

In-House R&D Projects – KLC

Year 2013-14

S. No.	Title	Status
1.	Preparation of Plasticizer from Recycled Pet Flakes Used in PVC Compounding.	Completed
2.	Development of Non-formaldehyde Fixing Agent for Direct & Reactive Dyes.	Completed
3.	Formulation and Compounding of Wax used for Casting and Molding of Jewelry.	Completed
4.	Preparation and Evaluation of Bio-Organic Fertilizer.	Completed
5.	Preparation and Evaluation of Bio-Organic Fertilizer.	Completed
6.	Utilization of Egg shell Waste as a filler in Rubbers	Completed
7.	Monitoring of Branded Cooking Oil and Vanaspati Ghee for the Quality Assessment.	Completed
8.	Application of Fourier Transform Infrared Spectroscopy and Gas Chromatography coupled with Mass Spectroscopy for Qualitative and Quantitative Determination of Food and Pharmaceutical Products.	Completed
9.	Development and characterization of marble sludge filled elastomeric composites.	Completed
10.	Design & Development of GLCD based Process Monitoring and Acquisition system.	Completed
11.	Development of Technology for the Treatment and Safe Disposal of Effluents from Industries.	Completed
12.	Establishment of Evaluation facility for non-Pesticidal organic contaminants and Pollutants and their commercialization	Completed
13.	Development of Technology for the Design, Fabrication and Marketing of Mobile incinerator for the Disposal of solid waste	Completed

14.	Development and production of non-toxic sanitizer for the removal of Pesticide Residues from Fruits, Vegetables and Cereals.	Completed
15.	Development of Technology for Production of Bio-Gas and Fertilizer from Indigenous Resources and its Utilization.	Completed
16.	Development of Organic Fertilizer from Herbal Solid waste.	Completed
17.	Selective Breeding and Production of all Male Tilapia for Local Aquaculture	Completed
18.	Control of Aflatoxins through Silicon dioxide as a Binder in selected Cereal and Grain products.	Completed
19.	Preparation of biodegradable polymer by isolated bacterial strains from different sources and its blending with synthetic polymer	Completed
20.	Biological Activities of Isolated Compounds and Synthetic Anthraquinones & Carbamate Derivatives.	Completed
21.	Preparation of Amino acid containing fertilizer for plant growth.	Completed
22.	Development of Dope Testing Facility	Completed
23.	Quality Control of Herbal Medicines & Raw Materials	Completed
24.	Isolation of Bioactive Component from Medicinal Herbs, their Utilization in Herbal Formulations.	Completed
25.	Evaluation of indigenous medicinal plants, <i>Litchi chinensis</i> , <i>Achras sapota</i> L., <i>Rubus niveus</i> , <i>Alstonia scholaris</i> , <i>Annona squamosa</i> and <i>Eriobotrya japonica</i> in addition the study and analysis of their chemical constituents for therapeutic use.	Completed
26.	Isolation and separation of bioactive natural products from some medicinal plants <i>Datura alba</i> , <i>Chenopodium album</i> , and <i>Alhagi maurorum</i> and Marigold	Completed
27.	Formulation & Production of Import Substitute Quality Veterinary Medicine to Increase Milk Production and Health Condition of Cattles by Using Herbal and Indigenous Raw Material.	Completed

28.	Preparation of biodegradable polymer by isolated bacterial strains from different sources and its blending with synthetic polymer.	On-Going
29.	Quality Assessment / Evaluation of Various Kinds of Paper and paper board packing material in Karachi	On-Going
30.	Formulation, Evaluation. And clinical trails for the production of Medicinal Drinking Water (FMDW)	On-Going
31.	Assessment of Exposure to Traffic-Related Aerosol and their effects on human being in Karachi	On-Going
32.	Design, Development and Production of Electro-Medical Equipment. Blood Shaker	On-Going
33.	Design, Development and Production of Electro-Medical Equipment. ECG Machine	On-Going
34.	Production and Commercialization of Developed Electro-Medical Equipment Infant Incubator	On-Going
35.	Development and Application of Plant Tissue Culture Technology for the Production of Stress Tolerant Crop (PSDP project)	On-Going
36.	Culture of Microalgae for Nutraceutical and Aquaculture Products	On-Going
37.	Studies on the Factors Affecting Biofilm Formation in Food and Water Borne Bacteria and the Role of Biofilms in Transmission of Diseases	On-Going
38.	Development of Organic Based Product for the Treatment, Application and Protection of Seed and Seedling.	On-Going
39.	Isolation, Purification and Characterization of β -galactosidase from microbial source.	On-Going
40.	Synthesis of Heterocyclic Organic Compounds for Drug Development.	On-Going

