

## REFERENCES

- Ababouch, L. (2005) Lipids. FAO Fisheries and Aquaculture Department, Rome, Italy. Available from: <http://www.fao.org/fishery/topic/14826/en> (retrieved 27.03.14).
- Aboluade, D.S. and Abdullahi, S.A. (2005). Proximate and Mineral contents in component parts of some freshwater species in Zaria, *Nigerian Food Journal*, 23:41-44
- Ackman, R.R. (1988). Concern for utilization of marine lipids and oils. *Food Technology*, 42:151-155.
- Adakole, J.A. (2000). The effects of domestic, agriculture and industrial effluents on the water quality and biota of Bindare stream, Zaria – Nigeria, PhD Thesis, Department of Biological Sciences, Ahmadu Bello University, Zaria, Nigeria, 256
- Adefemi, O.S. (2011). Chemical Composition of Tilapia mosambis fish from major dams in Ekiti-State, Nigeria, *African Journal of Food Science*, 5(10): 550-554.
- Adewole, O.S., Fawole, O.O. and Omotosho, J.S. (2003). Concentration of selected elements in some freshwater fishes in Nigeria, *Science Focus*, 4: 106-108.
- Ahmed, S., Rahman, A.F.M. A., Mustafa, M.G., Hussain, M. B. and Nahar, N. (2012). Nutrient Composition of Indegenous and Exotic Fishes of Rainfed Water logged Paddy Fields in Lakshmipur, Bangladesh. *World Journal of Zoology*, 7(2): 135-140.
- Akhirevbulu, C. J. and Okanji, V. A. (2013), Variation of Proximate Composition, Amino acid and Fatty acid profiles of parts of cultured Heterobranchus bidorsalis (Geoffroy Saint-Hilaire, 1809). *Nigerian Journal of Agriculture, Food and Environmental*, 9(4):7-12.
- Alasalvar C., Taylor K.D.A., Zubcov E., Shahidi F., Alexis M. (2002): Differentiation of cultured and wild sea bass (*Dicentrarchus labrax*): total lipid content, fatty acid and trace mineral composition. *Food Chemistry*, 79: 145-150.
- Albert, J. S., Lanno, M.J., Yuri T. (1998). Testing Hypothesis of neural evaluation in gymnotiform electric fishes using phylogenetic character data, *Evolution*, 52: 1760-1780.
- Alfa, Y.M., NDA-Umar, U.I., Salihu A.B. and NMA, N.Y. (2014). Proximate composition and mineral components of some species of fish sold in Bida fish market. *International Journal of Current Research in chemistry and Pharmaceutical Sciences*, 1(8):19-24
- Ali Aberoumand (2012). Proximate composition of less known some processed and fresh fish species for determination of the nutritive values in Iran, *Journal of Agricultural Technology* 8(3): 917-922.

- Alvarez, V., Trigo, M., Lois, S., Fernandez, D., Medina, I., Aubourg, S. P. (2009). Comparative Lipid Composition Study in Farmed and Wild Blackspot Seabream (*Pagellus bogaraveo*), *Czech Journal of Food Science*, 27: 274-276
- Ambedkar, G. and Muniyan, M. (2011). Accumulation of metals in the five commercially important freshwater fishes available in Vellar river, Tamil Nadu, India., *Archives of Applied Science Research*, 3: 261-264.
- Anderson, L.L., and Thomas, E. Lad. (1982). Autopsy findings in squamous cell carcinoma of the esophagus. *Cancer*, 50(8): 1587-1590.
- Andrew, A.E. (2001). Fish Processing Technology, University of Horin Press, Nigeria. 7-8.
- Anusuya, and Hemalatha, S. (2014). Nutritive composition of Channa Striatus fish after 2,4-D Pesticide treatment, *Internet Journal of Food Safety*. 16: 9-11.
- AOAC. (2012) Official Methods of Analysis. (19th edn), AOAC International, Maryland, USA.
- APHA-AWWA-WPCF. (2012) Standard methods for the examination of water and wastewater. American Public Health Association (APHA), 22nd edition. Washington. DC. 201-204.
- Ashraf, M., Zafar, A., Rauf, A., Mehboob, S. and Querishi, A.N. (2011), Nutritional values of wild and cultivated silver carp (*Hyphophthalmichthys molitrix*) and grass carp (*Ctenopharyngodon idella*), *International Journal of Agriculture and Biology*, 13: 210-214
- Asma, Z. and Ashraf, M. (2010). Comparative Studies on the Seasonal Variations in the nutritional values of three carnivorous fish species (Accepted for Presentation on "The 3rd Global Fisheries Conference." held in Egypt.
- Atlasa, A, Ozcan, M.M. and Harmankaya, M. (2014). Mineral contents of head, Caudal, Central fleshy part, and spinal columns of some fishes. *Environmental Monitoring and Assessment*, 186: 889-894.
- Babu, A., Kesavan, K., Annaduri, D. and Rajagopal, S. (2010). Bursa spinosa, A meso gastropod fit for human consumption. *Advance Journal of food Science and Technology*, 2(1):79-83.
- Balk, E., Chung, M., Lichtenstein, A., Chew, P., Kupelnick, B., Lawrence, A., and Lau, J. (2004). Effects of omega-3 fatty acids on cardiovascular risk factors and intermediate markers of cardiovascular disease. Evidence report/technology assessment (Summary), 93, 1.
- Baro, D. C., and Sharma, S. (2014). Ichthyofaunal diversity from Sonkosh river, Assam, India, *The Clarion-International Multidisciplinary Journal*, 3(1): 18-24.
- Baruah, U.K., Bhagowati, A.K., Talukdar, R.K. and Saharia, P.K. (2000). Beal Fisheries of Assam community based Co-management Imperative, Naga, *The ICLARM Quarterly*, 23(2).

