References

Aguilera, J.M. 2002. Fritura de alimentos. In Press. Cited in Bouchon, P.A. 2002. Modelling oil uptake during frying. Ph.D. dissertation. The University of Reading.

Alvarez, C., Couso, I. and Tejada, M. 1999. Microstructure of suwari and kamaboko sardine surimi gels. Journal of the Science of Food and Agriculture. 79: 839-844.

An, H., Peters, M.Y. and Seymour, T.A. 1996. Roles of endogenous enzymes in surimi gelation. Trends in Food Science & Technology. 7: 321-327.

Angsupanich, K. 1998. High pressure treatment effects on cod (*Gadus morhua*) muscle. Ph.D. dissertation. The University of Reading.

AOAC. 1990. Official methods of analysis. 15th ed. Arlington: Association of Official Analytical Chemists.

AOAC. 1995. Official methods of analysis. 16th ed. Arlington: Association of Official Analytical Chemists.

Anonymous. 2004. Atlantic Cod (Online). Available from: http://www.arkive.org/species/ARK/fish/Gadus_morhua/

Asghar, A., Samejima, K. and Yasui, T. 1985. Functionality of muscle proteins in gelation mechanism of structured meat product. CRC Crit. Rev. Food Sci., 22: 27-82.

Ashkenazi, N., Mizrahi, S. and Berk, Z. 1984. Heat and mass transfer in frying. In B.M. McKenna (ed). Engineering and Food. London: Elsevier Applied Science Publishers.

Ateba, P. and Mittal, G.S. 1994. Modelling the deep-fat frying of beef meatballs. International Journal of Food Science and Technology. 29: 429-440.

Balasubramaniam, V.M., Chinnan, M.S. and Mallikarjunan, P. 1995. Deep-fat frying of edible film coated products: experimentation and modeling. Food Processing Automation. 4: 486-493.

Balasubramaniam, V.M., Chinnan, M.S., Mallikarjunan, P. and Phillips, R.D. 1996. The effect of edible film on oil uptake and moisture retention of a deep-fat fried poultry product. Journal of Food Process Engineering. 20: 17-29.

Benjakul, S., Visessanguan, W., Ishizaki, S. and Tanaka, M. 2001. Differences in gelation characteristics of natural actomyosin from two species of bigeye snapper *Priacanthus tayenus* and *Priacanthus macracanthus*. Journal of Food Science. 66(9): 1311-1318.

Benjakul, S., Visessanguan, W. and Leelapongwattana, K. 2003a. Purification and characterization of heat-stable alkaline proteinase from bigeye snapper (*Priacanthus macracanthus*) muscle. Comparative Biochemistry and Physiology Part B. 134: 579-591.

Benjakul, S., Visessanguan, W. and Tueksuban, J. 2003b. Changes in physico-chemical properties and gel-forming ability of lizardfish (*Saurida tumbil*) during post-mortem storage in ice. Food Chemistry. 80: 535-544.

Blumenthal, M.M. 1991. A new look at the chemistry and physics of deep-fat frying. Food Technology. 68-71.

Bouchon, P.A. 2002. Modelling oil uptake during frying. Ph.D. Dissertation. The University of Reading.

Bouchon, P.A., Aguilera, J.M. and Pyle, D.L. 2003. Structure oil-absorption relationships during deep-fat frying. Journal of Food Science. 68 (9): 2711-2716.

Bouchon, P.A. and Pyle, D.L. 2004. Studying oil absorption in restructured potato chips. Journal of Food Science. 69(3): 115-122.

Boye S.W. and Lanier T.C. 1988. Effects of heat-stable alkaline protease activity of atlantic menhaden (*Brevoorti tyrannus*) on surimi gels. Journal of Food Science. 53(5): 1340-1398.

Carslaw, H.S. and Jaeger, J.C. 1959. Conduction of heat in solids, 2nd ed. Oxford: Oxford University Press.

Crank, J. 1975. The mathematics of diffusion. 2nd ed. Oxford: Oxford University Press.

Chan, J.K., Gill, T.A. and Paulson, A.T. 1992. The dynamics of thermal denaturation of fish myosins. Food Research International. 25:17-123.

