Aktinson, B. et Mavituna, F. (1991). *Upstream processing*. In: Biochemical engineering and biotechnology. Stockton, New York. pp: 525.

Ahmad, F., Jameel, A.T., Kamarudin, M.H. et Maizirwan Mel. (2011). Study of growth kinetic and modeling of ethanol production by *Saccharomyces cerevisae*. Afr J Biotechnol.16 (81): 18842-18846.

Alexander, M.A. et Jeffries, T.W. (1990). Respiratory effeciency and metabolite partitioning as regulatory phenomena in Yeast. *Enzyme Mcrobial technol*. 12: 2-18.

Allen, N.H. et Ahearn, D.G. (1987). *Ecology of Aquatic* *In*: Rose A.H., Harrison J.S. (edn), the yeast, V1, Biology of yeast. (2 nd edn) Academic Press. London. p: 123- 174.

Anonyme, 1. (2006). Renouvelable énergie. Source :<http://www.edf.com> /html/ecole\_energie/ impressions/ PDF\_jeux/jeux /PDFimprimer/EDE\_renouvelable.

Anonyme, 2. (2012). Rapport mondial sur les énergies renouvelables. Source : [http://ren21.net/Portals/0/documents/activities/gsr/KeyFindings\_\_fra\_02a](http://ren21.net/Portals/0/documents/activities/gsr/KeyFindings_2012_fra_02a).

Anonyme, 3. (2003). Sahara. Géographie du Sahara. Source : http// membre de lycos.Fr/fgeo2. html.

Arand, M. *et al.* (2002). Purification, characterization, gene cloning and preliminary X-ray data of the exo-inulinase from *Aspergillus awamori.* *Biochem J .* 362: 131–135.

Attar, A. (2013). Energie renouvelables et non renouvelables source: <http://www.petrochem2000.com/data/docs/ressources/dossiers_articles/doc_54.pdf>.

Augustin, J. C. (1996).Resistance of *Listeria monocytogenes* to physical exposure *Pathol Biology*. 44-9: 790-807.

Bååthe, E. et Söderström, B.E. (1980). Comparaisons of the agar-film and membrane filter methods for the estimation of the hyphal lengths in soil, with particular reference to the effect of magnification. *Soil Biol Biochem.* 12: 385-387.

Bajpai, R. et margaritis, S. (1982). A Ethanol Inhibition Kinetics of *Kluyveromyces marxianus* Grown on Artichoke Juice. *Appl envirol Microbiol.* 1: 1325-1329.

Barchmann, H.J., Besaïh, M., Brincat, L., Sergio, P. F. S. (2012). Le potentiel de la biomasse dans les pays méditerranéens. Source : <http://www>. paufm.org/ assembly/ Docs/ recommendations/Rabat2012/ ENERGY\_FR.

Barford, J.P. (1990). Ageneral model for aerobic yeast growth: Batch Growth. *Biotechnol Bioenerg*. 35: 907-920.

Barnett, J.A. (1976). The utilization of sugars by yeasts. *Advan Carb Chem Biochemistry*. 32:125-234.

Beal, C., Deschamps, N., Juillard, V., Roissart, H., Richard, J. et Saraux, B. (1994).Cinétiques de croissance et d’acidification des bactéries lactiques.Dans : *Bactéries lactiques*. Aspects fondamentaux et technologiques. *Lorica (Ed) Uriage*. 1:367-401.

Bedrani, S. (1995). Une stratégie pour le developpement des parcours en zones arides et semi arides. Rapp. Techn. Algérie. Doc. Banque mondiales. Tann.

Bento, A., Kanbur, R. et Leard, B. (2012). Super- Additionality: A Neglected Force in Markets for Carbon Offsets. Discussion Paper. CEPR.

Beretta, E. et Takeuchi, Y. (1994). Global stability for *chemostat* equations with delayed nutrient recycling. *Nonlinear World. 1*: 191–206.

Beretta, E., Bischi, G. et Solimano, F. (1990). Stability in *chemostat* equations with delayed nutrient recycling. *J Math Biol.* 28(1): 99–111.

Bergkamp, R.J., Bootsman, T.C., Toschka, H.Y., Mooren, A.T., Kox, L.,Verbakel, J.M., Geerse, R.H et Planta, R.J. (1993). Expression of an alpha-galactosidase gene under control of the homologous inulinase promoter in *Kluyveromyces marxianus. Appl Microbiol Biotechnol.* 40:309–317.

Bergter, F.et Knorre, W. A. (1972). Computer simulation van Wachstum und Produktbildung bei *Saccharomyces cerevisiae*. *Z Allg Mikrobiol*. 12:613–629.

Bideaux, C. (2000). Modélisation stoechiométrique des productions microbiennes par descripteur métabolique au moyen du calcul formel. Validation sur le modèle *Kluyveromyces marxianus*. Thèse INSA Toulouse.

Black, M. J., Whittaker, C., Hosseini, S. A., Diaz-Chavez, R., Woods, J. et Murphy, R. J. (2011). Life Cycle Assessment and sustainability methodologies for assessing industrial crops, processes and end products. *Indus Crops Products*. 34(2): 1332-1339.

BlackwellL, K., Singleton, J et Tobin, J. M. (1995). Metal cation uptake by yeast. *Appl Microbiol Biotechnol*. 43(4): 579-584.

Blecker, C., Chevalier, J.P., Van Herck, J.C., Fougnies, C., Deroanne, C. et Paquot, M. (2001). Inulin: Its physicochemical properties and technological functionality. *Recent Res. Devel. Agricultural Food Chem.* pp: 126-131.

Bo Zhao, A., Limin, I., Wanga, 1., Fengsong, L., Dongliang, B, Cuiqing, M, Yanhe Maa, Ping, X. (2010). Kinetics of D-lactic acid production by *Sporolactobacillus sp*. strain CAS Dusing repeated batch fermentation. *Biores Technol.* 101: 6499–6505.

Botton, B. (1991). La physiologie des levures Ds : Larpent J.P., Biotechnologie des levures. Masson, Milan Barcelone Bonn. Paris. p : 97-127.