- Babalola, A. F., Adeyemi, R.S., Olusola, A. O., Salaudeen, M. M., Olajuyigbe, O. O. and Akande, G.R. (2011). Proximate and Mineral composition in the flesh of five commercial fish species in Nigeria. *Journal of Food Safety*, 13: 208-213.
- Begum, M., Pal, H.K., Islam, M.A. and Alam, M.J. (2010). Length-weight relationship and growth condition of *Mystus gulio* (Ham) in different months and sexes. *University Journal of Zoology, Rajasthan University*, 28:73-75.
- Belitz, H. D., Grosch, W. and Scieberle, P. (2001). *Food Chemistry*, Springer Berlin, Heideberg, New York 5: pp 258–260, 681
- Bene, C. and Heck, S. (2005). Fish and Food Security in Africa NAGA, *World Fish Center Quarterly*, 28 (3): 8-13
- Beula Agnes, S (2013), Nutritional Level in Edible Marine Fish *Parastromateus niger* and its Depletion During Storage. *International Journal of Engineering Science Invention*, 2(2): 51-55.
- Bhandari S, Banjara, M.R.(2014). Micronutrients Deficiency, a Hidden Hunger in Nepal: Prevalence, causes, consequences and solutions. *International Scholarly Research Notices*, 15:1-9.
- Bhatti, H. K.(1943). On the relative value of certain larvivorous fishes from the Punjab, with notes on their habits and habitats. *Indian Journal of Veterinary Science*, 13(4): 315-325
- Bhuiyan, A L. (1964). *Fishes of Dacca*. Asiatic Society of Pakistan, Dacca, pp148
- Bijayalakshim, C, Nagasepam, R.S., Indira, N. and Shomorendra, M. (2014). Estimation of moisture and total lipid content of Estimation of moisture and total lipid content of some small indigenous fishes of Manipur. *International Journal of Science of Research*, 3(12).
- Biswas, A.K. and Abu-zeid, M. (eds) (1997). *Sustainable water development from the perspective of the South : Issues and constraints in River Basin Planning and Management*, , Oxford University Press, New Delhi.
- Blanchet, C., Dewailly, E., Ayotte, P., and Bruneau, S. (2000). Contribution of selected traditional and market foods to the diet of Nunavik Inuit women. *Canadian journal of Dietetic Practice and Research*, 61(2): 50-59
- Boran, G. and Karacam, H. (2011), Seasonal changes in proximate composition of some fish species from the black sea. *Turkish Journal Fisheries and Aquatic Sciences*, 11: 1-5.
- Bordin, K., Kunitake, M. T., Aracava, K. K., and Trindade, C. S. F.. Changes in food caused by deep fat frying-A review, *Archivos latinoamericanos de nutricion*, 63(1): 5-13.
- Borgstrom, G.(1962). Shellfish protein-nutritive aspects. *Fish as food*, 2: 115-147.

- Boyd, C.E. (1998). Water Quality for Pond Aquaculture. Research and Development Series No. 43. International Center for Aquaculture and Aquatic Environments, Alabama Agricultural Experiment Station, Auburn University, Alabama.
- Bratu, A., Mihalache, M., Hanganu, A., Chira, Nicoleta-Aurelia., Todasca, Maria-Cristina and Rosca, S. (2013). Quantitative determination of fatty acids from fish oils using GC-MS method and <sup>1</sup>H-NMR spectroscopy. *UPB Scientific Bulletin, Series B: Chemistry and Materials Science*, 75(2): 23-32
- Cahu C, Salen, E and Lorgeril, M.D. (2004). Farmed and wild fish in the prevention of cardiovascular disease; Assessing possible differences in lipid nutritional values. *Nutrition metabolism and cardiovascular disease* 14:34-41.
- Chakravartty, P., Chakravartty, M., and Sharma, S. (2012). A Survey on the Fish Diversity with Special Reference to the Classified Ornamental Fishes and their Prospects in the Kapla Beel of Barpeta District Science, *The Science Probe*, 1(2): 12-21.
- Chalamaiah, M, Kumar, B. D., Hemalatha, R. and Jyothirmayi, T. (2012). Fish protein hydrolysates. Proximate composition, amino acids composition, antioxidant activities and applications. A review. *Food chemistry*, 135: 3020-3038.
- Charlton, M. (2006). Branched-chain amino acid enriched supplements as therapy for liver disease, *The Journal of nutrition*, 136(1): 295-298.
- Choudhury, P., Dhakad, N.K. and Jain, R. (2014). Studies on Physico-chemical Parameters of Bilawali Tank, Indore (M.P)India, *IOSR Journal Of Environmental Science, Toxicology and Food Technology*, 8(1): 37-40.
- Chukwuemeka, U., Ndukwe G.I. and Audu, T.O. (2008). Comparison of Fatty Acids Profile of Some Freshwater and Marine Fishes, *Journal of Food Safety*, 10: 9-17
- Clark, J. M. (1964). Experimental biochemistry. WH Freeman and Company, USA.
- Craig, S. and Helfrich, L.A. (2002). Understanding fish nutrition feeds and feeding, Virginia Cooperative extension, knowledge for the common wealth): *Virginia Tech Publication*: 420-256.
- CSIR, (1962). Fish and fisheries, Raw materials India, 4:132.
- Dahl, E., Fritzell, J., and Lahelma, E. (2006). Welfare State regimes and health inequalities. In Siegrist, J. and Marnot, M (eds) Social inequalities in health. Oxford University Press, Oxford, 193-222.
- Damsgaard, C.T., Schack-Nielson L, Michaelsen KF, Fruekilde M-B, Hels, O. and Lauritzen, L (2006). Fish Oil affects blood pressure and the plasma lipid profile in healthy Danish infants. *Journal of Nutrition*, 136:94-99.