Cheng, C.S., Hamann, D.D. and Webb, N.B. 1979. Effect of thermal processing on minced fish gel texture. Journal of Food Science. 44: 1080-1086.

Cohen, D.M., Inada, T. Iwamoto, T. and Scialabba, N. 1990. *Gadus morhua* Atlantic Cod (Online). Available from: http://filaman.uni-kiel.de/Summary/

Davies, J.R., Bardsley, R.G., Ledward, D.A. and Poulter, R.G. 1988. Myosin thermal stability in fish muscle. Journal of the Science of Food and Agriculture. 43: 61-66.

Farkas, B.E. 1994. Modeling immersion frying as a moving boundary problem. Ph.D. dissertation. University of California, Davis. Cited in Singh, R.P. 1995. Heat and mass transfer in foods during deep-fat frying. Food Technology. 49: 134-137.

Farkas, B.E., Singh, R.P. and McCarthy, M.J. 1992. Measurement of oil/ water interface in foods during frying. In R.P. Singh and A. Wirakartakusumah (eds). Advances in Food Engineering. Boca Raton: CRC Press.

Fennema, O.R. (ed). 1996. Food Chemistry. 3rd ed. New York: Marcel Dekker.

Ferry, J.D. 1948. Protein gels. Advances in Protein Science. 4: 1-78.

Foegeding, E.A. 1988.Thermally induced changes in muscle proteins. Food Technology. 42: 58-60.

Funami, T., Funami, M. Tawada, T. and Nakao, Y. 1999. Decreasing oil uptake of doughnuts during deep-fat frying using curdlan. Journal of Food Science. 64(5): 883-888.

Gamble, M.H. and Rice, P. 1987. Effect of pre-fry drying on oil uptake and distribution in potato crisp manufacture. International Journal of Food Science and Technology. 22: 535-548.

Gamble, M.H., Rice, P. and Selman, J.D. 1987. Relationship between oil uptake and moisture loss during frying of potato slices from c.v. record U.K. tubers. International Journal of Food Science and Technology. 22: 233-241.

Gill, T.A., Chan, J.K., Phonchareon, K.F. and Paulson, A.T. 1992. Effect of salt concentration and temperature on heat-induced aggregation and gelation of fish myosin. Food Research International. 25: 333-341.

Goll, D.E., Robson, R.M. and Stromer, M.H. 1977. Muscle protein. In J.R. Whitaker and S.R. Tanenbaum (eds). Food Proteins. Connecticut: AVI Publishing Company, Inc.

Gorga, F.R. 1999. Proteins. Available from: http://webhost.bridgew.edu/fgorga/proteins/default.htm

Hall, G.M. and Ahmad, N.H. 1997. Surimi and fish-mince products. In G.M. Hall (ed). Fish Processing Technology. London: Blackie Academic & Professional.

Hermansson, A.M. 1978. Physico-chemical aspects of soy proteins structure formation. Journal of Texture Studies. 9: 33-58.

Hermansson,A.M. 1994. Microstructure of protein gels related to functionality. In R.Y. Yada, R.L. Jackman and J.L. Smith (ed). Protein structure-function relationships in food. London: Blackie Academic & Professional.

Hossain, M.I., Itoh, Y., Morioka, K. and Obatake, A. 2001. Contribution of the polymerization of protein by disulfide bonding to increased gel strength of walleye pollack surimi gel with preheating time. *Fisheries Science.* 67 : 710-717.

Howell, B.K., Matthew, A.D. and Donnelly, A.P. 1991. Thermal stability of fish myofibrils: a differential scanning calorimetric study. International Journal of Food Science and Technology. 26: 283-295.

Hug, K. 2001. Shielding: Fabric-Over-Foam EMI Gaskets. Available from: http://www.ce-mag.com/archive/01/11/Hug.html

Ishioroshi, M., Samejima, K. and Yasui, T. 1979. Heat-induced gelation of myosin: factors of pH and salt concentrations. Journal of Food Science. 44: 1280-1284.

Jiang, S.-T., Hsieh, J.-F., Ho, M.-L. and Chung, Y.-C. 2000. Microbial transglutaminase affects gel properties of golden threadfin-bream and Pollack surimi. Journal of Food Science. 65(4): 694-699.

