Penyakit Tidak Menular*. Jakarta: Kemenkes.
- Khuwijitjaru P, N. P. (2007). Foaming and emulsifying properties of rice bran extracts obtained by subcritical water treatment . *Silpakorn University Science and Technology*, 7-12.
- Kim HJ, O. D. (2005). Purification and characterization of an L-arabinose isomerase from an isolated strain of *Geobacillus thermodenitrificans* producing D-Tagatose . *J Biotechnol*, 162-173.
- Kim, P. (2004). Current Studies on Biological Tagatose Production Using L-Arabinose Isomerase : A Review and Future Perspective. *Appl Microbiol Biotechnol*, 243-249.
- Kim, R. K. (2002). Cloning, expression and characterization of L-arabinose isomerase from *Thermotoga neapolitana*: Bioconversion of D-galactose to D-tagatose using the enzyme. *FEMS Microbiology Letters*,, 121-126.
- Klaus Buchholz, V. K. (2005). *Biocatalysts and Enzyme Technology*. Wiley 2005.
- Kusumaningsih, T. (1999). *Hubungan antara indeks keparahan karies dengan jumlah lactobacillus sp. di dalam saliva anak taman kanak-kanak*. Surabaya: Majalah Kedokteran Gigi FKG Unair 1999.
- L. Cheng, M. W. (2010). An L-Arabinose Isomerase from *Acidothermus cellulolyticus* ATCC 43068 Cloning, Expression, Purification, and Characterization. *Appl Microbiol Biotechnol*, 1089-1097.
- L.N Bell, D. (2015). Tagatose stability in beverages as impacted by composition and thermal processing. In: *Preedy VR (ed) Processing and impact on active components in food*.
- Laar, V. L. (2021). Rare Mono- and Disaccharides as healthy alternative for additional sugars

- and sweeteners. *Crit Rev Food Nutr*, 713-741.
- Laksmi, F. A., Arai, Shigeki, Hirohito, T., Yoshitaka, N., Saksono, B., . . . Ishibashi, M. (2018). Improved Substrate Specificity dor D-galactose of L-arabinose isomerase for industrial application. *biochimica et biophysica acta (BBA)*.
- Laksmi, F. A., Nirwantono, R., Nuryana, I., & Agustriana, E. (2022). Expression and characterization of thermostable D-allulose 3-epimerase from *Arthrobacter psychrolactophilus* (Ap DAEase) with potential catalytic activity for bioconversion of D-allulose from d-fructose. *International Journal of Biologial Macromolecules*.
- LB Kanzil, R. S. (1999). *Efek peningkatan pH plak dan potensial remineralisasi dari beberapa pemanis dalam permen karet sesudah makan karbohidrat*. Jakarta: Majalah ilmu kedokteran gigi FKG Usakti 1999.
- Lee DW, C. E. (2005). Distinct metal dependence for catalytic and structural functions in the L-arabinose isomerases from the mesophilic *Bacillus halodurans* and the thermophilic *Geobacillus stearothermophilus*. *ARch biochem biophys*, 333-343.
- Lee, C. K. (2004). Characterization of a thermostable L-arabinose (D-galactose) isomerase from the hyperthermophiliceubacterium *Thermotoga maritima*. *Applied and Environmental Microbiology*, 1397-1404.
- Levin, G. (2002). Tagatose, the New GRAS Sweetener and Health Product. *Journal of Medicinal Food*, 23-36.
- Lu, e. a. (2007). Nearcritical and supercritical ethanol as a benign solvent: polarity and hydrogenbonding. *Fluid Phase Equilibria*,, 37-49.
- Lu, L. D. (2008). Tagatose, a new antidiabetic and obesity control drug. *Diabetes, Obesity and Metabolism*.
- M Rhimi, a. a. (2015). The secreted L-arabinose isomerase displays anti-hyperglycemic effects in mice. *Microbial Cell Factories*, 204.
- Manzo, R., & al., S. A. (2013). Screening and selection of wilf strains for l-arabinose isomerase production. *Braz. J. Chem. Eng*, 711-720.
- Marion Guerrero-Wyss, S. D. (2018). D-Tagatose Is a Promising Sweetener to Control Glycaemia: A New Functional Food. *BioMed Research International*.