- Dand, Ch. Baro and Sharma, S. (2014). Ichthyofaunal diversity from Sankosh river, Assam, India, *The Clarion International Multidisciplinary Journal*, 3(1):18-24.
- Daniel Imaobang, E. (2015). Proximate composition of three commercial fishes commonly consumed in Akwa Ibom state, Nigeria, *Internaltional Journal of Multidisciplinary Academic Research*, 3(1): 9-13.
- Das, B. and Sharma, S. (2012). A comparison of fish diversity of Kapili and Jamuna rivers of Karbi Anglong District, Assam. 2012. *The Science Probe*, 1(1): 21-29.
- Das, H. P. (1978). Studies on the Grey Mullet, *Mugil cephalus* (Linnaeus) from the Goa waters. Diss. Ph. D thesis submitted to university of Bombay.
- Das, M., and Sarmah, J. (2014). A Study on Ichthyo-Diversity Of Jia Bharali River, Assam, India. *Reviews of Literature*, 2(3): 1.
- Das, Snehalata P., Sahu, S. K. (2001). Biochemical changes induced by mercury in the liver of penaeid prawns *Penaeus indicus* and *P. monodon* (Crustacea penaeidae) from Rashikulya Estuary East Coast of India, *Indian Journal of Geo-marine Sciences*, 30(4): 246-252.
- Debnath, C., Sahoo, L., Singha A., Yadav, G.S., Datta, M. and Ngachan, S.V. (2014). Protein and mineral composition of some local fishes of Tripura, India. *Indian Journal of Hill Farming*, 27(1): 120-123
- Dhaneesh, K.V., Naushad, K.M, Ajith Kumar, T.T. (2012). Nutritional Evaluation of commercially Important fish species of Lakshadweep Archipelago, India, *PLOS ONE* 7(9): 4539.
- Dixit, A.K. (2015). Study of physico-chemical parameters of different pond water of Bilaspur District, Chhattishgarh, India, *Environmental Skeptics and Critics*, 4(3): 89.
- Dubey, A. K., Shukla, S. K., and Verma, H. (2012). Ichthyo-Diversity of Banisagar Dam at Chhatarpur, Madhya Pradesh, India. *International Journal of Fisheries and Aquaculture*, 2(3): 157-161.
- Dubey, B., Pal, A.K. and Singh, G. (2011). Assessment of ambient particulate matter in coal mining area. Eastern India, *International Journal of Applied Sciences*, 3(1):1-11.
- Dubey, J.P. (1995). Duration of immunity to shedding of *Toxoplasma gondii* oocysts by cats. *Journal of Parasitology*, 81: 410-415.
- Ederm, D.O. (2009). Vitamin A, A review, *Asian Journal of Clinical Nutrition*, 1:65-82.
- Efflong, B.N. and Fakunle, J. (2013). Proximate composition and fatty acid profile in some commercially important fish species from Lake Kainji, Nigeria. *International Journal of Biology, Pharmacy and Allied Sciences*, 2(4): 849-856.

- Elagba, H.A.M., Rabie, A. and Masour, H.M. (2010). Proximate composition , amino acid and mineral contents of five commercial Nile fishes in Sudan. *African Journal of food science*, 4(10):650-654.
- Elvevoll, E. O. and James, D.G. (2000). 'Potential benefits of fish for maternal, fetal neonatal nutrition: a review of literature. *Food, Nutrition and Agriculture*, 27: 28-39
- Esther, W.M., Maroko, Mokaya, Agwala, Ototo, Kobingi Nyakeya, Jane Nyamora.2016. Growth performance of milkfish (*Channos Chanos Forskal*) fed on formulated and non formulated diets made from locally available ingredients in South Coast region, Kenya. *International Journal of fisheries and aquatic studies*, 4(1):288-293.
- Eyo, A.A. (2001). Fish Processing Technology in the tropic, University of Ilorin Press Ilorin, Nigeria, 1-20
- FAO, (2001) The composition of Fish, FAO in partnership with Support unit for International Fisheries and Aquatic Research, SIFAR.
- FAO/WHO. (2001). Human vitamin and mineral composition of some selected fresh water fishes in Nigeria, *Journal of Food. Safety*, 9: 52-55.
- Farid, F.B., Latifa, G.A, Nahid, M.N and Begum, M. (2014). Comparative study of dry and pickle salted shoal (*C.strialus*; Bloch, 1801) at room temperature (27-310c). *International Journal of Fisheries and Aquatic Studies*, 2(1): 157-163.
- Farzana, A., Hafeez-ur-Raham, M., Ashraf, M. and Iqbal, K.J. (2013). Body composition of feather back notopecterus notopecterus and Rita rita from Balloki Headworks-Pakistan, *Journal of Agriculture Food and Applied Science*, 1(4): 126-129.
- Fawole, O. O., Ogundiran, M. A., Ayandiran, T. A., and Olagunju, O. F. (2007). Proximate and mineral composition in some selected fresh water fishes in Nigeria. *Journal of Food Safety*, 9: 52-55.
- Felt, O, Buri, P, Gurny, R. (1980). Chitosan: A unique Polysaccharide for drug delivery. *Drug Development and Industrial Pharmacy*, 24:979-993
- Firlianty, E. Suprayinto, Hardoko, H. Nursyan .(2014). Protein profile and amino acid profile of vaccum drying and freeze drying of family Channidae collected from central Kalimantan, Indonesia, *International Journal of Biosciences*, 5(8): 75-83
- Folch, J., Lees, M., and Sloane-Stanley, G. H. (1957). A simple method for the isolation and purification of total lipids from animal tissues. *Journal of Biological Chemistry*, 226(1): 497-509.
- Foran, J.A., Carpenter, D.O., Hamilton, M.C., Knuth B.A. and Schwager, S.J.(2005). Rish-Based consumption advice for farmol Atlantic and wild pacific salmon contaminated with dioxin like compounds. *Environmental Health Perspective*, 33: 552-556.