Kamath, G.G., Lanier, T.C., Foegeding, E.A. and Hamann, D.D. 1992. Nondisulfide covalent cross-linking of myosin heavy chain in setting of Alaska Pollock and atlantic croaker surimi. Journal of Food Biochemistry. 16: 151-172.

Keller, C., Escher, F. and Solms, J.A. 1986. Method of localizing fat distribution in deep-fat fried potato products. Lebensmittel-Wissenschaft & Technology. 19: 346-348.

Lamberg, I., Hallstrom, B. and Olsson, H. 1990. Fat uptake in a potato drying/ frying process. Lebensmittel-Wissenschaft & Technology. 23: 295-300.

Lanier, T.C. and Lee, C.M. 1992. Surimi Technology. New York: Marcel Dekker, Inc.

Lanier, T.C., Lin, T.S., Lui, Y.M. and Hamann, D.D. 1982. Heat gelation properties of actomyosin and surimi prepared from atlantic croaker. Journal of Food Science. 47: 1921-1925.

Lee, H.G., Lanier, T.C., Hamann, D.D. and Knopp, J.A. 1997. Transglutaminase effects on low temperature gelation of fish protein sols. Journal of Food Science. 62(1): 20-24.

Lesiow, T. and Xiong, Y.L. 2001. Mechanism of rheological changes in poultry myofibrillar proteins during gelation. Avian and Poultry Biology Reviews. 12 (4): 137-149.

Lin, T.M. and Park, J.W. 1996. Extraction of proteins from pacific whiting mince at various washing conditions. Journal of Food Science. 61(2): 432-438.

Lou, X., Wang, C., Xiong, Y.L., Wang, B. and Mims, S.D. 2000. Gelation characteristics of paddlefish (*Polyodon spathula*) surimi under different heating conditions. Journal of Food Science. 65(3): 394-398.

Makinodan, Y., Toyohara, H. and Niwa, E. 1985. Implication of muscle alkaline proteinase in the textural degradation of fish meat gel. Journal of Food Science. 50: 1351-1355.

Mangino, M. and Litchfiled, J. 2004. Protein Structure. Available from: http://class.fst.ohio-state.edu/fst605/lectures/Lect12.html

McDonough, C., Gomez, M.H., Lee, J.K., Waniska, R.D. and Rooney, L.W. 1993. Environmental scanning electron microscopy evaluation of tortilla chip microstructure during deep-fat frying. Journal of Food Science. 8(1): 199-203.

Miller, K.S., Singh, R.P. and Farkas, B.E. 1994. Viscosity and heat transfer coefficients for canola, corn, palm, and soybean oil. Journal of Food Processing and Preservation. 18: 461-472.

Mohamed, S., Lajis, S.M.M. and Hamid, N.A. 1995. Effects of protein from different sources on the characteristics of sponge cakes, rice cakes (apam), doughnuts and frying batters. Journal of the Science of Food and Agriculture. 68: 271-277.

Moreira, R.G. and Barrufet, M.A. 1998. A new approach to describe oil absorption in fried foods: a simulation study. Journal of Food Engineering. 35: 1-22.

Moreira, R.G., Castell-Perez, M.E. and Barrufet, M.A. 1999. Deep-Fat Frying Fundamentals and Applications. Maryland: Aspen Publishers, Inc.

Moreira, R.G., Palau, J. and Sun, X. 1995. Simultaneous heat and mass transfer during the deep-fat frying of tortilla chips. Journal of Food Process Engineering. 18: 307-320.

Moreira, R.G., Sun, X. and Chen, Y. 1997. Factors affecting oil uptake in tortilla chips in deep-fat frying. Journal of Food Engineering. 31: 485-498.

Morrissey, M.T., Wu, J.W., Lin, D. and An, H. 1993. Protease inhibitor effects on torsion measurements and autolysis of pacific whiting surimi. Journal of Food Science. 58: 1050-1054.

Murray, R.K., Granner, D.K. Mayes, P.A. and Rodwell, V.W. 1996. Haper's Biochemistry. 24th edition. Connecticut: Appleton & Lange Asimon & Schuster Company.

Niwa, E. 1992. Chemistry of surimi gelation. In T.C. Lanier and C.M. Lee (eds.), Surimi Technology. pp. 111-142. New York: Marcel Dekker, Inc.