- McMurry, M. E. (1994). *Fundamental of Organic and Biological Chemistry*. New Jersey. N
- Salonen, K. S. (2013). D-tagatose production in the presence of borate by resting Lactococcus lactis cell harboring Bifidobacterium longum L arabinose Isomerase. *Bioprocess Biosyst. Eng*, 489-497.
- N Sarwar, G. P. (2010). *Diabetes Mellitus, fasting blood glucose concentration, and risk of vascular disease : a collaborative meta-analysis of 102 prospective studies* . Lancet.
- O.O Ibrahim, J. S. (2000). Process for Manufacturing D-Tagatose USA.
- Oh, & Xu. (2018). Tagatose : Properties, applications, and biotechnological processes. *Applied microbiology and biotechnology*.
- Patel, M., Akhani, R., Patel, A., & Dedania. (2017). A single and two step isomerization process for D-tagatose and L-ribose bioproduction using L-arabinose isomerase and D-lyxose isomerase. *Enzyme and Microbial Technology*, 27-33.
- Rhimi M, B. S. (2006). Cloning, purification and biochemical characterization of metal-ions independent and thermoactive L-arabinose isomerase from the Bacillus stearothermophilus US 100 strain . *Biochim Biophys Acta*, 191-199.
- Robinson, P. (2015). Enzymes : Principles and biotechnological applications. *Essays Biochem*, 1-41.
- Ronie Machielsen, r. J. (2011). Molecular Description and Industrial Potential of Tn6098 Conjugative. *APPLIED AND ENVIRONMENTAL MICROBIOLOGY*, 555-563.
- S.H Yoon, K. P. (2003). Properties of L-Arabinose Isomerase from Escherichia Coli as Biocatalyst for Tagatose Production. *World J Microbiol Biotechnol*.
- Shrivastava, S. R. (2013). Role of self-care in management of diabetes Mellitus. *Journal of Diabetes & Metabolic Disorders*, 12-14.
- SJ Lee, L. D. (2005). Characterization of a thermoacidophilic L-Arabinose Isomerase from Alicyclobacillus acidocaldarius: role of Lys-269 in pH optimum . *Appl Environ Microbiol*.
- Standards, A. N. (2005). *D-Tagatose : A Human Risk Assessment*.
- Woodroof, J., & Phillips, G. (1974). Beverages: Carbonated and non Carbonated. *The AVI Publishing Company*.

- Xing, G. H., Wen, C. T., & Shiu, M. L. (2014). Characterization of a thermophilic L-Arabinose Isomerase from *Thermoanaerobacterium saccharolyticum* NTOU1. *Biochemical Engineering Journal*, 121-128.
- Xu, L. F. (2014). L-Arabinose isomerase and its use for biotechnological production of rare sugars. *Applied Microbiology and Biotechnology*, 8869-8878.
- Y.H, Hong, L. D., S.J, L., Choe E.A, K. Y., & Lee C.J, C. Y. (2007). Production of D-Tagatose at high temperatures using immobilized *Escherichia coli* cells expressing L-Arabinose Isomerase from *Thermatoga neapolitana*. *Biotechnol. Lett.*, 569-574.
- Yan Zheng, a. e. (2018). Global aetiology and epidemiology of type 2 diabetes mellitus and its complications. *Nat Rev Endocrinol*, 88-89.
- Yang, e. a. (2018). *Hexuronate C-4 Epimerase variant having improved D-Tagatose conversion activity, and d-tagatose production method using same.*
- Yoon SH, K. P. (2003). Properties of L-arabinose Isomerase from *Escherichia coli* as biocatalyst for Tagatose production. *World J Microbiol Biotechnol*, 47-51.
- Z Xu, Q. Y. (2011). A Novel L-Arabinose Isomerase from *Lactobacillus fermentum* CGMCC2921 for D-Tagatose Production : gene cloning, purification and characterization. *J Mol Catal B: Enzym.*