- Fournier, V., Juaneda, P., Destailats, F. F., Dionise, P. Lambelet, J.L. and Berdeaux, O. (2006). Analysis of eicosapentaenoic and docosahexaenoic acid geometrical isomers formed during fish oil deodorization. *Journal of Chromatography A*, 1129: 21-28.
- Friedberg, C. E., Janssen, M. J., Heine, R. J. and Grobde D.E. (1998). Fish oil and glycemic control in diabetes. A meta-analysis. *Diabetes care*, 21:494-500.
- Fumio, K., Yasuo, K., Terue, K., Yoshimori, K, Hideki, K, Baatar, P, Judger, O. and Uliziburen, C. (2012). Influence of essential trace minerals and micronutrient insufficiencies on harmful metal overload in a Mongolian patient with multiple sclerosis. *Current Aging Science*, 5: 115-125.
- Ghelichpour, M. and Shabanpour, B. (2011). The investigation of proximate composition and Protein solubility in processed mullet fillets. *International Food Research Journal*, 18(4): 11343-13475
- Grant, W. B. (1997). Dietary links to Alzheimer's disease. *Alzheimer's Disease Review*, 2: 42-55.
- Haliloglu, H.I., Bayer, A. Sirkecioglu, A.N. Ara. SM. And Atamanalp, M. (2004). Comparison of fatty acid composition in some tissues of rainbow trout (*Oncorhynchus mykiss*) living in seawater and freshwater. *Food Chemistry*, 86: 55-59.
- Harper, Charles R., and Terry A. Jacobson. (2013). The fats of life: the role of omega-3 fatty acids in the prevention of coronary heart disease. *Archives of internal Medicine*, 161(18): 2185-2192.
- Hels, O., Hassan, N., Tetens, H. and Thilsted, S.H. (2002). Food consumption energy and nutrient intake and nutritional status in rural Bangladesh : Changes from 1981-82 to 1995-96. *European Journal of Clinical Nutrition*, 57:586-594.
- Hei, A. and Sarojanlini, C. (2012). Proximate composition, macro and micro elements of some smoke dried hill stream fishes from Manipur, India. *Nature and Science*, 10(1): 59-65
- Hemalatha, B., Puttaiah, E.T.(2014). Fish Culture and Physico-chemical Characteristics of Madikoppa Pond, Dharwad Tq/Dist, Karnatak. *Hydrology Current Research*, 5(1): 162.
- Hossain, M.A., Afsana, K. and Azad Shah, A.K.M.(1999). Nutritional value of some small indigenous fish species (SIS) of Bangladesh. *Bangladesh Journal of Fish*, 3(1):77-85.
- Hsich, B.T., Chang, C.Y., Chang, Y.C., and Cheng, K.Y. (2011). Relationship between the level of essential metal elements and in human hair and coronary heart disease. *Journal of Radionalytical and Nuclear Chemistry.*, 290: 165-169.
- Hulyal, S.B. and Kaliwal, B.B. (2011). Seasonal variations in physico-chemical characteristics of Almatti reservoir of Bijapur district, Karnataka State, *International Journal of Environmental Protection*, 1(1): 58-67.

- Huss, H.H. (2005), Quality and Quality changes in fresh fish. FAO Fisheries Technical paper No.348, Food and Agriculture Organization (FAO) of the United Nations, Rome, Italy.
- Hussain M, (1999), Design of Two Standard Steel Body Fishing Crafts for all Season Operation in the Bay of Bengal, National Marine Fisheries Seminar
- Hyland, K. (2007), Inherited disorders affecting dopamine and serotonin: critical neurotransmitters derived from aromatic amino acids. *The Journal of nutrition* 137(6): 1568-1572.
- Imaculate, K., Jeyasanta and Patterson, J. (2013). Total lipid, phospholipid and Cholesterol contents of six commercially important fishes of Tuticorin, Southeast Coast of India. *Sky Journal of food Science*, 2(6): 47-53.
- Islam, M., Ahmed, A.M., Barman, B.(2014). Studies on physio-chemical properties of water in some selected sites of Deepor Beel (Ramsar site), Assam, India. *The Clarion*, 3(2): 25-32.
- Islam, R., Mondal, L. K., Sheikh, L., Islam, Sk., and Atiqur, R .(2013).Nutritional Science and Food Technology, *Herbal Open Access Journal*, ISSN 2054-1848.
- Jabeen, F, Choudhury H. and Sarma D. (2017). Length–weight relationships of *Barilius bendelisis* (Hamilton, 1807), *Barilius shacra* (Hamilton, 1822) and *Barilius barna* (Hamilton, 1822) from Manas River in Assam, India, *Journal of Applied Ichthyology*, 33:607-608
- Jain, Y. and Dhamija, S.K. (2000). Studies on a polluted lentic water body of Jabalpur with special reference to its physico chemical and biological parameters. *Journal of Environment and Pollution*, 7(2):83-87.
- Jakhar, J.K., Pal, A.K, Devivaraprasad, A., Reddy, N.P., Sahu, G. Venkateshwarlu and Vardi H.K. (2012). Fatty acid composition of some selected Indian fishes. *African Journal of Basic and Applied Sciences*, 4(5):155-160.
- Jayasree, V, Panilekar, A.H., Wahidull, S. and Kamat, S.Y.(1994). Seasonal changes in biochemical composition of *Holothuria leucospilota* (Echinodermata). *Indian Journal of Marine Science*, 23: 117-119
- Jessica R. Bogard. Shakuntala, H. Thilsted, G., Marks, C., Wahab, M.A., Hossain, Mostafa A.R. Jakorsen, J., and Stangoulis, J. (2015). Nutrient composition of important fishes species in Bangladesh and potential contribution to recommended nutrient intakes. *Journal of Food Composition and Analysis*. 42: 120-133.
- Jiang, J., Lu S, Zhang, H., Liu, G., Lin, k., Huang, W., Luo, R., Zhang, X., Tang, C. and Yu, Y. (2015).Dietary intake of human essential elements from a total diet study in Shenzhen Guangdong Province, China. *Journal of Food Composition and Analysis*, 39: 1-7.