Year 2014-15

S. No.	Title of Project	Status
1.	Development of Fire / Flame retardant Thermoplastic Material	Completed
2.	Preparation of Chelated Micronutrients Fertilizers.	Completed
3.	Commercialization of Solid-state Incubator Based on Peltier Module for Bacterial analysis	Completed
4.	Development of Indigenous technology for up-gradation of produced raw gas by (PCSIR fabricated biogas plant) for quantification and purification of Bio-methane.	Completed
5.	Production of Probiotic for the Biotherapeutic and Nutritional Use.	Completed
6.	Formulation, Evaluation and Clinical Trials for the production of medicinal Drinking water	On-Going
7.	Determination of Dioxin and Furan in food and fisheries products.	On-Going
8.	Studies on Nano Carbon Tubes in waste water Treatments	On-Going
9.	Culture of Microalgae for Nutraceutical and Aquaculture products	On-Going
10.	Development of functional dietary fiber from fruit processing waste	On-Going
11.	Technology Development for Low Cost Ethylene Ripening of Climacteric Fruits	On-Going
12.	Development and Commercialization of Biological Control Technology for Aflatoxins Reduction in Agricultural Commodities of Pakistan.	On-Going
13.	Isolation, Purification and Characterization of β -galactosidase from microbial source.	On-Going
14.	Synthesis of Heterocyclic Organic Compounds for Drug Development	On-Going

15.	Synthesis and Isolation of Bioactive Compounds and Development of Instrumental Bioassay Methods.	On-Going
16.	Synthesis of triterpenes and other bioactive compounds by microbial biotransformation/chemical method for cost effective drug preparation. The anti-oxidant and related biological potential of the isolated and derivatised metabolites	On-Going
17.	Development and Characterization of industrial waste-polymer composites	On-Going

Year 2015-16

S. No.	Title of Project	Status
1.	Formulation, Evaluation and Clinical Trials for the production of medicinal Drinking water	Completed
2.	Determination of Dioxin and Furan in food and fisheries products.	Completed
3.	Studies on Nano Carbon Tubes in waste water Treatments	Completed
4.	Culture of Microalgae for Nutraceutical and Aquaculture products	Completed
5.	Development and Commercialization of Biological Control Technology for Aflatoxins Reduction in Agricultural Commodities of Pakistan	Completed
6.	Synthesis of Heterocyclic Organic Compounds for Drug Development	Completed
7.	Development and Characterization of industrial waste-polymer composites	Completed
8.	Synthesis and Isolation of Bioactive Compounds and Development of Instrumental Bioassay Methods.	On-Going
9.	Synthesis of triterpenes and other bioactive compounds by microbial biotransformation/chemical method for cost effective drug preparation. The anti-oxidant and related biological potential of the isolated and derivatised metabolites	On-Going
10.	Development and Characterization of industrial waste-polymer composites	On-Going
11.	Development of Antiscalent, Anticorrosion and Membrane Cleaning Chemicals for Reverse Osmosis Systems	On-Going
12.	Standards Complaint Fire/ Flame Retardant Thermoplastic Material	On-Going
13.	Determination of Dioxin and Furan in Food and fisheries products	On-Going

14.	Development of indigenous Technology for up gradation of Produced raw gas by (PCSIR fabricated biogas plant) for quantification and purification of bio-methane	On-Going
15.	Assessment of Exposure to traffic Related Aerosol and their Effects on Human being in Karachi	On-Going
16.	Evaluation of indigenous plants, Moringa oleifera and Eriobotrya japonica for biological potential	On-Going