Botton, B., Breton, A., Fever, M., Gauthier, S., Guy, P., Larpent, J.P., Reymond, P., Sanglier,

J.J., Vayssier, Y. et Veau, P. (1990). *Moisissures utiles et nuisibles d’importance industrielle*.

(2éme édn). Masson. Collection Biotechnologies. p : 34-381.

Bouix, M. et Leveau, J.Y. (1991).Les levures Ds : Bourgeois C.M., Leveau J.Y., *Techniques d’analyse et de contrôle dans les industries agroalimentaires*, (2ème édn) Lavoisier-Tec &Doc, Paris. 3. p : 206-229.

Bouzoura, M. et Toutain, G. (1970). Contribution à l’étude de la fertilité des sols en palmeraie marocaines et de la fertilisation des cultures, (edn) Associe. Alawania.

Bryssin, I. et Toutain, G. (1970). *Etude des sols des palmeraie par la culture et le fumure*, (edn) Associe. Alawania.

Buhot, D. (1973). Echantillonnage de sols .Conservation et préparation des échantillons. Problème statistique. *Ann Phytopathol.* 5 :296- 298.

Calvet, R. (2003). *Le sol : propriétés et fonctions.* (1éreedn). Paris.

Camacho-Ruiz, L., Perez-Guerra, N. et Roses, R.P. (2003). Factors affecting the growth of *Saccharomyces cerevisiae* in batch culture and in solid sate fermentation. *Electron J Environ Agric Food Chem*. 2(5):531–542.

Camille, D. (2007). *Microbiology pratique pour le laboratoire d’analyse ou de contrôle sanitaire*. Edition Lavoisier. p 128-129.

Caylak, B. et Vardar, S.F.(1996). Comparison of different production processes for bioethanol. *Turk J Chem*. 22:351–359.

Cereghino, J.L. et Cregg, J.M. (2000). Heterologous protein expression in the methylotrophic yeast *Pichia pastoris*. *FEMS microbiology reviews*. 24 (1): 45-66.

Chi Z., Chi Z., Zhang T., Liu G. et Yue L. (2009). Inulinase-expressing microorganisms and applications of inulinases. *Appl* *Microbiol Biotechnol*. 82: 211-220.

Chin-Hana, S. et Shang-Tian, Y. (1990). Kinetic and modelling of temperature effects on batch xanthan gum fermentation. *Biotechnol Bioeng.* 37: 567-574.

Cho, Y.J. et Yun, J.W. (2002). Purification and characterization of endoinulinase from *Xanthomonas oryzae* No. 5. *Process Biochem.* 37: 1325–1331.

Costa, A.C., Daniel, I.P., Maugeri, F. et Maciel, R. (2001). Factorial design and simulation for the optimisation and determination of control structures for an extractive alcoholic fermentation. *Process Biochem*. 37:125 - 137.

Crabtree, H. G. (1929). Observations on the carbohydrate metabolism of tumours. *Biochem Journal* 23: 536-545.

da Cruz, S.H., Batistote, M. et Ernandes, J.R. (2003). Effect of sugar catabolite repression in correlation with the structural complexity of the nitrogen source on yeast growth and fermentation. *J Inst Brew* .109 (4):349–355.

Davet, P. (1996). *Vie microbienne du sol et production végétales,* (1ére edn) INRA. Paris.

de Mot R. et Verachtert, H. (1985). Purification and characterization of the extracellular amylolytic enzymes for the yeast Filobasidium capsuligenum. *Appl Microbiol* .50:1474–1482.

Dechauffour, P. (1979). *Pédologie T1 et T2*, (edn) Masson. Paris. NI°. (B.U).

Demirbas, A. (2008). Biofuels sources, biofuel policy, biofuel economy and global biofuel projections. *Energy Conver Manage*. 49(8): 2106-2116.

Dien, B.S., Cotta, M.A. et Jeffries, T.W. (2003). Bacteria engineered for fuel ethanol production current status. *Appl Microbiol Biotechnol.* 63:258–266.

Djebaili, S. *et al.* (1983). Carte de l’occupation des terres, carte pastorale de l’Algérie, notice. *Biocénoses.* 2:1-2. p132.

Dombek, K. M. et Ingram, L. 0. (1987). Ethanol Production during Batch Fermentation with *Saccharomyces cerevisiae*: Changes in Glycolytic Enzymes and Internal. *Appl Microbiol*: (1) 286-1291.

Drapcho, C.M, Nhuan, N.P. et Walker, T.H. (2008). Biofuels Engineering *Process Technol*. USA: The McGraw-Hill Companies, Inc.

Ebertova, H. (1966). Amylolytic enzymes of Endomycopsis capsularis. II. A study of properties of isolated α-amylase, amyloglucosidase and maltose trans glucosidase. *Folia Microbiol*. 11:422–438.

Ergun, M. et Mutlu, S.F. (2000). Application of a statistical technique to the production of ethanol from sugar beet molasses by *Saccharomyces cerevisiae*. *Bioresour Technol*,73:251–255.

Escobar, J. C., Lora E. S., Venturini, O. J., Yanez, E. E., Castillo, E. F. et Almazan, O. (2009). Biofuels: Environment, technology and food security. *Renew Sust Energy Reviews*. 13(6-7): 1275-1287.

Esener, A., Roels, J.A. et Kossen, G.W.F. (1981). Fed-batch culture: modeling and application in the study of microbial energetics. *Biotechnol Bioenerg*. 27:1851-1871.

Ettalibi, M. et Baratti J.C. (1987). Purification, properties and comparison of invertase, exoinulinases and endoinulinases of *Aspergillus* *ficuum*. *Appl Microbiol Biotechnol.* 26 :13 20.

Farhi, A. (2002) Biskra : de l'oasis à la ville saharienne (Note). In: Méditerranée, Tome 99, 3 4-. Le sahara, cette «autre Méditerranée» (Fernand Braudel). pp. 77-82. doi : 10.3406/ medit. 2002.3264.