- Kaisar, M.A., Rasul, M.G., Mansur, M.A., Khan, M., Mazumder, B.X., and Hasan, M.M. (2017). Quality aspect and heavy metal contents of fresh and dry salted Hilsa (*Tenualosa Ilisha*) of Bangladesh. *International Research Journal of Biological Science*, 6(2): 16-21.
- Kawarazuke, N, Bene, C. (2011). The potential role of small fish species in improving micronutrient deficiencies in developing countries. *Building evidence Public Health Nutrition*, 14: 1927-1938.
- Kottelat, M. and Whitten, T.(1996). Freshwater biodiversity in Asia with special reference to fish world bank technical paper, Washington DC, 343: 1-59.
- Kumar, A., Kumar S, Kanan, D., Babu Rao, N., Thirunavukkarasu P. and Soundarapandiyan P. (2014).Evaluation of Nutrients in Trash Fish, Parangipettai (South East Coast of India). *International Journal of Research in Fisheries and Aquaculture*, 4(2): 82-85.
- Kumar, D. and I.S. Yadav.(1992). Taramira (Eruca Sative Mill) research in India present status and future programme on yield enhancement. *Advances in Oilseed Research*, 1: 327-358.
- Kumar, M. P., Annathi, A.R., Shakila, R.J. and Shanmugan, S.A. (2014). Proximate and major mineral composition of 23 medium sized Marine fishes landed in the Thoothukudi Coast of India. *Journal of Nutrition and Food Sciences*, 4: 1
- Kumaran, R., Ravi, V., Gunalan B., Murugan, S. and Sundramanickam, A. (2012). Estimation of proximate amino acids, fatty acids and mineral compositions of mullet (*Mugil cephalus*) of Parangipettai, Southeast Coast of India. *Advances in Applied Sciences Research*, 3(4): 2015-2019
- Kwansa-Ansah, E.E., Akota J, Adimalo, A.A. and Nam, D. (2012). Determination of toxic and essential elements in Tilapia species from Vilta lake with Indictivety coupled Plasma-Mass Spectrometry. *International Journal of Environment Protection*, 2:30-34.
- Liu, R. H.(2003). Health benefits of fruit and vegetables are from additive and synergistic combinations of phytochemicals. *The American journal of clinical nutrition*,78(3): 517-520.
- Love, R. M. (1957). The biochemical composition of fish. *The physiology of fishes*, 1: 401-418.
- Mahananda, M.R., Mohanty, B.P., Behera, N.R. (2010). Physico-chemical analysis of surface and ground water of Bargarh District, Orissa, India. *International Journal of Research and Reviews in Applied Sciences*, 2(3): 284-295.
- Mahanty, A., Ganguli, S., Verma, A, Saho, S, Mitra, P., Paria, P., Sharma, A.P., Singh, B..K., Mahanty, B.P.(2014). Nutrient profile of small indiginous fish Puntius sophore: Proximate composition, Amino acid, fatty acid and Micronutrient profiles. *The National Academy of Sciences, India*, 37(1): 39-44.

- Marchioli, R.(2002). Early protection against sudden death by n-3 polyunsaturated fatty acids after myocardial infarction : Time course analysis, of the result of gissi prevenzione. *Circulation*, 105:1897-1903
- Marichamy, G, Badhul, Haq, M.A., Vignesh, R., Sedhuraman, V. and Nagar, A.R. (2012). Assessment of proximate and mineral composition of Twenty edible fishes of Parangspettai coastal waters. *International Journal of Pharma and Bio Sciences*, 3 (2).
- Mazid, A., Bastami, K.D., Khoshnood, R. and Eshaghi, N.(2011). Survey of some chemical compositions and fatty acids in cultured common carp (*Cyprinus carpio*) and Grass crap (*Ctenophar yngodon idella*) Noshahr Iran. *World Journal of Fish Marine Science*, 3: 533-538.
- Mazoffarian, D., Aro, A. and Willett,W.C. (2009). Health effects of trans-fatty acids: experimental and observational evidence. *Europian Journal of Clinical Nutrition*, 63(Suppl 2): 5-21
- Mozaffarian, D., Ascherio A, Hu, F.B, Stampfer, M. J., Willett, W.C, Siscovick, D.S. and Rimm, E.B. (2005). Interplay between different polyunsaturated fatty acids and risk of coronary heart disease in men. *Circulation*, 111(2):157-64.
- Mbatia, B., Adlercrentz, D., Adler Creutz, P., Mahadhy, A., Mulaa, F. and Mattiasson, B.(2010). Enzymatic oil extraction and positional analysis of w-3 fatty acids in Nile perch and salmon heads, *Process Biochemistry*, 45:815-819.
- Meghadam, H.N., Mesgaran, M.D., Najafabadi, H.J. (2007). Determiration of chemical composition mineral contents and protein quality of Iranian Kilka fish meal. *International Journal Bultry Science*, 6:354-361.
- Menon, A.G.K., Devi, K.R. and Viswanath, W. (2000). A new species of *Puntius* (Cyprinidae : Cyprininae) from Manipur, India, *Journal of. Bombay Natural History Society.*, 97(2):263-268.
- Meyer, A, Eskandari, S, Grallath, S, Rentsch, D. (2006). Al GAT1, a high affinity transporter for gamma-aminobutyric acid in *Arabidopsis thaliana*. *Journal of Biological Chemistry*, 281(11):7197-204.
- Minkin, S.E., Rahman, M.M and Halder, S.(1997). Fish biodiversity, human nutrition and environmental restoration in Bangladesh. In *Openwater Fisheries of Bangladesh*. The University Press Limited. Dhaka, Bangladesh. 75-88
- Mitsch, W.J., Gosselink J.G.(1993). *Wetalnds*. 2nd edition. Van Nostrand-Reinhold, New York.
- Mogobe, O., Mosepele, K. and Masamba, W.R.L. (2015). Essential mineral contents of common fish species in Chanoga, Okavango Delta, *Botswana*, 9(9): 480-486.
- Mohanty, B.P., Paria P., Das D., Ganguly S., Mitra P, Verma A., Saho S, Mahanty A., Md. Aftabuddin, Behera B.K., Sankar T.V. and Sharma, A.P. (2012). Nutrient profile of

