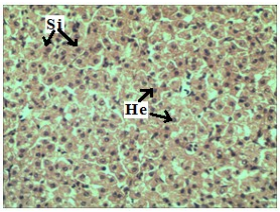
Electronic Supplementary Material (ESI) for Environmental Science: Nano.

Supplementary figures:

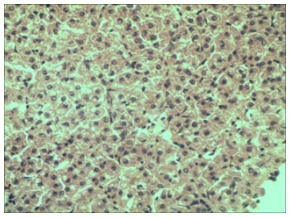
Figure: Sp-1) Histopathology of liver, ovary and testis.

Effect of laccase-nanoparticle conjugates on liver.

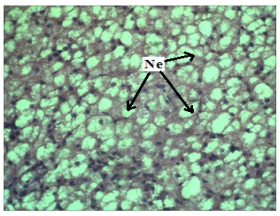
Fish
(Normal hepatocytes)



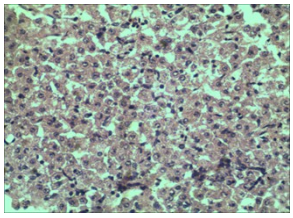
Fish + Enz + nano
(Normal hepatocytes)



Fish + BPA
(Necrotic hepatocytes)

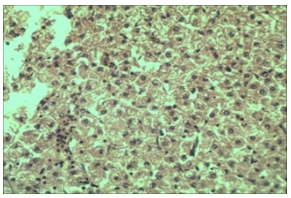


Fish + conjugates + BPA
(Almost normal hepatocytes)



Fish + Enz + BPA

(Almost normal hepatocytes)

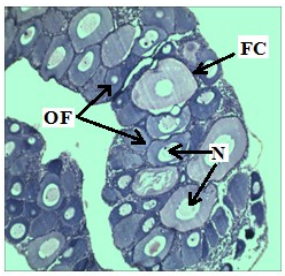


[Si-Sinusoids, He- Hepatocytes, Ne- Necrotic.]

Effect of laccase-nanoparticle conjugates on Ovary.

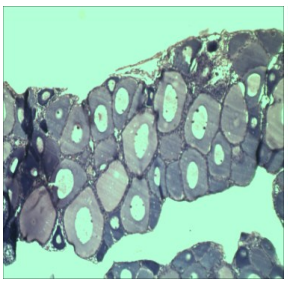
Fish

(Immature ovary)



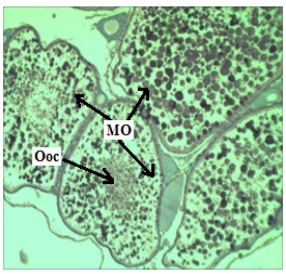
Fish + enzyme + nano

(Immature ovary)



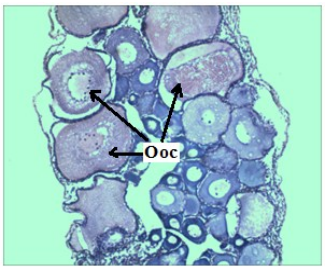
Fish + BPA

(Mature ovary)



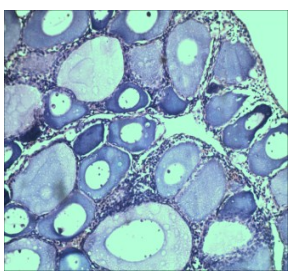
Fish + enzyme + BPA

(Developing ovary)



Fish + conjugates + BPA

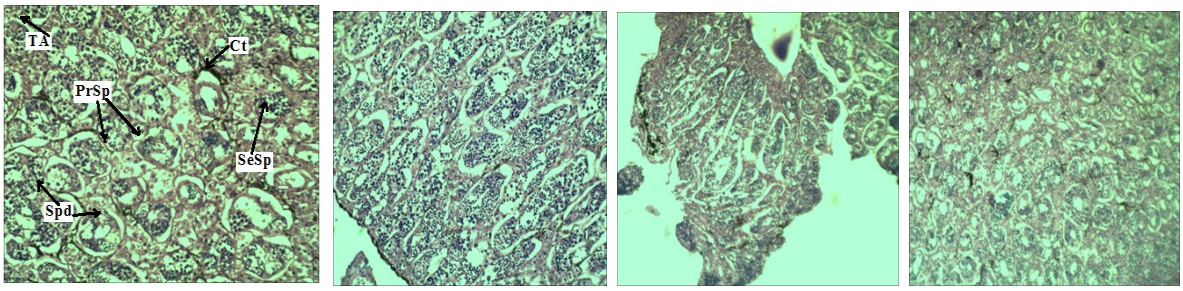
(Almost immature ovary)