Feria-Gervasio, D., Mouret, J.R., Gorret, N., Goma, G. et Guillouet, S. (2008) .Oleic acid delays and modulates the transition from respiratory to fermentative metabolism in *Saccharomyces cerevisiae* after exposure to glucose excess. *Appl Microbiol Biotechnol*. 78(2):319-331.

Fiaux, J., Cakar, Z.P., Sonderegger, M., Wuthrich, K., Szyperski, T. et Sauer, U. (2003). Metabolic-Flux Profiling of the Yeasts *Saccharomyces cerevisiae* and *Pichia stipitis.* *Eukaryotic Cell.*  2(1):170-180.

Fiechter, A. et Seghezzi, W. (1992). Regulation of glucose metabolism in growing yeat cells. *J Biotechnol*. 27: 27-45.

Fillon, M. (1996). Développement d’une méthodologie pour la modélisation et la simulation des réacteurs discontinu, application à la fermentation brassicole. PhD Thésis, Institut National Polytechnique de Toulouse (France).

Fleet, G.H. et Heard, G.M. (1993). Yeast: growth during fermentation. In: Fleet GM :ed *Wine Microbiology and Biotechnology*. Harwood Academic Publishers, Chur Switzerland. pp: 27 54.

Freedman, H., SO, J. et Waltman, P. (1989). Coexistence in a model of competition in the *chemostat* incorporating discrete delays. *SIAM Journal Appl Math***.** 49(3):859–870.

Fujita,Y., Ito, J., Ueda, M. et Fukuda, H. (2003). Synergistic saccharification, and direct fermentation to ethanol, of amorphous cellulose by use of an engineered yeast strain codisplaying three types of cellulolytic enzyme. *Appl Environ* *Microbiol.* *70*: 1207–1212.

Ge, X.Y. et Zhang, W.G. (2005). Shortcut to the Production of High Ethanol Concentrationfrom Jerusalem Artichoke Tubers. *Food Technol Biotechnol*. 43 (3) 241–246.

Gervais, P. et Sarrette, M. (1990). Influence of age of mycelia and water activity on aroma production by *Trichoderma viride*. *J Ferment Bioeng* .69:46–50.

Gervasio, F., Mouret, D., Gorret, J.R., Goma, N.G. et Guillouet, S. (2008). Oleic acid delays and modulates the transition from respiratory to fermentative metabolism in *Saccharomyces* *cerevisiae* after exposure to glucose excess. *Appl Microbiol Biotechnol*. 78(2):319-331.

Ghasem, N., Habibollah, Y., Ku, S. et Ku, I. (2004). Ethanol fermentation in an immobilized cell reactor using *Saccharomyces cerevisiae*. *Bioresour Technol*. 92:251–260.

Gong, C.S., Maun, C.M. et Tsao, G.T. (1981). Direct fermentation of cellulose to ethanol by a cellulolytic filamentous fungus *Monilia sp*. *Biotechnol Lett*. 3:77–82

Guebel, D., cordenons, A., Nudel, C et Giulietti, A.M. (1989). Fermentation of D-xylose to ethanol by *Pichia sitipitis* NRRLy 7124. *International symp yeasts*. 5: 73- 77.

Guimaraes, L.H.S., Terenzi, H.F., Polizeli, M.L. et Jorge, J.A. (2007). Production and characterizationof a thermostable extracellular β-D-fructofuranosidase produced by *Aspergillus ochraceus* with agroindustrial residues as carbonsources, *Enzyme Microbial Technol*. 42: 52-57.

Guiraud, J.P. (1998). *Microbiologie alimentaire*. Dunod, Paris. p : 310-321.

Guiraud, J.P. et Rosec, J.P. (2004). Pratique des normes en microbiologie alimentaire. AFNOR. p: 228-235.

Gupta, A.K., Gill, A., et Kaur, N. (1998). A HgCl2 insensitive and thermally stable inulinase from *Aspergillus oryzae* *Phytochemistry*. 49:55–58.

Gupta, A.K., Kaur, M., Kaur, N. et Singh, R. (1992). A comparison of properties of inulinases of *Fusarium oxysporum* immobilized on various supports. *J Chem Technol Biotechnol.* 53: 293–296.

Hanne, H. (2012). Les marchés de production et de consommation et les prix des biocarburants dans l’Union européenne et le monde. Source : <http://www.economie.gouv.fr/files/directions_services/dgccrf/documentation/dgccrf_eco/dgccrf_eco9.pdf>.

Hsu, T. (1996). *Pretreatment of biomass*. In: Wyman C (ed) Handbook on bioethanol: production and utilization. Taylor et Francis, Washington DC. pp: 179–212.

Ingram, L.O., Gomez, P.F., Lai, X., Moniruzzaman, M., Wood, B.E., Yomano, L.P. et York, S.W. (1998). Metabolic engineering of bacteria for ethanol production. *Biotechnol Bioeng.* 58 (2,3) :204–214.

Ito, K., Yoshida, K., Ishikawa, T et Kobayashi, S. (1990). Volatile compounds produced by fungus *Aspergillus oryzae* in rice koji and their changes during cultivation. *J Ferment Bioeng.* 70:169–172.

Jackson, J.V. et Edwards, V.H. (1975). Kinetics of substrate inhibition of exponential yeast growth. *Biotechnol Bioeng.* 17: 943–964.

Jang, S. (2000). Dynamics of variable-yield nutrient-phytoplankton-zooplankton models with nutrient recycling and self-shading. *J Math Biol***.** 40(3): 229–250.

Jeffries, T.W. (2006). Engineering yeasts for xylose metabolism. *Curr Opin Biotechnol.* 17: 320-326.

Jiang,L. et MA. Z. (1998).Stability of a *chemostat* model for a single species with delayed nutrient recycling- case of weak kernel function Chinese. *Quart J Math*. 13(1)*:* 64–69.

Jose, D. (1999). Recent developments in microbial inulinases, its production, properties and industrial applications. *Appl Biochem Biotechnol*. 81: 35–52.

Kane, Y. (1966). Numerical solution of initial boundary value problems involving Maxwell's equations in isotropic media . *IEEE Transactions on Antennas and Propagation.* 14 (3): 302–307.