- Giant river catfish *Sperata seenghala* (Skyles). *The National Academy of Sciences. India*, 35 (3): 155-161
- Mohanty, B.P. (2011) Fish as Health Food In: Handbook of Fisheries and Aquaculture: ISBN:978-81-7164-106-2 2nd edn., ICAR-DKMA, New Delhi, 35:843-861
- Molla, A. H., Saha, C., Ahsan, M. S., Talukder, S. M., and Alam, M. T. (2007). Physico-chemical and microbiological investigation of the lipid from Bangladeshi fresh water fish *Mystus vittatus*. *University Journal of Zoology, Rajshahi University*, 26: 21-25.
- Molur, S. and Walker, S. (1998). Report of the Workshop “Conservation and Management Plan for fresh fishes of India”. Zoo Outreach Organisation, Conservation Specialist Group of India, Coimbatore, India.
- Manthey- Karl, M., Lehmann, I., Ostermeyer, U and Schroider, U.(2016). Natural Chemical composition of commercial fish species: Characterisation of Pangasius, Wild and Farmed Turbot and Barramund; *Foods*, 5: 58.
- Mookerjee, H.K., Ganguly, D.N. and Mallik, S.C. (1950). On the History of *Ophicephus gachua*, *Zoological Society Bengal*, 3(2): 169-179
- Mozaffarian, D., Benjamin, E. J., Go, A. S., Arnett, D. K., Blaha, M. J., Cushman, M., Turner, M. B. (2015). Heart disease and stroke statistic (2015). A report from the American Heart Association. *Circulation*, 131(4): 29-39.
- Mozaffarian, M.D., Razenn, N.L. Lewis, H. K., Gregory, L.B. Russell, P.T. and Devis S, S .(2003). Cardiac benefits of fish consumption may depend on type of fish meal consumed. *Circulation*, 107: 1372-1382.
- Mridha, M.A.R., Narejo, NT, Uddin, M.S., Kabir M.S., Karim, M and Chowdhury, M.B.R. (2005). Resistance of *Aeromonas* spp. In the fish, *catla catla*, against some antibacterial agents (SC), *Pakistan Journal of Zoology*, 37(4):158.
- Nair, P.G.V. and Mathew, S .(2001). Biochemical composition of fish and shell fish, Central Institute of Fisheries Technology, Cochin-682029 ICAR
- Nath, A. K. and Banerjee, B. (2012). Comparative evaluation of body composition of Hilsa, *Tenualosa ilisha* (Hamilton,1822), in different size groups with special reference to fatty acids, in Hooghly estuarine system, West Bengal, India. *Indian Journal of Fish*, 59(2): 145–146
- Nazeer, R.A., Sampath Kumar, N.S. Naqash, S.Y. Radhika, R. Kishore, R. and Bhatt, S.R. (2009). Lipid profiles of Threadfin beam (*Nemipterus japonicas*) organs. *Indian Journal of Marine Sciences*, 38 (4): 461-463.
- Neil, J.S. (1997), Fish consumption oils and coronary heart diseases. *The American Journal of Clinical Nutrition*, 65: 1083-1086.

- Nestel, P.J.N. (2000). Fish oil and cardiovascular disease lipids and arterial function. *American Journal of Clinical Nutrition*, 71: 228-231.
- Nijinkoue, J.M., Gouado I., Tchoumboungang, F.T., Yanga, J.H., Ndinteh, D.T., Fodjo, C.Y. and Schweigert, F.J. (2016). Proximate composition, mineral content and fatty acid profile of two marine fishes from Cameroonian coast: *Pseudotolithus typus* and *Pseudotolithus elongatus*. *NFS Journal*, 4: 27-31
- Nordov, A., Marchioli R., Arnesen H. and Videback J. (2011). n-3 Polyunsaturated Fatty Acids and Cardiovascular Diseases. *Lipids*, 36(1): 127-129
- Newsad, A.K.M.A. (2007). Participatory training of trainers –A new approach applied in fish processing. Bangladesh Fisheries Research Forum, Dhaka, 328.
- Naushad Ali, S.S., Tiwari, B.K., Singh, P., Tripathi, V., and A.B. Afidi. (2013). Biochemical variation among some species of pond fishes. *Global Journal of Biology, Agricultural and Health Sciences*, 2(2):1-6
- O. Guizani, S. E., and Nizar, M. (2015). Atlantic mackerel amino acids and mineral contents from the Tunisian middle eastern coast. *International Journal of Agricultural Policy and Research.*, 3(2):77-83
- Oduor-Odote, P.M. and Kazungu, J.M. (2008). The body composition of low value fish and their preparation into higher value snack food. *Western Indian Ocean Journal of Marine science*, 7: 111–117
- Ojewola, G.S., Otteh, J.O. and Abasiokong, S.F. (2006). Effect of African Yam Bean Meat Based Diets Supplemented at varying levels with nutraceutical Xylase Enzyme on Broiler starter. *Agricultured Journal*, 3:172-175.
- Oksuz, A., Ozyilmaz, A., Aktas, M., Gercek, G., and Motte, J. (2009). A comparative study on proximate, mineral and fatty acid compositions of deep seawater rose shrimp (*Parapenaeus longirostris*, Lucas 1846) and red shrimp (*Plesionika martia*, A. Milne-Edwards, 1883). *Journal of Animal Veterinary Advances.*, 8(1): 183–189.
- Olsen, S.F. and Secher N.J. (2000). Low consumption of sea food in early pregnancy as a risk factor for preterm delivery: Prospective cohort study. *BMJ* 324-447
- Oluwaniyi, O.O., Dosumu, O.O. (2009). Preliminary Studies on the effect of processing methods on the quality of three commonly consumed marine fishes in Nigeria. *Biokemistri*, 21(1): 42-48
- Oramadike, C.E. (2015). Proximate composition and technological properties of Wild African catfish *Chrysichthys nigrodigitatus* (Lacepede 1802). *American Journal of Agricultural Science*, 2(2): 54-58

