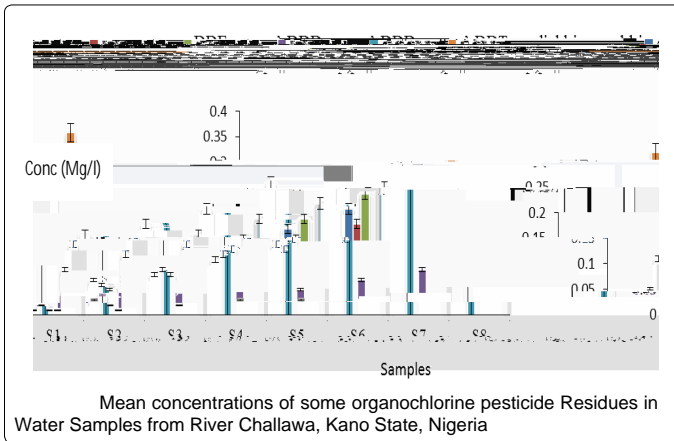


Keywords: *Keywords text is illegible due to image quality.*

Introduction

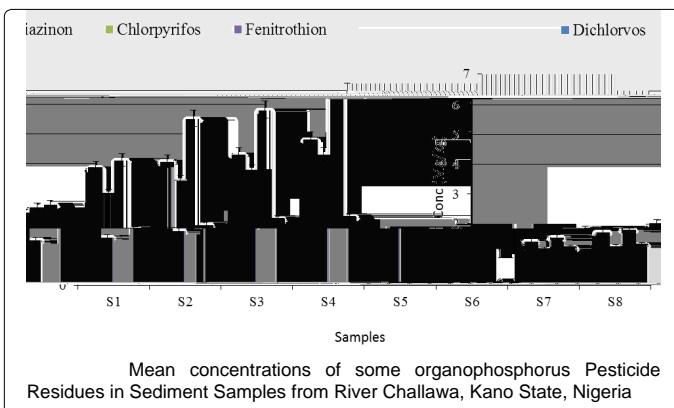
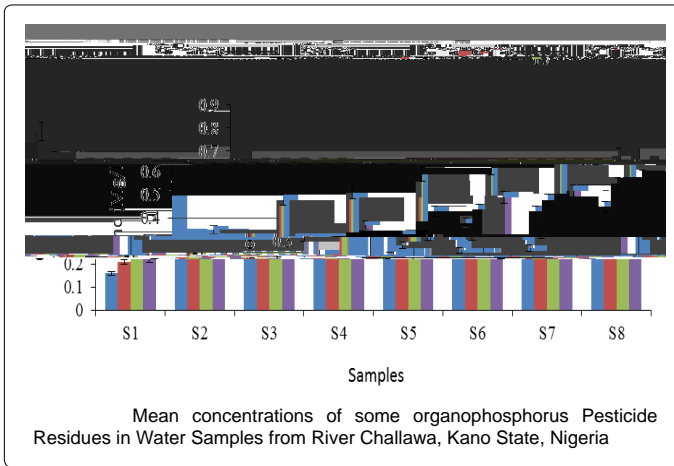
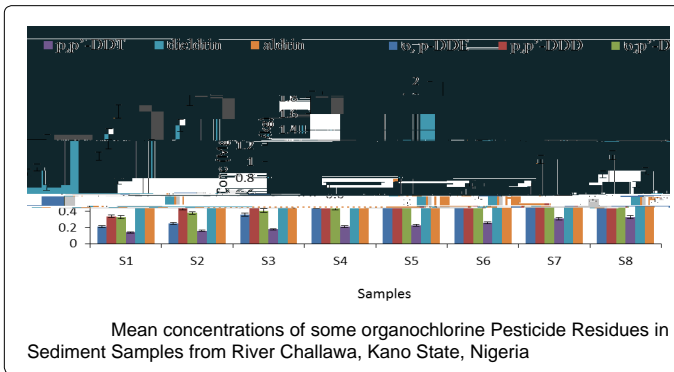
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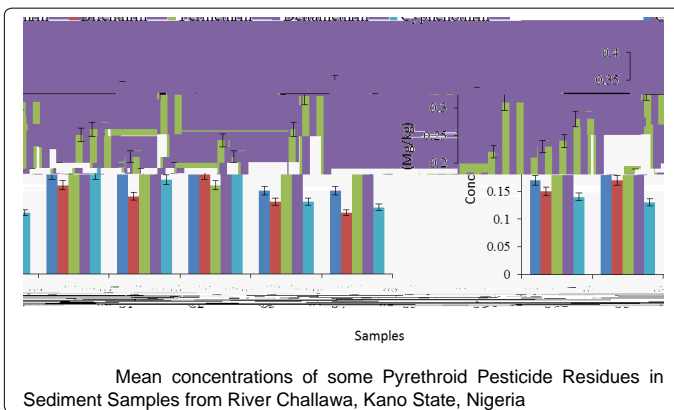
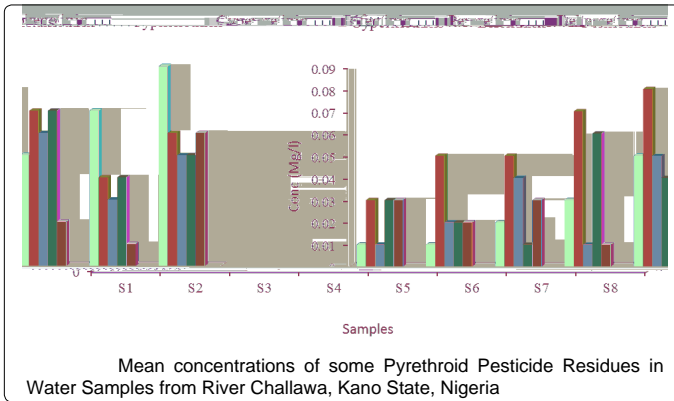
The study was conducted in a laboratory setting to determine the presence and concentration of organochlorine, organophosphorus, and pyrethroid pesticide residues in water and sediment samples. The samples were collected from various locations and analyzed using High Performance Liquid Chromatography (HPLC) with a UV/visible detector. The results showed that organochlorine pesticides were present in the sediment samples, while organophosphorus and pyrethroid pesticides were detected in both water and sediment samples. The concentrations of these pesticides were found to be significantly higher in the sediment samples compared to the water samples. This indicates that pesticides are more persistent in sediment and can be transported through the water column. The study highlights the need for regular monitoring of pesticide residues in water and sediment to assess the risk to the environment and human health.