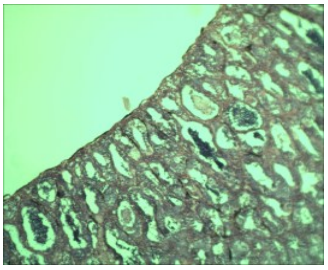
[FC-Follicle cells, OF-Ovigerous folds, N-Nucleus, Ooc-Oocytes, Mo-Mature oocytes.]

Effect of laccase-nanoparticle conjugates on Testis.

Fish **Fish + enzyme + nano** **Fish + BPA** **Fish + enzyme + BPA**



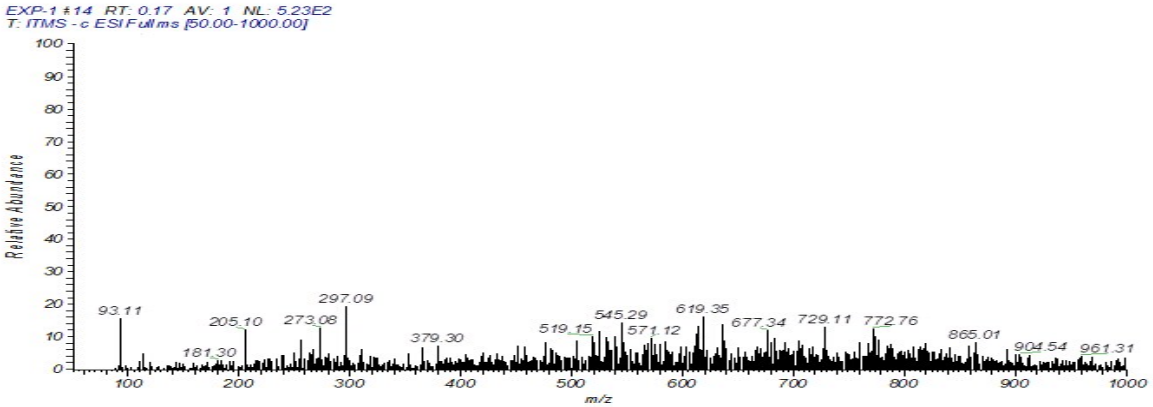
Fish + conjugate + BPA



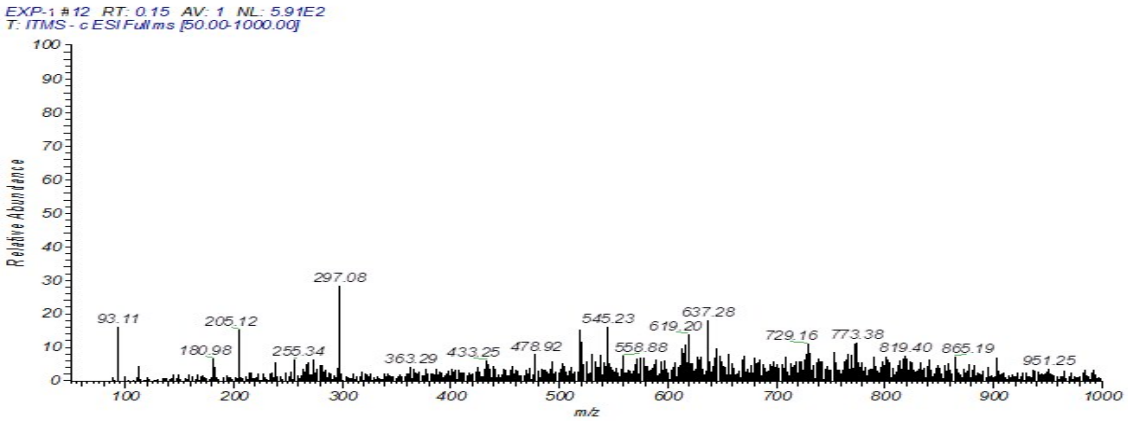
[TA-Tunica albuginea, Ct-Connective tissue, PrSp & SeSp- Primary &secondary spermatocytes, Spd-Spermatids.]