- Orban, E., Nevigato T., Masci M., Di Lena G., Casini I., Caproni R., Gambelli L., De Angelis P., Rampacci M. (2007). Nutritional quality and safety of European perch (*Perca fluviatilis*) from three lakes of Central Italy. *Food Chemistry*, 100: 482-490.
- Owaga, E.E, Onyango C, Njoroge, .A. (2010). Influence of selected washing treatments and dry temperatures on proximate composition of Dagaa (*Rastrincobola argentea*), a small pelagic fish species. *African Journal of Food Agriculture Nutritional Development*, 10(7):1-14.
- Parihar, M.S., and Dubey, A.K. (1995). Lipid peroxidation and ascorbic acid status in respiratory organs of male and female fresh water cat fish *Heteropneustes fossilis* exposed to temperature increase *Comp. Biochem Physiology*, 112: 303-313
- Pawar, S. and Sonawane, S.R. (2013). Fish Muscle protein Highest Source of Energy. *International Journal Of Biodiversity and Conservation*, 5(7): 433-435
- Piggot, G.M. and Tucker, B.W. (1990). *Seafood: Effects of Technology on Nutrition*, Marcel Dekker Inc., New York
- Rahaman, M. A., Shikha F.H., Hossian M. I., Asadujjam M., Nahar N. and M.M Rahaman. (2014). Comparative Study on Proximate Composition and Heavy Metal Concentration of *Amblypharyngodon mola*, *Channa punctatus* Collected from Pond Water and Open Water. *American-Eurasian Journal of Toxicological Sciences*, 6(4):131-135.
- Rahman, A. K. (1989). *Freshwater fishes of Bangladesh*. Zoological Society of Bangladesh, Department of Zoology, University of Dhaka, 364
- Rainboth, W. J.(1996). *Fishes of the Cambodian Mekong*. FAO Species Identification Field Guide for Fishery Purposes, FAO, Rome, 265
- Ramanujam, M.E., Devi, K.R., Indra, T. J. and T. Murugavel (2010). Vertebrate survey at Adyar Creek and estuary. Report submitted by Pitchandikulam Forest consultants to Chennai Rivers Restoration Trust. pp67.
- Rao, B.M., Murthy, L.N., Mathew, S., Asha, K.K., Sankar, T.V. and Prasad, M.M. (2012). Changes in the nutritional profile of godavari hilsa shad, *tenualosa ilisha* (hamilton, 1822) during its anadromous migration from bay of bengal to the river Godavari. *Indian Journal of Fish*, 59(1): 125-132.
- Ravichandran, S., Kumaravel, K., Rameshkumar, G., and Ajith Kumar, T. T. (2010). Antimicrobial peptides from the marine fishes. *Research Journal of Immunology*, 3(2): 146-156.
- Ray, N. and Dhar, B. (2012). Study of Bioenergetics, Proximate Composition and Microbiological status of leaf fish *Nandus nandus* (Ham. 1822). *Keanean Journal of Science*, 1: 6974.

- Riehl, R and Baensch, H.A. (1996). Aquarien Atlas, Band 1. 10th Editio. Mergus Verlag GmBH, Melle, Germany, 992
- Robert E. Burch, Henry K. J. Hahn, James F. Sullivan.(1975). Newer aspects of the roles of zinc, manganese, and copper in human nutrition. *Clinical chemistry*, 21(4): 501-520.
- Roger, P., Elie, F., Rose, L., Martin, F., Jacop, S., Mercy, A .B. and Felicite, M.T. (2005), Methods of preparation and nutritional evaluation of Dishes consumed in a malaria endemic zone in Cameroon (Ngali II). *African Journal of Biotechnology.*, 4(3): 273-278.
- Roos, N., Islam, M., Thilsted, S.H. (2003). Small fish is an important dietary source of vitamin A and calcium in rural Bangladesh. *International Journal of Food Science and Nutrition*, 54: 329-339.
- Roos, N., Leth, T., Jakobsen, J., Thilsted, S.H. (2002). High vitamin A content in some small indigenous fish species in Bangladesh: perspectives for food-based strategies to reduce vitamin A deficiency. *International Journal of Food Sciences and Nutrition*, 53: 425–437.
- Rosenquist, Thomas H., Anne Ratashak, S. and Selhub, J. (1996). Homocysteine induces congenital defects of the heart and neural tube: effect of folic acid. Proceedings of the *National Academy of Sciences*, 93(26): 15227-15232.
- Roy, S., Ahmed, M.I., Khatun, M.M, Bin Sayoed M.M., Saifuddin Shah M. and Golam Sarower M. (2014), Antioxidant Potential and nutrient content of selected small indigenous species of fish pharmacology online. sitae. *It Archieves*, 2: 48-53.
- Rubio-Rodriguez, N., Beltran, S., Jainme, S.M., de Diego, M.T. Sanz, J.R. Carballido. (2010). Production of Omega-3 polyunsaturated fatty acid concentrates. A review, *Innovative Food Science and Emerging Technologies*, 11 :1-12.
- Russo, G. L. (2009). Dietary n-6 and n-3 polyunsaturated fatty acids: From biochemistry to clinical implications in cardiovascular prevention. *Biochemical pharmacology*, 77: 937-946.
- Salito, H., Kenji, I. and Murase, T. (1997). The fatty acid composition in Tuna (Bonito and *Rithynnus pelamis*) caught at three different localities from Tropic to temperate. *Journal of Science*, 73:53-59.
- Sankar, T.V., Anandan, R., Mathew, S, Asha, K.K., Lakshmanan, P.T., Varkey, J, Anesh P.A. and Mahanty, B.P. (2013). Chemical composition and nutritional value of Anchovy (*Stolephorus commersonii*) Caught from Kerala Coast, India. *European Journal of Experimental Biology*, 3(1): 85-89
- Sarkar, A, Upadhya, B. (2013). Assessment of the Variations in Physico-Chemical Characteristics of Water Quality of the Wetlands in District Mainpuri (UP) India. *International Journal of Geology, Earth and Environmental Sciences*, 3(1): 95-103.