Kang, S.I. et Kim, S.I. (1999). Molecular cloning and sequence analysis of an endo-inulinase gene from *Arthrobacter sp.* S37. *Biotechnol Lett.* 21: 569–574.

Kang, S.I., Chang, Y.J., Oh S.J. et Kim S.I. (1998). Purification and properties of an endo inulinasefrom an *Arthrobacter sp*. *Biotech Lett*. 20 (10): 983-986.

Kappeli, O. (1986). Regulation of carbon metabolism in *Saccharomyces cerevisiae* and related yeasts. *Advan. Microbial Physiol*. 28:181-209.

Kato, K., Araki, T., Kitamura, T., Morita, N., Moori, M. et Suzuki, Y. (1999). Purification and properties of a thermostable inulinase (β-D-fructan fructohydrolase) from *Bacillus stearothermophilus* KP1289. *Starch*. 51:253–258.

Kattere, T. et Andoren, O. (2001). The ICBM of analytically solved models of soil carbon, nitrogen and microbial biomass. *Ecol Model.* 130:199-207.

Kelly, C.T., Moriarty, M.E. et Fogarty, W.M. (1985). Thermostable extracellular a-amylase and α-glucosidase of *Lipomyces starkeyi*. *Appl Microbiol Biotechnol*. 22:352–358.

Kim, H.S., Lee, D.W., Ryu, E.J., Uhm, T.B., Yang, M.S., Kim, J.B. et Chae, K.S.(1999). Expression of the *INU2* gene for an endoinulinase of *Aspergillus ficuum* in *Saccharomyces cerevisiae*. *Biotechnol Lett.* 21: 621–623.

Kim, M.K., Kim, Y.H., Kim, H.R., Kim, B.I., Byun, S.M. et Uhm, T.B . (1994). Thermal stability of an acidic inulinase from *Scytalidium* *acidophilum*. *Biotechnol Lett.* 16: 965–966.

Kiran, S., Sikander, A et Lkram. H .(2003). Time course study for yeast invertase production by submerged fermentation. *J Biol Sci*. 3(11):984–988.

Kochhar, A., Kaur, N. et Gupta, A.K. (1997). Inulinase from *Aspergillus versicolor*. A potent enzyme for producing fructosefrom inulin. *J Sci Ind Res.* 56:721–726.

Koga, N. (2008). An energy balance under a conventional crop rotation system in northern Japan: Perspectives on fuel ethanol production from sugar beet. *Agri Ecosy Environ*. 125(1 4): 101-110.

Kreger -Van Rij, N.J. (1984).*The yeast, a Taxonomic Study,* Elsevier Biomedical.

Kurtzman ,C.P., Fell, J.W. et Boekhout, T. (2011). *The yeast a taxonomic study* (5edn) Elsevier. London. pp: 622- 623.

Kwon, H.J., Jeon, S.J., You, D.J., Kim, K.H., Jeong, Y.K., Kim, Y.H., Kim, Y.M. et Kim, B.W.(2003). Cloning and characterization of an exoinulinase from *Bacillus polymyxa*. *Biotechnol Lett.* 25:155–159.

Larpent, J.P. et Larpent-Gourgaud, M. (1997). *Mémento technique de microbiologie*. (3émeedn) édition, Lavoisier-Tec Doc. Paris. p : 217-240.

Larpent, J.P. (1991). *Biotechnologie des levures. Masson*, Milan Barcelone Bonn. Paris. p: 97-127.

Larpent, J.P. et Larpent-Gourgaud, M. (1997). *Mémento technique de microbiologie*. (3e édn), Lavoisier-Tec et Doc, Paris. 8. p: 217-240.

LeBerre, M. et Ramousse, R. (2001). *Les enjeux de la conservation de la biodiversité en milieu saharien*, (edn) Université Claud Bernard. Lion 1.

LeCleche, B. (2000). *Agronomie des bases au nouvelle orientation*, (edn) ENITA de Bordeaux.

Leclerc, H., Meyer, A. et Deiana, J. (1995). *Cours de microbiologie générale. Nouveau programme. Biosciences et Techniques*. doin éditeur, Paris. p : 73-92.

Lee, J.M., Pollard, J.F. et Coulman, G.A. (1983). Ethanol fermentation with cell recycling: Computer simulation. *Biotechnol Bioeng*. 25: 497-511.

Lei, F., Rotboll, M. et Jorgensen, S.B. (2001). A biochemically structured model for *Saccharomyces cerevisiae*. *J Biotechnol*. 88: 205- 221.

Leticia, P., Miguel, C., Humberto, G. et Jaime, A.J. (1997). Fermentation parameters influencing higher alcohol production in the tequila process. *Biotechnol Lett.* 19(1):45–47.

Levespiel, O. (1980). The Monod equation: a revisit and a generalization to product inhibition situations. *Biotechnol Bioeng*. 22:1671–1687.

Lim, S.H.A.D., Ryu, J.M.B., Lee, H., Jeon, J.H., Sok, D.E. et Choi, E.S. (2011). Ethanol fermentation from Jerusalem artichoke powder using *Saccharomyces cerevisiae* KCCM50549 without pretreatment for inulin hydrolysis. *Bioresour Technol*. 102: 2109–2111.

Lin, Y. et Tanaka, S. (2006). Ethanol fermentation from biomass resources: current state and prospects. *Appl Microbiol Biotechnol*. 69: 627–642.

Lodder, L. (1971). *The yeasts, a taxonomie study*. North Holland Publishing Company, Amesterdam- London.

Loegering, K., Christian, M., Jan-Patrick, V., Claudia, W., Daniel, Z., Hans-Peter, B., Ulrich, S. et Reiner, L. (2011). An integrated scale-down plant for optimal recombinant enzyme production by *Pichia pastoris* . *Biotechnol J.* 6 (4): 428-436.

Looten, P., Blanchet, P.D. et Vandecasteele, J.P. (1987). The β -fructofuranosidase activities of a strain of *Clostridium acetobutylicum* grown on inulin. *Appl* *Microbiol Biotechnol. 25:*  419–425.