Nonaka, M., Sayre, R.N. and Weaver, M.L. 1977. Oil content of french fried as affected by blanch temperatures, fry temperatures and melting point of frying oils. American Potato Journal. 54: 151-159. Cited in Bouchon, P.A. 2002. Modelling oil uptake during frying. Ph.D. dissertation. The University of Reading.

Oakenfull, D., Pearce, J. and Burley, R.W. 1997. Protein gelation. In S. Damodaran and A. Paraf (eds.), Food proteins and their applications. pp. 389-427. New York: Marcel Dekker, Inc.

Park, J.W. 2000. Surimi and Surimi Seafood. New York: Marcel Dekker, Inc.

Pedreschi, F., Aguilera, J.M. and Pyle, L. 2001. Texture characterization and kinetics of potato strips during frying. Journal of Food Science. 66(2): 314-318.

Pinthus, E.J. and Saguy, I.S. 1994. Initial interfacial tension and oil uptake by deep-fat fried foods. Journal of Food Science. 59(4): 804-807.

Pinthus, E.J., Weinberg, P. and Saguy, I.S. 1992. Gel-strength in restructured potato product affects oil uptake during deep-fat frying. Journal of Food Science. 57(6): 1359-1360.

Pinthus, E.J., Weinberg, P. and Saguy, I.S. 1995. Oil uptake in deep-fat frying as affected by porosity. Journal of Food Science. 60(4): 767-769.

Poulter, R.G., Ledward, D.A., Godber, S., Hall, G. and Rowlands, B. 1985. Heat stability of fish muscle proteins. Journal of Food Technology. 20: 203-217.

Saguy, I.S. and Pinthus, E.J. 1995. Oil uptake during deep-fat frying: factors and mechanism. Food Technology. 49: 142-145.

Saguy, I.S., Gremaud, E., Gloria, H. and Turesky, R.J. 1997. Distribution and quantification of oil uptake in French fries utilizing a radiolabeled 14C palmitic acid. Journal of Agriculture Food Chemistry. 45: 4286-4289.

Sankar, T.V. and Ramachandran, A. 2002. Rheological characteristics of suwari and kamaboko gels made of surimi from Indian major carps. Journal of the Science of Food and Agriculture. 82: 1021-1027.

Sano, T., Noguchi, S.F. Tsuchiya, T. and Matsumoto, J.J. 1988. Dynamic viscoelastic behavior of natural actomyosin and myosin during thermal gelation. *Journal of Food Science*. 53(3): 924-928.

Schmidt, R.H. 1981. Gelation and coagulation. In J.P. Cherry (ed), Protein Functionality in Foods. Washington DC: ACS Symposium Series.

Seguro, K., Kumazawa, Y., Ohtsuka, T., Toiguchi, S. and Motoki, M. 1995. Microbial transglutaminase and ε-(γ-glutamyl) lysine crosslink effects on elastic properties of kamaboko gels. Journal of Food Science. 60(2): 305-311.

Sikorski, Z.E., Kolakowska, A. and Burt, J.R. 1990. Seafood: Resources, Nutritional Composition and Preservation. Boca Raton, FL: CRC Press.

Singh, R.P. 1995. Heat and mass transfer in foods during deep-fat frying. Food Technology. 49: 134-137.

Smith, L.M., Clifford, A.J., Creveling, R.K. and Hamblin, C.L. 1985. Lipid content and fatty acid profiles of various deep-fat fried foods. JAOCS. 62(6): 990-993.

Smyth, A.B., Smith, D.M., Vega-Warner, V. and O'Neil, E. 1996. Thermal denaturation and aggregation of chicken breast muscle myosin and subfragments. Journal of Agricultural and Food Chemistry. 44: 1005.

Stanby, M.E. 1982. Properties of fish oils and their application to handling of fish and nutritional and industrial use. In R.E. Martin, G.L. Flick, C.E. Hebard and D.R. Ward (eds.), Chemistry and Biochemistry of Marine Food Products. pp. 75-92. Connecticut: The AVI Publishing Company.

Stone, A.P. and Stanley, D.W. 1992. Mechanism if fish muscle gelation. Food Research International. 25: 381-388.

Thinakorn, S. 1998. Foaming process of high-density polyethylene and natural rubber blends. Thesis. Chulalongkorn University.

