Food Enzymology 3(2-1)

Theory

Enzymes: Nomenclature and classification. Enzyme classes: proteases, amylases, cellulases, tranasferases, hydrolases, isomerases, lipases, redox enzymes. Natural Sources of enzymes Enzyme kinetics and inhibition. Enzyme immobilization and methods, enzyme reactions. Analysis of enzyme activity. Separation, purification and assay of enzymes. Enzyme supplementations Regulation for enzyme supplementations therapeutic enzyme Application of enzymes: baking, brewing, starch hydrolysis, dairy, beverages, fruit juice processing, meat, fat and others.

Practical

Extraction and purification of enzymes. Estimation of amylases, proteases and peroxidases. Catalase enzyme activity test. Us e of Natural enzymes in f ood products Effect of temperature and pH on enzyme stability and activity Application of enzyme (Rennet) i n dairy. Use of enzymes in bread, juice clarification, meat tenderization and other food products.

Books Recommended

1. Mathewson, P.R. 1998. Enzymes. American Association of Cereal Chemists, Inc., St. Paul, Minnesota, USA
2. Whitaker, J.R., Voragen, A.G.J. and Wong, D.W.S. 2003. Handbook of Food Enzymology. Marcel Dekker, Inc., New York.
3. Whitehurst, J. and Law, B.A. 2002. Enzymes in Food Technology. CRC Press, Boca Raton, Florida, USA.
4. Wong, D.W.S. 1995. Food Enzymes. Chapman & Hall, New York.

Website: www.foodscienceuniverse.com