Lu,Z*.* (2004). Global stability for a *chemostat*-type model with delayed nutrient recycling, Discrete and Continuous Dynamical Systems. *Series.*4(3):663–670.

Luedeking, R. et Piret, E. L. (1959). A kinetic study of the lactic acid fermentation. *J Biochemical Microbiol Technol Engin*. 1: 393-412.

Madigan, M.T., Matinko, J.M. et Parker, J. (1997). *Brok biology of microorganisms*, (8ème edn). USA.

Margat, G. (1985). *Hydrologie et ressource en eau des zones arides*. (8éme edn), Bull.soc.Geol. France.

Martin, C., Galbe, M., Wahlbom, C.F., Hahn-Hagerdal, B. et Jonsson, L.F. (2002). Ethanol production from enzymatic hydrolysates of sugarcane bagasse using recombinant xylose-utilizing *Saccharomyces cerevisiae*. *Enzyme Microb Technol*. 31: 274–282.

Matthew, H., Ashley, O., Brian, K., Alisa, E. et Benjamin, J.S. (2005). Wine making 101. Available at http://www.arches.uga.edu/*∼*matthaas/ strains.htm.

Maung, M. (1987).Contribution à l’étude de dégradation des pristinamycines en cours de culture de *Streptomyces pristinaespiralis* et des procédures minimisant ce processus. *Thèse* *de doctorat de l’Institut National des Sciences Appliquées*. Toulouse, France.

Melvydas, V., Gedminiene,G., Jarmalaite, I., Capukoitiene, B. et Nemceva, L. (2006). Initial analysis of highly competitive yeast strains promising for ethanol industry. *Biol*. 3: 63-66.

Michael, M. et John M. (2006). *Broch Biology of Microorganisms*, (11th edn). Prentice Hall

Mihail, J.D. et Alcoren, S.M. (1987). *Marcophomina phaseolma* spatial patterns in cultivated and sampling strategies. *Phytopath.*77:1126-1131.

Miller, G.L. (1959). Use of dinitrosalicylic acid reagent for determination of reducing sugar, *Anal Chem*. 31: 426–8.

Miyamoto, K. (1997). Renewable biological systems for alternative sustainable energy production. <http://www.fao.org/docrep/w7241e/> w7241e00.htm.

Mogg, R. (2004). Biofuels in Asia: Thailand relaunches gasohol for automotive use. *Refocus*. 5(3): 44-47.

Mohamed, M. et Hind M. (1998). Etudes des pluies annuelles et journalières dans les Sahara algérienne. *Cahier Sécheresse.* 9(3):193-199.

Monod, J. (1942). *Recherches sur la croissance des cultures bacteriennes*. Hermann & Cie, Paris, France.

Mons, L. (2005).  Les enjeux de l’energie. larousse, France.

Moriyama, S., Akimoto, H.N., Suetsugu, S., Kawasaki, T., Nakamura, T. et Ohta, K. (2002). Purification and properties of an extracellular exoinulinase from *Penicillium sp*. strain TN-88 and sequence analysis of the encoding gene. *Biosci Biotechnol* *Biochem.* 66:1887–1896.

Moser, F.A. (1983). Formal macro-approach to bioprocess modeling with analogies. *Acta Biotechnol.* 3:195–216.

Mukherjee, K. et Sengupta, S. (1987). Purification and properties of a non-specific fructofuranosidase (inulinase) from the mushroom *Panaeolus papillonaceus* *Can J Microbiol. 33*: 520–524.

Mulchandani, A. et Luong, J.H.T. (1989). Microbial inhibition kinetics revisited. *Enzy Microb. Technol.* 11: 175-176.

Muzzolini, A. (2000). *The origin and development of Africa livestock*. Archaeology Ggenetics linguistics and Ethmography U.C.L.P. (edn) Blench R.M & Macdonalds K.C Press. London.

Nagem, R.A.P., Rojas, A.L., Golubev, A.M., Korneeva, O.S.,Enyaskaya, E.V., Kulminskaya, A.A., Neustroev, K.N. et Polikarpov, I. (2004). Crystal structure of exo-inulinase from *Aspergillus awamori*: the enzyme fold and structural determinants of substrate recognition. *J Mol Biol*. 344: 471-480.

Nakamura, T., Ogata, Y., Hamada, S. et Ohta, K. (1996). Ethanol production from Jerusalem artichoke tubers by *Aspergillus niger* and *Saccharomyces cerevisiae*. *J Ferment Bioeng*. 81:564-566.

Navarro, A.R., Sepulveda, M.C. et Rubio., M.C. (2000). Bio-concentration of vinasse from the alcoholic fermentation of sugar canemolasses. *Waste Manag*. 20:581–585.

Neagu, C.B. et Bahrim, G. (2012). Comparative study of different methods of hydrolysis and fermentation for bioethanol obtaining from inulin and inulin rich feedstock. *Food Industry*. 13: 63 – 68.

Neilsen, J. et Villadsen, J. (1994). *Bioreaction Engineering Principales*. New York : Plenum Press.

Ohta, K., Akimoto, H., Matsuda, S., Toshimitsu, D. et Nakamura, T. (1998). Molecular cloning and sequence analysis of two endoinulinase genes from *Aspergillus niger*. *Biosci* *Biotechnol* *Biochem.* 62:1731–1738.

Ohta, K., Beall, D.S., Mejia, J.P., Shanmugam, K.T. et Ingram, L.O., (1991). Genetic-improvement of Escherichia-Coli for ethanol-production chromosomal inte- gration of Zymomonas-Mobilis genes encoding pyruvate decarboxylase and alcohol dehydrogenase-Ii. *Appl Environ Microbiol*. 57 : 893–900.

Ohta, K., Hamada, S. et Nakamura, T. (1993). Production of high concentrations of ethanol from inulin by simultaneous saccharification and fermentation using *Aspergillus niger* and *Saccharomyces cerevisiae*. *Appl Envtl Microbiol*. 59: (3)729-733.