Tseng, Y., Moreira, R. and Sun, X. 1996. Total frying-use time effects on soybean-oil deterioration and on tortilla chip quality. International Journal of Food Science and Technology. 31: 287-294.

Ufheil, G. and Escher, F. 1996. Dynamics of oil uptake during deep-fat frying of potato slices. Lebensmittel-Wissenschaft and Technologie. 29: 640-644. Cited in Bouchon, P.A. 2002. Modelling oil uptake during frying. Ph.D. dissertation. The University of Reading.

Venugopal, V. and Shahidi, F. 1996. Structure and composition of fish muscle. Food Research International. 12: 175-197.

Walstra, P. 2003. Physical Chemistry of Foods New York: Marcel Dekker.

Yongsawatdigul, J., Park, J.W. and Kolbe, E. 1997. Texture degradation kinetics of gels made from pacific whiting surimi. Journal of Food Process Engineering. 20: 433-452.

Zayas, J.F. 1997. Functionality of Protein in Food. Heidelberg: Springer-Verlag Berlin Heidelberg.

Ziegler, G.R. and Acton, J.C. 1984. Mechanisms of gel formation by proteins of muscle tissue. Food Technology. 38: 77-80.

APPENDICES

APPENDIX A

A. Statistical Analysis

A.1 Statistical Analysis of the Surface Oil Absorption during Frying at 180 °C

Table A.1.1 Analysis of variance of the surface oil absorption at a frying period of 90 seconds

Source	DF*	SS*	MS*	F
Treatment	2	1.215	0.608	0.746^{ns}
Error	6	4.886	0.814	
Total	8	6.101		

*: Degree of freedom (DF), Sum of squares (SS), Mean squares (MS)

^{ns}: Non significant difference ($p > 0.05$)

Table A.1.2 Analysis of variance of the surface oil absorption at a frying period of 150 seconds

Source	DF*	SS*	MS*	F
Treatment	2	0.910	0.455	0.820^{ns}
Error	6	3.328	0.555	
Total	8	4.293		

*: Degree of freedom (DF), Sum of squares (SS), Mean squares (MS)

^{ns}: Non significant difference ($p > 0.05$)

Table A.1.3 Analysis of variance of the surface oil absorption at a frying period of 180 seconds

Source	DF*	SS*	MS*	F
Treatment	2	0.350	0.175	0.442^{ns}
Error	6	2.374	0.396	
Total	8	2.725		

*: Degree of freedom (DF), Sum of squares (SS), Mean squares (MS)

^{ns}: Non significant difference ($p > 0.05$)

A.2 Statistical Analysis of the Structural Oil Absorption during Frying at 180 °C

Table A.2.1 Analysis of variance of the structural oil absorption at a frying period of 90 seconds

Source	DF*	SS*	MS*	F
Treatment	2	0.583	0.292	2.512^{ns}
Error	6	0.696	0.116	
Total	8	1.279		

*: Degree of freedom (DF), Sum of squares (SS), Mean squares (MS)

^{ns}: Non significant difference ($p > 0.05$)

Table A.2.2 Analysis of variance of the structural oil absorption at a frying period of 150 seconds

Source	DF*	SS*	MS*	F
Treatment	2	0.547	0.274	5.311[S]
Error	6	0.309	0.052	
Total	8	0.856		

*: Degree of freedom (DF), Sum of squares (SS), Mean squares (MS)

[S]: Significant difference ($p \leq 0.05$)

Table A.2.3 Analysis of variance of the structural oil absorption at a frying period of 180 seconds

Source	DF*	SS*	MS*	F
Treatment	2	1.750	0.875	7.174[S]
Error	6	0.732	0.122	
Total	8	2.482		

*: Degree of freedom (DF), Sum of squares (SS), Mean squares (MS)

[S]: Significant difference ($p \leq 0.05$)

A.3 Statistical Analysis of the Surface Oil Content during Cooling

Table A.3.1 Analysis of variance of the surface oil content at a cooling period of 1 minute

Source	DF*	SS*	MS*	F
Treatment	2	1.165	0.583	107.236[S]
Error	3	0.016	0.005	
Total	5	1.182		

*: Degree of freedom (DF), Sum of squares (SS), Mean squares (MS)