- Sen, N. and Biswas, B.K.(1994). On a new species of Nangra Day (Pisces : Siluriformes: Sisoridae) from Assam. N.E. India with a note on comparative studies of other known species. *Records of Zoological Survey of India*, 94 (2-4):441-446.
- Sharma, M.S., Sharma, L.L. and Durve, V.S. (1984). Eutrophication of the lake Pichhola in Udaipur, Rajasthan. *Poll Research*, 39-44.
- Shrivastava,S. and Kanungo,V. K. (2013). Physico-chemical Analysis of pond water of Surguja District Chattisgarh,India. *International Journal Of Herbal Medicine*, 1(4): 35-43.
- Sidhu, K.S. (2003). Health benefits and potential risks related to consumption of fish or fish oil. *Regulatory Toxicology and Pharmacology*, 38: 3:336.
- Silva, J.J., Astorage, G, Cubillos A. and Masson, L. (1991). Active Rheumatoid Arthritis : effect of dietary supplementation de Marco de
- Singh, R.P. and Mathur, P. (2005). Investigation of variations in physico-chemical characteristics of a fresh water reservoir of Ajmer city, Rajasthan. *Indian Journal of Environmental Sciences*, 9(1): 57-61.
- Siyanbola, M F. (2016). Proximate composition and amino acid profiles of snakehead (*Parachanna obscura*) mudfish (*Clarias gariepinus*) and African pike (*Hepsetus Odoe*) in Igboho dam, South West Nigeria. *Global Journal of Fisheries and Aquaculture*, 4(4):317-324.
- Stancheva, M., Merdzhanova, A., Dobрева, D. A., and Makedonski, L. (2010). Fatty acid composition and fat-soluble vitamins content of sprat (*Sprattus sprattus*) and goby (*Neogobius rattan*) from Bulgarian Black Sea. *Ovidius University Annals of Chemistry*, 21(1): 23-28.
- Sterba, G. (1962) *Freshwater Fishes of The World*. Vista Books, London, 878
- Susan, E Carlson, John Colombo, Byron J Gajewski, Kathleen M Gustafason, David Mundy, John Yeast, Michael K Georgieff, Lisa A Markley, Elizabeth H Kerling and D Jill Shaddy (2013). DHA supplementation and pregnancy outcomes. *American Journal of Clinical Nutrition*, 97(4):808-815.
- Sutharshiny, S., and Sivashanthini, K. (2011). Total lipid and cholesterol content in the flesh of the five important commercial fishes from waters around Jaffna Peninsula, Sri Lanka. *International Journal of Biology Chemistry*, 6: 161-1969.
- Swaranlatha, N. and Rao A.N. (1998). Ecological studies of Banjara lake with reference to water pollution. *Journal of Environmental Biology*, 19(2):179-186.
- Talwar, P.K. and Jhingran, A.(1991). *Inland fishes of India and adjacent countries*. Oxford and IBH Publishing Co. New Delhi. 2:115-6.
- Tanvir, H.M., Jilani Chowdhury A.K., Sarwer, M.G., Hasan, M.M. and Mst. S. Sharmin. (2016). *American Journal of food and nutrition*, 6(4):117-125.44.

- Tasbozan, O., Gokcee, M. A., Celik, M., Tabakoglu, S.S.; Kucukgulmez, A. and Basusta, A. (2013). Nutritional Composition of Spiny eel (*Mastacembelus mastacembelus*) Caught from the Ataturk Dam Lake in Turkey, *Journal of Applied Biological Sciences*, 7(2): 78-82
- Thilsted, S.H., Roos, N. and Hossain, N. (2005). The role of small indigenous fish species in food and nutrition security in Bangladesh. NAGA. *The ICLARM Quarterly*, 1:13-15.
- Tsagay, T., Natarajan P, Tesfay Z, (2016). Proximate and mineral composition of some commercially important fish species of tekeze reservoir and lake Hashenge, Ethiopia. *Journal of fisheries and aquatic studies*, 4(1): 288-293.
- Turkmen, A., Aro, T., Nurmi, T. and Kallio, H. (2005). Heavy metals in three commercially valuable fish species from Iskenderun Bay of Northern East Mediterranean Sea. *Turkey Food Chemistry*, 91:167-172.
- Varljen, J, Sulic, S., Brmalj,J., Baticic, L., Obersnel, V. and Kapovic, M.. (2003). Lipid Classes and Fatty acid Composition of *Diplodus Vulgarus* and Conger conger originating from the Adriatic Sea. *Food Technology and Biotechnology*, 41(2): 159-156.
- Venugopal, V., and Shahidi, F. (1996) . Structure and composition of fish muscle. *Food Reviews International*, 12(2): 175-197.
- Vijayakumar, N. Sakthivel, D. and Anandhan, V. (2014). Proximate composition of clupeidae and Engraulidae inhabiting Thengaithittu Estuary Puducherry, South East Coast of India. *International Journal of Science Inventions Today*, 3(3): 298-309.
- Viswanath, W. and Shant, K. (2004). A new nemacheiline fish of the genus *Schistura* McClelland (Cypriniforms : Balitoridae) from Manipur, India. *Journal of Bombay Natural History and Society.*, 101:138-140.
- Watanabe, T., Kiron, V. and Satoh, S.(1997). Trace minerals in fish nutrition. *Aquaculture*, 151: 185-207.
- West, Keith P. (2002), Extent of vitamin A deficiency among preschool children and women of reproductive age. *The Journal of Nutrition*, 132(9): 2857-2866.
- WHO/FAO/UNU expert consultation. Geneva, Switzerland. (WHO technical report series, No. 935)
- Yadav, K.K., Gupta, N., Kumar, V., Arya, S., and Singh, D. (2012), Physico-chemical analysis of selected ground water samples of Agra city, India. *Recent Research in Science and Technology*, 4(11): 51-54.
- Yadav, P., Yadav, V.K., Yadav, A.K. and Khare, P.K. (2013). Physico-chemical characteristics of a fresh water pond of Orai, U.P., Central India. *Octa Journal of Biosciences*, 1(2): 177-184.



- Yanez, E., Ballester, D. and Monckeberg, F. (1976). Enzymatic fish protein hydrolyzate: chemical composition, nutritive value and use as a supplement to cereal protein. *Journal of Food Science.*, 41: 1289-1292.
- Young, Vernon R., and Pellett Peter L. (1994), Plant proteins in relation to human protein and amino acid nutrition. *The American Journal of Clinical Nutrition*, 59(5): 1203-1212.
- Zhimin Zhang, Lianhua Liu, Congxin Xie, Dapeng Li, Jun Xu, Meng Zhang, Min Zhang .(2014). Lipid Contents, Fatty Acid Profiles and Nutritional Quality of Nine Wild Caught Freshwater Fish Species of the Yangtze Basin, China. *Journal of Food and Nutrition Research*, 7: 388-394.
- Zweigh, R.D. (1989). Evolving water quality in a common carp and blue tilapia high production pond. *Hydrobiologia*, 171: 11-21.