Ongen-Baysal, G. et Sukan, S.S. (1996). Production of inulinase by mixed culture of *Aspergillus niger* and *Kluyveromyces marxianus*. *Biotechnol Lett.* 18:1431–1434.

Onodera, S., Murakami, T., Ito, H., Mori, H., Matsui, H., Honma, M., Chiba, S. et Shiomi, N. (1996). Molecular cloning and nucleotide sequences of c DNA and gene encoding endo inulinase from *Penicillium purpurogenum*. *Biosci Biotechnol Biochem. 60*: 1780–1785.

Orthen, B. et Wehrmeyer, A. (2004). Dynamics of non-structural carbohydrates in bulbs and shoots of the geophytes. *Galanthus nivalis* *Physiol Plant*. 120 (4): 529-536.

Oura, E. (1997). Reaction products of yeast fermentations. *Process Biochem.* 12: 19-21.

Pandey, A., Soccol, C.R., Selvakumar, P., Soccol, V.T., Krieger, N. et Jose, D. (1999). Recent developments in microbial inulinases, its production, properties and industrial applications. *Appl Biochem Biotechnol*. 81: 35–52.

Parekh, S.R. et Margaritis, A. (1986). Continuous hydrolysis of fructans in Jerusalem artichoke extracts using immobilized non- -viable cells of *Kluyveromyces marxianus. J Food Sci.* 51: 854–855.

Pastore, G.M ., Park, Y.K., Min, D.B. (1994). Production of a fruity aroma by Neurospora from beiju. *Mycol Res.* 98: 25–35.

Peringer, P., Blachere, H., Corrieu, G. et Lane, A.G. (1974). A generalized mathematical model for the growth kinetics of *Saccharomyces cerevisiae* with experimental determination of parameters. *Biotechnol Bioeng*. 16:431–454.

Peuk, A.D. (2000). The chemical composition of xylen sapin Viritis vinifera L.cv. Riesling during vegetative growth on three different francian vineyard soils and as influenced by nitrogen fertilizer. *Am Enol Viticult.* 51: 329-339.

Phaff, H.J. et Starmer, W.T. (1987).*Yeast associated with Plants, Insects and Soil* *In :* Rose A.H., Harrison J.S. (ed), The yeast, V1, Biology of yeast. (2 ndedn) Acad Press. London. p: 123- 174.

Piret, S. J. (1988). Reflection on the dynamics of growth and product formation in microbial cultures. Dans: *Horiz Bioch Eng*. (3): 155- 160.

Postma E., Verduyn C., Scheffers A. et Van Dijken J. (1989). Enzymic analysis of Crabtree effect in glucose- limited chemostat cultures of *Saccharomyces cerevisiae*. *Appl Env Microbiol*. 55 : 468-477.

Prescott, L. M., Harley, J. P., Klein, D. A., Claire, M ., Bacq, C. et Dusart, J. (2007). Microbiologie . (Edn). De Boeck p: 492.

Rey, M.W. *et al*. (2004). Complete genome sequence of the industrial bacterium *Bacillus licheniformis* and comparisons with closely related *Bacillus species. Genome Biol. 5*: 77. 84

Ritsema, T. et Smeekens, S. (2003).Fructans: beneficial for plants and humans. *Curr Opin Plant Biol*. 6: 223-230.

Robyns, B. et Bastard, P. (2004). Production décentralisée d’électricité : contexte et enjeux techniques. Source : <http://www>. Electricité energy revue 3 EI n°39.

Rodriguez-Zaragoza, S., Mayslish, E. et Steinberger, Y. (2005). Vertcal Distribution the free living Amoeba Population in soil under desert Shrubs in the Ngev. *Appl Environ Microbiol.* 71(4):2053-2060.

Rosenberger, A., Kaul, H. P., Senn, T. et Aufhammer, W. (2000). Improving the energy balance of bioethanol production from winter cereals: The effect of crop production intensity. *Appl Energy* **.**68(1): 51-67.

Roukas, T. (1996). Ethanol production from non-sterilized beet molasses by free and immobilized *Saccharomyces cerevisiae* cells using fed-batch culture. *J Eng* .27:87–96.

Ruan, S. (1993). Persistence and coexistence in zooplankton-phytoplankton-nutrient models with instantaneous nutrient recycling. *J Math Biol*. 31(6): 633–654.

Ruan, S. et HE, X. (1998). Global stability in chemostat-type competition models with nutrient recycling. *J Appl Math*. 58: 170–192.

Ruark, G.H. et Zarnoch, S.J. (1992). Soil carbon, nitrogen and fine root biomass sampling in a pine stand. *Soil Sc Soc Am J.* 56:1945-1950.

Saadoun, I. et Momani, I. (1997). *Stryptoyces* from Jordan soil active against *Agrobacterium tumefasciens. Actinomycetes*.8(12):29-36.

Saddler, J.N. et Chan, M.K.H. (1982). Optimization of Clostridium thermocellum growth on cellulose and pretreated wood substrates. *Eur J Appl Microbiol Biotechnol.*16:99–104.

Sanchez, O.J. et Cardona, C.A. (2008). Trends in biotechnological production of fuel ethanol from different feedstocks. *Bioresour Technol.* 99:5270–5295.

Sanchez, S., Bravo, V., Castro, E., Moya, A.J et Camacho, F. (1999). Comparative study of the fermentation of D-glucose/D-xylose mixtures with *Pachysolen tannophilus* and *Candida shehatae*. *Bioprocess Eng*. 21: 525–532.

Schell, M.A., Karmirantzou, M., Snel, B., Vilanova, D., Berger, B., Pessi, G., Zwahlen, M.C., Desiere, F., Bork, P., Delley, M., Pridmore, R. et Arigoni, D. F. (2002). The genome sequence of *Bifidobacterium longum* reflects its adaptation to the human gastrointestinal tract. *Proc Natl Acad Sci USA.* 99: 14422–14427.

Schnürer, J., Clarholm, M. et Rosswall, T. (1985). Microbial biomass and and activity in a agricultural soil with different organic matter contents. *Soil Biol Biochem.* 17: 611- 618.

