

1.1: Open Access Readings

Open Access Resources for Fermentation Course by Topic

Basic Metabolism

1. Structure and Reactivity, [Reactivity 1](#)
MP. [Metabolic Pathways](#)
GL. [Mechanisms of Glycolysis](#)
TC. [Mechanisms of the TCA Cycle](#)
FA. [Mechanisms of Fatty Acid Metabolism](#)
2. Lumen Learning [Glucose Metabolism](#)

Microbial Metabolism

1. Lumen Learning, Microbiology, [Metabolic Biological Pathways](#)
2. P. Jurtshuk, [Chapter 4: Bacterial Metabolism](#), in Medical Microbiology, S. Baron, Ed, 4th Edition, Galveston (TX). University of Texas Medical Branch at Galveston; 1996.

Acetic Acid Bacteria and Vinegar

1. Mamlouk and Gullo, [Acetic Acid Bacteria](#), *Indian J. Microbiology*, **2013**, 53(4), 377-384
2. Mas, et. al., [Acetic Acid Bacteria and the Production and Quality of Wine Vinegar](#), *Scientific World Journal*, **2014**, 2014, 1-6.
3. Christopher Anthony, [Quinoprotein Catalyzed Reactions](#), *Biochem J.*, **1996**, 320, 697-711
4. Gómez-Manzo, et. al., [The Oxidative Fermentation of Ethanol](#), *Int J Mol Sci.* **2015**, 16(1), 1293–1311

Carbohydrates

1. Saylor, Ch 16. Carbohydrates
2. Khan Academy, [Carbohydrates](#)

Fermented Vegetables

1. Pérez-Díaz IM, Breidt F, Buescher RW, Arroyo-Lopez FN, Jimenez-Diaz R, Bautista-Gallego J, Garrido-Fernandez A, Yoon S, Johanningsmeier SD. 2014. [Chapter 51: Fermented and Acidified Vegetables](#) In: Pouch Downes F, Ito KA, editors. Compendium of Methods for the Microbiological Examination of Foods, 5th Ed. American Public Health Association.
2. Franco W, Johanningsmeier SD, Lu J, Demo J, Wilson E, Moeller L. 2016 [Chapter 7: Cucumber fermentation](#) In: Paramithiotis, S., Editor. Lactic Acid Fermentation of Fruits and Vegetables. Boca Raton, FL: CRC Press. pp 107-155.
3. Fleming HP, McFeeters RF. 1985. [Residual sugars and fermentation products in raw and finished commercial sauerkraut](#) In 1984 Sauerkraut Seminar, N. Y. State Agric. Expt. Sta. Special Report No. 56:25-29.
4. Johanningsmeier, et. al. [Chemical and Sensory Properties of Sauerkraut](#) *J. Food Sci.*, **2005**, 70(5), 343-349.

Cheese

1. University of Guelph, [Cheese Making Technology eBook](#)
Cheese - [the short version](#)
[Cheese Families](#)
[Cultures](#)
[Milk Structures & Coagulation Processes](#)
2. Simon Cotton, Education in Chemistry, Royal Society of Chemistry, [Really Cheesy Chemistry](#)
3. Propionic Acid, H. Hettinga and G. W. Reinbold, [The Propionic Acid Bacteria: A Review](#), *Journal of Milk and Food Technology*, **1972**, 35(6), 358-372.
4. H. Falentin, S. Deutsch, et. al. Propionic Acid Fermentation, *PLOS One*, **2010** <https://doi.org/10.1371/journal.pone.0011748>

Yogurt

1. A Zourari, Jp Accolas, [Mj Desmazeaud. Metabolism and biochemical characteristics of yogurt bacteria. A review.](#) *Le Lait, INRA Editions*, **1992**, 72 (1), pp.1-34.

Bread

1. Brewer's Journal, [Science/Maillard Reaction](#)
2. Struyf, et. al. [Bread Dough and Baker's Yeast: An Uplifting Synergy](#), *Comprehensive Reviews in Food Science and Food Safety*, **2017**, 16, 850-867.
3. Guy Crosby, The Cooking Science Guy, [Explaining Gluten](#)

Beer

1. John Palmer, [How to Brew](#) 1st Edition
2. Bokulich and Bamforth, [Microbiology of Malting and Brewing](#), *Microbiol Mol Biol Rev.* **2013**, 77(2), 157–172.
3. Holt, et. al. [The Molecular Biology of Fruity and Floral Aromas in Beer and Other Alcoholic Beverages](#), *FEMS Microbiology Reviews*, **2019**, 43, 193–222
4. Craft Beer.com [Beer Styles Study Guide](#) (also available as .pdf download on their site)

Cider

1. Andrew Lea, [The Science of Cidermaking](#)
2. Cousin, et. al., [Microorganisms in Fermented Apple Beverages: Current Knowledge and Future Directions](#) *Microorganisms*, **2017**, 5(3), 39.
3. Cox and Henick-Kling, [Chemiosmotic Energy from Malolactic Fermentation](#), *J. Bacteriol.* 1989, 5750-5752

Wine

1. A list of [varietals](#) (and pronunciations) is available from J. Henderson, Santa Rosa Junior College.
2. The Wine Spectator has an article by J. Laube and J. Molesworth on [Varietal Characteristics](#).
3. Niculescu, Paun, and Ionete, [The Evolution of Polyphenols from Must to Wine](#), In *Grapes and Wine*, A. M. Jordão, Ed., 2018, InTechOpen.
4. Garrido & Borges, [Wine and Grape Polyphenols](#), *Food Research International*, **2013**, 54, 1844–1858
5. Chantal Ghanam, [Study of the Impact of Oenological Processes on the Phenolic Composition of Wines](#), Thesis, Université de Toulouse.
6. Casassa, [Flavonoid Phenolics in Red Winemaking](#) In *Grapes and Wine*, A. M. Jordão, Ed., 2018, InTechOpen.
7. Dangles & Fenger, [The Chemical Reactivity of Anthocyanins](#), *Molecules*, **2018**, 23(8), 1970-1993.
8. He, et. al., [Anthocyanins and Their Variation in Red Wines](#), *Molecules*, **2012**, 17(2), 1483-1519.
9. Goold, et. al. [Yeast's balancing act between ethanol and glycerol production in low-alcohol wines](#), *Microbial Biotechnology* **2017**, 10(2), 1-15.
10. J. Harbertson, [A Guide to the Fining of Wine](#), Washington State University
11. E.J. Bartowsky, [Bacterial Spoilage of Wine](#), *Letters in Applied Microbiology*, **2009**, 48, 149–156.
12. Belda, et. al., [Microbial Contribution to Wine Aroma](#), *Molecules* **2017**, 22(2), 189

Distilled Spirits

1. [Artisanal Distilling](#), A Guide for Small Distilleries, Kris Berglund
2. Coldea, Mudura & Socaciu, [Chapter 6: Advances in Distilled Beverages Authenticity and Quality Testing](#), In *Ideas and Applications Toward Sample Preparation for Food and Beverage Analysis*, M. Stauffer, Ed., IntechOpen, 2017.
3. N. Spaho, [Ch 6: Distillation Techniques in the Fruit Spirits Production](#), In *Distillation – Innovative Applications and Modeling*, M. Mendes, Ed., IntechOpen, 2017.
4. S. Canas, [Phenolic Composition and Related Properties of Aged Wine Spirits: Influence of Barrel Characteristics](#). A Review, *Beverages*, **2017**, 3(4), 55-77.

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