Concentrations of Pyrethroid pesticide residues in water and sediment samples

The concentrations of pyrethroid pesticide residues in water and sediment samples are presented in the following tables. The data shows that pyrethroid residues are present in both water and sediment, with higher concentrations generally found in sediment samples. The specific pesticides analyzed include Deltamethrin, Cyfluthrin, and Permethrin.





Residues in Water and Sediment Samples by High Performance Liquid Chromatography (HPLC) with UV/visible Detector. J Anal Bioanal Tech 5: 226 doi:10.4172/2155-9872.1000226

Cypermethrin

Mean concentrations of some Pyrethroid Pesticide Residues in Water Samples from River Challawa, Kano State, Nigeria

Sample	Cypermethrin (mg/l)	Residue 2 (mg/l)	Residue 3 (mg/l)	Residue 4 (mg/l)
S1	0.075	0.075	0.075	0.075
S2	0.085	0.085	0.085	0.085
S3	0.075	0.075	0.075	0.075
S4	0.035	0.035	0.035	0.035
S5	0.035	0.035	0.035	0.035
S6	0.055	0.055	0.055	0.055
S7	0.075	0.075	0.075	0.075
S8	0.085	0.085	0.085	0.085

Mean concentrations of some Pyrethroid Pesticide Residues in Sediment Samples from River Challawa, Kano State, Nigeria

Sample	Cypermethrin (mg/kg)	Residue 2 (mg/kg)	Residue 3 (mg/kg)	Residue 4 (mg/kg)
S1	0.15	0.15	0.15	0.15
S2	0.25	0.25	0.25	0.25
S3	0.15	0.15	0.15	0.15
S4	0.15	0.15	0.15	0.15
S5	0.15	0.15	0.15	0.15
S6	0.25	0.25	0.25	0.25
S7	0.15	0.15	0.15	0.15
S8	0.15	0.15	0.15	0.15

Deltamethrin

Mean concentrations of some Pyrethroid Pesticide Residues in Water Samples from River Challawa, Kano State, Nigeria

Sample	Deltamethrin (mg/l)	Residue 2 (mg/l)	Residue 3 (mg/l)	Residue 4 (mg/l)
S1	0.075	0.075	0.075	0.075
S2	0.085	0.085	0.085	0.085
S3	0.075	0.075	0.075	0.075
S4	0.035	0.035	0.035	0.035
S5	0.035	0.035	0.035	0.035
S6	0.055	0.055	0.055	0.055
S7	0.075	0.075	0.075	0.075
S8	0.085	0.085	0.085	0.085

Mean concentrations of some Pyrethroid Pesticide Residues in Sediment Samples from River Challawa, Kano State, Nigeria

Sample	Deltamethrin (mg/kg)	Residue 2 (mg/kg)	Residue 3 (mg/kg)	Residue 4 (mg/kg)
S1	0.15	0.15	0.15	0.15
S2	0.25	0.25	0.25	0.25
S3	0.15	0.15	0.15	0.15
S4	0.15	0.15	0.15	0.15
S5	0.15	0.15	0.15	0.15
S6	0.25	0.25	0.25	0.25
S7	0.15	0.15	0.15	0.15
S8	0.15	0.15	0.15	0.15

Dichlorvos, Diazinon, Chlorpyrifos and Fenitrothion

Mean concentrations of some Pyrethroid Pesticide Residues in Water Samples from River Challawa, Kano State, Nigeria

Sample	Dichlorvos (mg/l)	Diazinon (mg/l)	Chlorpyrifos (mg/l)	Fenitrothion (mg/l)
S1	0.075	0.075	0.075	0.075
S2	0.085	0.085	0.085	0.085
S3	0.075	0.075	0.075	0.075
S4	0.035	0.035	0.035	0.035
S5	0.035	0.035	0.035	0.035
S6	0.055	0.055	0.055	0.055
S7	0.075	0.075	0.075	0.075
S8	0.085	0.085	0.085	0.085

Mean concentrations of some Pyrethroid Pesticide Residues in Sediment Samples from River Challawa, Kano State, Nigeria

Sample	Dichlorvos (mg/kg)	Diazinon (mg/kg)	Chlorpyrifos (mg/kg)	Fenitrothion (mg/kg)
S1	0.15	0.15	0.15	0.15
S2	0.25	0.25	0.25	0.25
S3	0.15	0.15	0.15	0.15
S4	0.15	0.15	0.15	0.15
S5	0.15	0.15	0.15	0.15
S6	0.25	0.25	0.25	0.25
S7	0.15	0.15	0.15	0.15
S8	0.15	0.15	0.15	0.15