Schugerl, K. (1985). Bioreaction engineering 1: Fundamentals, thermodynamics, formal kinetics, idealized reactor types and operation modes. Jonh Wiles and Sons.

Sébastien, N., Ronkart, A., Christophe, S. et Micher, P. (2007). Isolation and identification of inulooligosaccharides resulting from inulin hydrolysis. *Analytica Chimica Acta.* 604:81–87.

Shafaghat, H., Najafpour, G.D, Rezaei, P.S. et Sharifzadeh, M. (2009). Growth Kinetics and Ethanol Productivity of *Saccharomyces cerevisiae* PTCC 24860 on Various Carbon Sources. *World Appl Sci J* . 7(2): 140-144.

Sharma A.D., Kainth, S. et Gill P.K. (2006). Inulinase production using garlic (Allium sativum) powder asa potential substrate in *Streptomyces sp*. *J Food Engin*.77: 486-491.

Sharma, S.K. (2000). Saccharification and bioethanol production from sunflower stalks and hulls.Afr J bioetech (41): 122- 130.

Sheng, J., Chi, Z., Yan, K., Wang, X., Gong, F. et Li, J. (2009). Use of response surface methodology for optimization of process parameters for high inulinase production by the marine yeast *Cryptococcus aureus* G7a in solid state fermentation and hydrolysis of inulin. *Bioprocess Biosyst Eng. 32*:333–339.

Shiomi, N. (1989). Properties of fructosyltransferases involved in the synthesis of fructan in

Liliaceous plants. *J Plant Physiol*. 134: 151-155.

Shiomi, N., Benkeblia, N., Onodera, S. et Kawazoe, N. (2006). Froctooligosaccharides changes during maturation in inflorescences and seeds of onion (*Allium cepa* L W202). *Can J Plant Sci*. 86: 269-278.

Silla, A.M., Zygora, P.S.J. et Stewart, G.G. (1984). Characterization of Sch. Castellii mutants with increased productivity of amylase. *Appl Microbiol Biotechnol*. 20:124–128.

Simoes-Mendes, B. (1984). Purification and characterization of the extracellular amylase of the yeast Sch. Alluvius. *Can J Microbiol* .30:1163–1170.

Singh, R.S. et Singh, R.P. (2010). Production of Fructooligosaccharides from Inulin by Endoinulinases and Their Prebiotic Potential .*Food Technol Biotechnol. 48* (4): 435–450.

Singh, RS., Dhaliwal, R. et Puri, M. (2006). Production of inulinase from *Kluyveromyces marxianus* YS-1 using root extract of *Asparagus racemosus*. *Proc Biochem*. 41:1703–1707.

Singleton, P. (2005). *Bactériologie : pour la médecine, la biologie et les biotechnologies*, cours, (6e édn), Dunod.

Smith, C.K., Coyea, M.R. et Munson, A.D. (2000). Soil carbon, nitrogen and phosphorus stocks and dynamics under disturbed black spruce forest. *Ecol App.* 10:75-78.

Sonnleitner. B. et Kappeli, O. (1986). Growth of *Saccharomyces cerevisiae* is controlled by its limited respiratory capacity formulation and verification of a hypothesis. *Biotechnol Bioeng.* 28: 927-927.

Soto-Cruz, O., Favela-Torres, E. et Saucedo-Castaneda, G. (2002).Modeling of growth, lactate consumption, and volatile fatty acid production by *Megasphaera**elsdenii* cultivated in minimal and complex media. *Biotechnol Prog.* 18: 193-200.

Spencer- Martins, I. et Van Uden, N. (1979). Extracellular amylolytic system of the yeast Lipomyces kononenkoae. *Eur J Appl Microbiol Biotechnol*. 6:241–250.

Stepanov, A.I., Afanaseva, V.P., Zaitseva, G.V., Mednokova, A.P et Lupandina, I.B. (1975) Regulation of the biosynthesis of the enzyme of amylolytic acomplex of Endomycopsis fibuligera. *Prikl Biohim Mikrobiol*. 11:682–685.

Subler, S. et Kirsh, K.S. (1998). Spring dynamic of soil carbon, nitrogen and microbial activity in earthwarm middens in no-tillcornfield. *Bio Fert Soils.* 26:243-249.

Sugawara, E., Hashimoto, S., Sakurai, Y. et Kobayashi, A. (1994). Formation by yeast of the HEMF (4-hydrpxy-2 (or 5)-ethyl-5 (or 2)-methyl-3 (2H)-furanone) aroma components in Miso with aging. *Biosci Biotechnol Biochem*. 58:1134–1135

Sun, Y. et Cheng, J. (2002). Hydrolysis of lignocellulosic materials for ethanol production: a review. *Bioresour Technol*. 83(1):1–11.

Suzuki, T., Mori, H., Yamane, T et Shimizu, S. (1985). Automatic supplementation of minerals in fed-batch culture to high cell mass concentration. *Biotechnol Bioeng.* 27: 192- 201.

Teng, Z., Gao, R., Rehim, M. et Wang, K. (2009). Global behaviors of Monod type chemostat model with nutrient recycling and impulsive input. *J Mathel Chemist press.* 3: 123-147.

Todor, D. et Tsonka, U.D. (2002). Influence of the growth conditions on the resistance of *Saccharomyces cerevisiae*, strain NBIMCC 181, by freeze–drying. *J Cult Collect.* 3:72–77.

Toivola, A., Yarrow, D., Bosch, E., Dijken, J et Scheffers, A. (1984). Alcoholic fermentation of D- xylose by yeasts. *Appl Envirol Microbiol.* 47(6):1221-1223.

Tortora, J., Funk, B.F. et Case, C.l. (2003). *Introduction à la microbiologie*, édition de renouveau Pédagogique Inc. Canada.

Tsujimoto, Y., Watanabe, A., Nakano, K., Watanabe, K., Matsui, H., Tsuji, K., Tsukihara, T et Suzuki, Y. (2003). Gene cloning, expression, and crystallization of a thermostable exo-inulinase from *Geobacillus stearothermophilus* KP1289. *App Microbiol Biotechnol.* 62:180–185.