Figure: Sp-2) Dtermination of significant removal of BPA using conjugates using ESI-MS of liver sample.

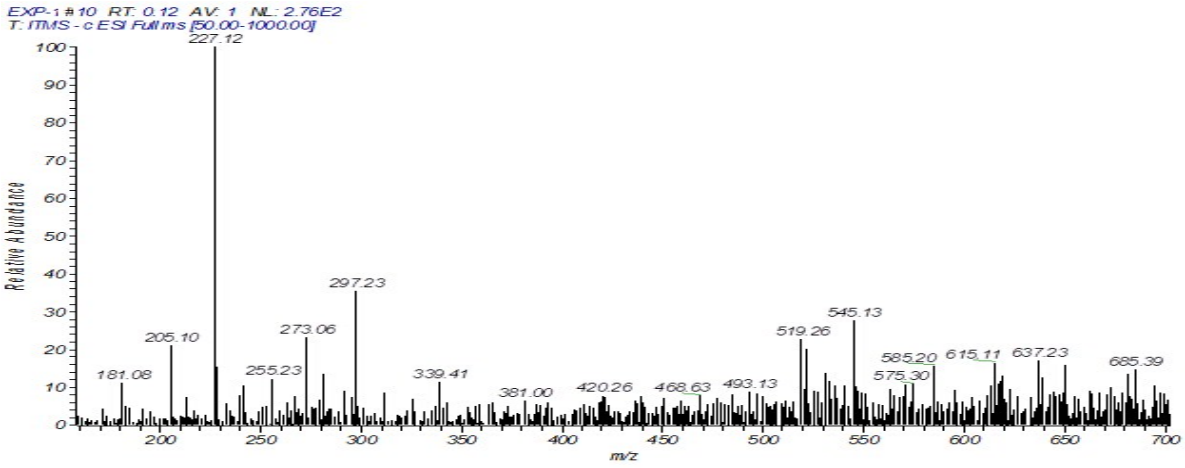
Only fish



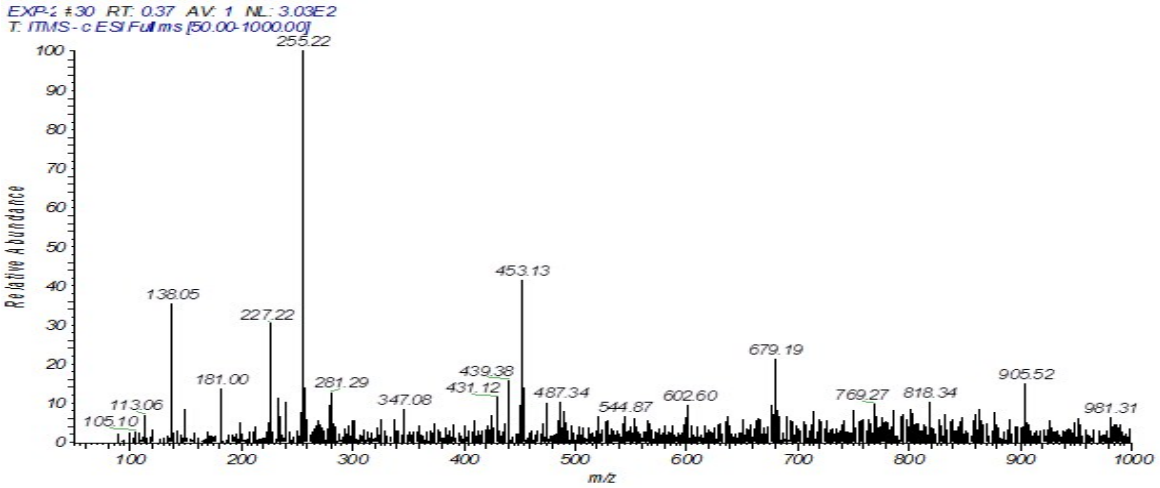
Fish + enzyme + nano



Fish + BPA