[S]: Significant difference ($p \leq 0.05$)

Table A.3.2 Analysis of variance of the surface oil content at a cooling period of 3 minutes

Source	DF*	SS*	MS*	F
Treatment	2	2.491	1.245	541.486[S]
Error	3	0.007	0.002	
Total	5	2.498		

*: Degree of freedom (DF), Sum of squares (SS), Mean squares (MS)

[S]: Significant difference ($p \leq 0.05$)

Table A.3.3 Analysis of variance of the surface oil content at a cooling period of 5 minutes

Source	DF*	SS*	MS*	F
Treatment	2	1.674	0.837	761.045[S]
Error	3	0.003	0.001	
Total	5	1.678		

*: Degree of freedom (DF), Sum of squares (SS), Mean squares (MS)

[S]: Significant difference ($p \leq 0.05$)

A.4 Statistical Analysis of the Structural Oil Absorption during Cooling

Table A.4.1 Analysis of variance of the structural oil absorption at a cooling period of 1 minute

Source	DF*	SS*	MS*	F
Treatment	2	5.996	2.998	1439.144[S]
Error	3	0.006	0.002	
Total	5	6.003		

*: Degree of freedom (DF), Sum of squares (SS), Mean squares (MS)

[S]: Significant difference ($p \leq 0.05$)

Table A.4.2 Analysis of variance of the structural oil absorption at a cooling period of 3 minutes

Source	DF*	SS*	MS*	F
Treatment	2	10.785	5.393	948.848[S]
Error	3	0.017	0.006	
Total	5	10.802		

*: Degree of freedom (DF), Sum of squares (SS), Mean squares (MS)

[S]: Significant difference ($p \leq 0.05$)

Table A.4.3 Analysis of variance of the structural oil absorption at a cooling period of 5 minutes

Source	DF*	SS*	MS*	F
Treatment	2	10.156	5.078	568.410^{S}
Error	3	0.027	0.009	
Total	5	10.182		

*: Degree of freedom (DF), Sum of squares (SS), Mean squares (MS)

^{S}: Significant difference ($p \leq 0.05$)

A.5 Statistical Analysis of the Moisture Loss during Frying at 180 °C

Table A.5.1 Analysis of variance of the moisture loss at a frying period of 90 seconds

Source	DF*	SS*	MS*	F
Treatment	2	0.003	0.001	0.093^{ns}
Error	3	0.045	0.015	
Total	5	0.048		

*: Degree of freedom (DF), Sum of squares (SS), Mean squares (MS)

^{ns}: Non significant difference ($p > 0.05$)

Table A.5.2 Analysis of variance of the moisture loss at a frying period of 120 seconds

Source	DF*	SS*	MS*	F
Treatment	2	0.991	0.496	14.653[S]
Error	3	0.101	0.034	
Total	5	1.092		

*: Degree of freedom (DF), Sum of squares (SS), Mean squares (MS)

[S]: Significant difference ($p \leq 0.05$)

Table A.5.3 Analysis of variance of the moisture loss at a frying period of 150 seconds

Source	DF*	SS*	MS*	F
Treatment	2	7.547	3.773	85.886[S]
Error	3	0.132	0.044	
Total	5	7.678		

*: Degree of freedom (DF), Sum of squares (SS), Mean squares (MS)

[S]: Significant difference ($p \leq 0.05$)

Table A.5.4 Analysis of variance of the moisture loss at a frying period of 180 seconds

Source	DF*	SS*	MS*	F
Treatment	2	5.655	2.828	97.901[S]
Error	3	0.087	0.029	
Total	5	5.742		

*: Degree of freedom (DF), Sum of squares (SS), Mean squares (MS)

[S]: Significant difference ($p \leq 0.05$)

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- Bouchon, P.A., Chinnasarn, S. and Pyle, D.L. 2005. Frying: Experiments, models and food structure. *Proceedings of the 7th World Congress of Chemical Engineering,* Glasgow, Scotland, United Kingdom.
- Chinnasarn, S., Pyle, D.L., Pradistsuwana, C., Niranjan, K. and Jantawat, P. Texture development in fish gels made from cod surimi. Accepted for publication to the *Transactions of the Institution of Chemical Engineers: Part C, Food and Bioproducts Processing.*

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