Uhm, T.B., Chung, M.S., Lee, S.H., Gourronc, F., Housen, I., Kim, J.H., Van Beeumen, J., Haye B. et Vandenhaute, J. (1999). Purification and characterization of *Aspergillus ficuum* endoinulinase. *Biosci Biotechnol Biochem.* 63:146–151.

UI-Haq, I., Roheena, A., Ashraf, H. et Shah, A.H. (2002). Isolation and screening of fungy for the biosynthesis of α- amylase. Biotechnol. 2 (4): 61- 66.

Uzunova, K., Vassileva, A., Ivanova, V., Spasova, D. et Tonkova, A. (2002). Thermostable exo-inulinase production by semicontinuous cultivation of membrane-immobilized *Bacillus sp.*11 cells. *Process Biochem.* 37:863–868.

Vallet, C., Said, R., Rabiller, C et Martin, M.L. (1996). Natural abundance isotopic fractionation in the fermentation reaction: influence of the nature of the yeast. *Bioorg Chem.* 24:319–330.

Van Laere, A. et Van den Ende, W. (2002).Inulin metabolism in dicots: chicory as a model system. *Plant Cell Environ*. 25:803-813.

Van Urk, H., Schipper, D., Breedveld, G.J., Mak, P.R., Alexander, S.W. et Van Dijken, J.P. ( 1989). Localization and kinetics of pyruvate-metabolizing enzymes in relation to aerobic alcoholic fermentation in *Saccharomyces cerevisiae* CBS 8066 and *Candida utilis* CBS 621. *Bioch Biophy Acta (BBA) - General Subjects*. 992 (1):78-86.

Vandamme, E. J.et Derycke, D. G. (1983). Microbial inulinases - Fermentation process, properties, and applications. *Advan Appl Microbiol.* 29: 139-176.

Vaughan-Martini, A., Kurtzman, C.P., Meyer Sally, A.N. et O’Neill, B.E. (2005). Two new species in the *Pichia guilliermondii* clade: *Pichia caribbica* sp. nov., the ascosporic state of *Candida fermentati*, and *Candida carpophila* comb. *Yeast Res*. 5: 463–469.

Verduyn, C., Postma, E., Scheffers, W.A. et Van Dijken, J, P. (1992). Effect of benzoic acid on metabolic fluxes in yeasts: A continuous-culture study on the regulation of respiration and alcoholic fermentation. *Yeast*. 8(7):501-517.

Virginie, A.G, Bruno, B., Sylvie, D. et Jean-Marie, S. (2001). Stress effect of ethanol on fermentation kinetics by stationary-phase cells of *Saccharomyces cerevisiae*. *Biotechnol Lett*. 23:677–681.

Vullo, D.L., Coto, C.E. et Siñeriz, F. (1991). Characterization of an inulinase produced by *Bacillus subtilis* 430A, a strain isolated from the rhizosphere of *Vernonia herbacea* (Vell) Rusby. *Appl Environ Microbiol.* 57:2392–2394.

Walker, J.F., Jenkins, N. (1997)."Wind energy technology". John Wiley et Sons, Inc

Waterhouse, A.L et Chatterton, N.J. (1993). Glossary in fructan terms. In: *Science and technology offructans,* Suzuki M, Chatterton NJ ed: Boca Raton, FL:CRC Press USA. pp: 1 6.

Westra, M.T. et Kuyvenhoven, S. (2002). L’énergie fait tournerlemonde. Source : <https://www.efda.org/wpcms/wp-content/uploads/2011/11/EPYW_fr.pdf>.

Wickerham, L.J. (1951). Taxonomy of yeast. Technical Bulletin No. 1029, United States. Departement of Agriculture, Washington, D.C.

Wilson, R.G., Martin, A.R et Kachman, S.D. (2006). Seasonal changes in carbohydrates in the root of Canada thistle (*Cirsium arvense*) and the disruption of these changes by herbicides. *Weed technol*. 20: 242-248.

Workman, W.E et Day, D.F. (1983). Purification and properties of the β-fructofuranosidase from *Kluyveromyces fragilis. FEBS* *Lett.* 160: 16–20.

Xiao, R.M. et Tanida, S. (1989). Purification and characteristics of two exoinulinases from *Chrysosporium pannorum. J Ferment Bioeng.* 67: 331–334.

Yamauchi, H., Akita, O., Obata, T., Amachi, T., Hara, S et Yoshizawa, K. (1989). Production and application of a fruity odor in a solidstate culture of *Neurospora sp*. using pregelatinized polish rice. *Agric Biol Chem*. 53:2881–2888.

Yu, Z.S et Zhang, H.X. (2004). Ethanol fermentation of acid-hydrolyzed cellulosic pyrolysate with *Saccharomyces cerevisiae*. *Bioresour Technol*. 93:199–204.

Yuan, S., Zhang, W et Han, M. (2009). Global asymptotic behavior in chemostat-type competition models with delay Nonlinear Analysis. *Real World Applications* 10(3): 1305–1320.

Yuan, W.J., Zhao, X.Q., Ge, X.M. et Bai, F.W. (2008). Ethanol fermentation with *Kluyveromyces marxianus* from Jerusalem artichoke grown in salina and irrigated with a mixture of seawater and freshwater. *J Appl Microbiol*. 105: 2076-2083.

Yun, J.W., Kim, D.H., Kim, B.W et Song, S.K. (1997). Production of inulo-oligosaccharides from inulin by immobilized endoinulinase from *Pseudomonas* sp. *J Ferment. Bioeng.* 84: 369– 371.

Zhang, L., Wang, J., Ohta, Y. et Wang, Y. (2003). Expression of the inulinase gene from *Aspergillus niger*in *Pichia pastoris*. *Proc Biochem*. 38:1209–1212.

Zhang, T., Chi, Z., Zhao, C.H., Chi, Z.M. et Gong, F. (2010). Bioethanol production from hydrolysates of inulin and the tuber meal of Jerusalem artichoke by *Saccharomyces* sp. W0, *Bioresour Technol*. 101: 8166–8170.