Fish + enzyme + BPA



Fish + conjugate + BPA

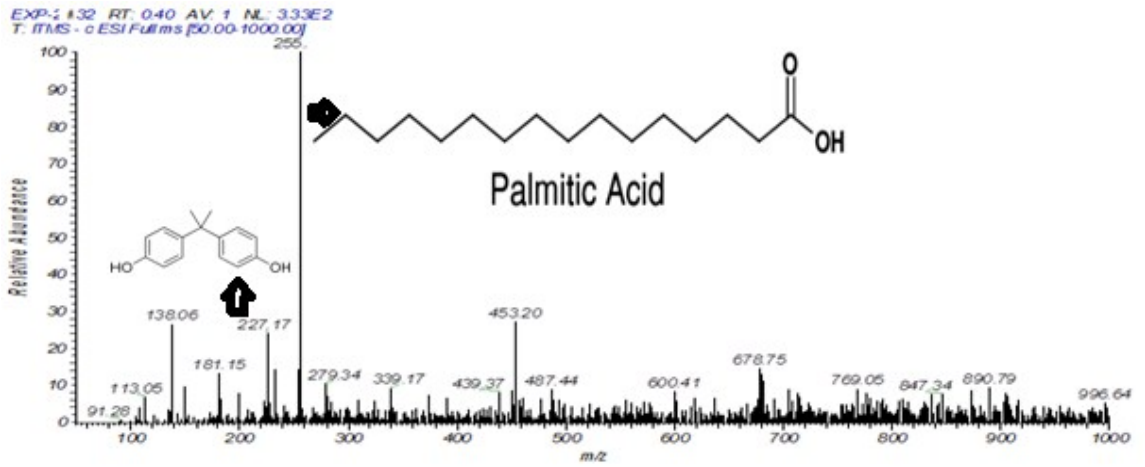
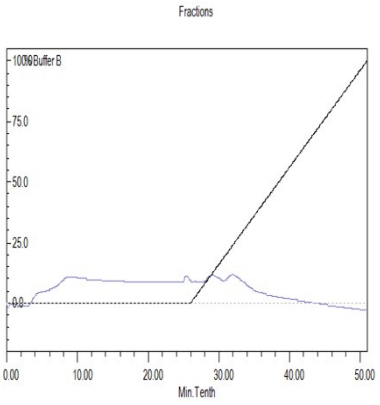
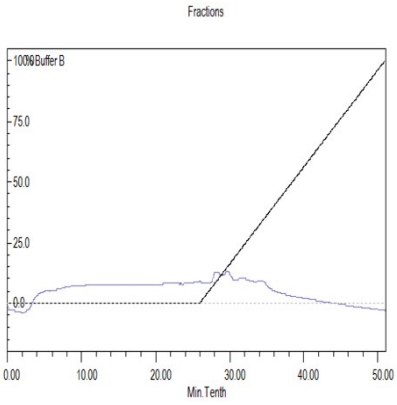


Figure: Sp-3) Detection of vitellogenin synthesis variation using FPLC.

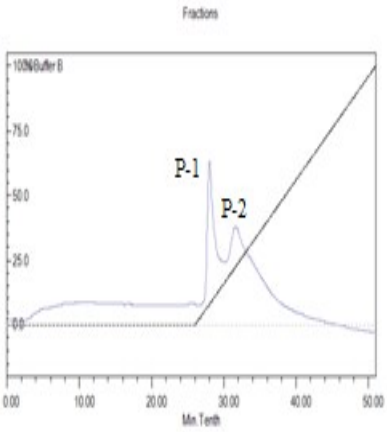
Only Fish



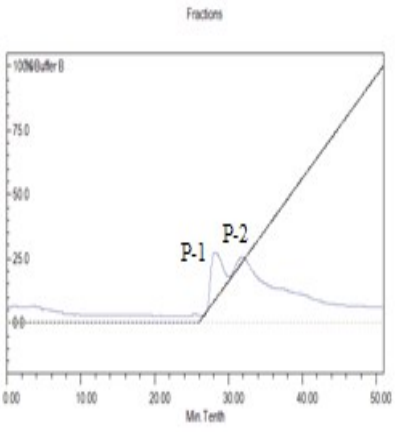
Fish + enzyme + nano



Fish+ BPA



Fish+ enzyme+ BPA



Fish + conjugates + BPA

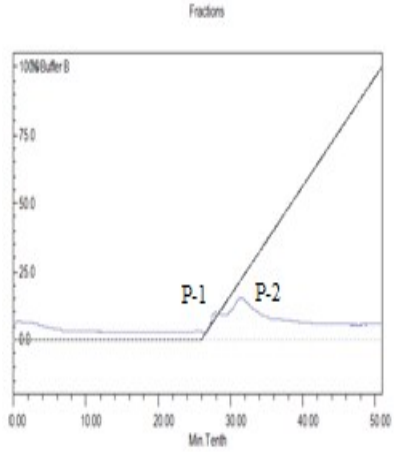
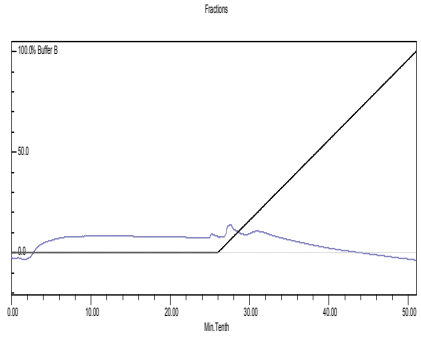
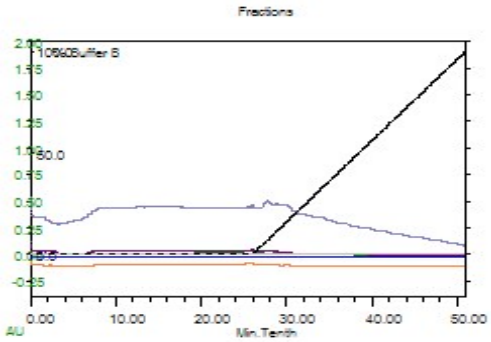


Figure: Sp-4) Detection of vitellogenin production using FPLC in male fish.

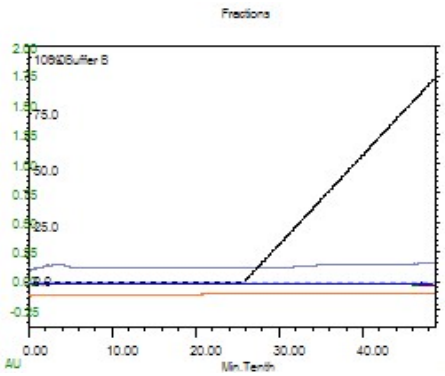
BPA+ fish



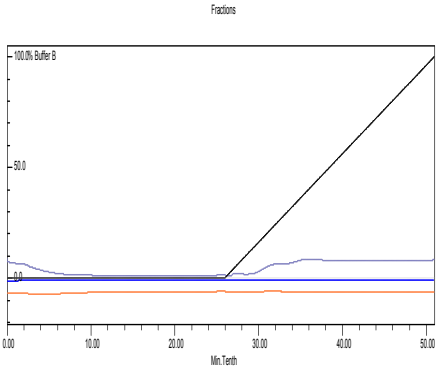
BPA+ enzyme+ fish



Normal fish



Fish + enzyme + nano



Fish + conjugates +BPA

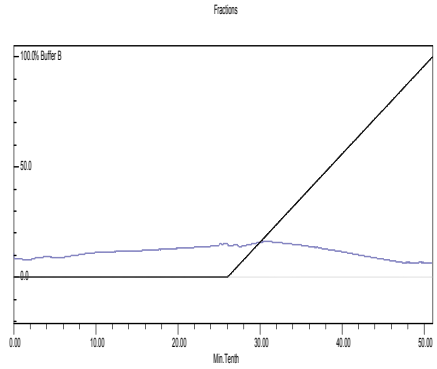


Figure: Sp-5) SDS-PAGE of differentially treated female fish vitellogenin after getting from FPLC