

RESEARCH AND DEVELOPMENT

| Name of the Researcher | Designation & Department | Research Topic | Year of Completion |
|------------------------|---|---|--------------------|
| Dr. R.G.Weginwar | Professor, Department of Applied Chemistry | Neutron Activation Analysis of Biological and Environmental Samples | 1992 |

BRIEF SUMMARY OF THE WORK: The Ph.D . work was carried out at Post Graduate Department of Chemistry, Nagpur University Nagpur in collaboration with Radiochemistry Division, Bhabha Atomic Research Centre Mumbai under the very prestigious Department of Atomic Energy, Govt. of India Scholarship Program and Council of Scientific and Industrial Research (CSIR) from June 1987 to June 1991. Under this Research Program, Application of Neutron Activation Analysis of various Biological and Environmental samples were analysed such as Cancer breast tissues of different stages, kidney stones, ambient dust cement air dust particulates, water samples, milk samples etc. Apart from this we have developed some Isotope Dilution Analysis of some metals and this technique has been applied for the analysis of Biological and Environmental samples. Also we have also developed some solvent extraction method and applied for the Biological and Environmental samples.

During Post Doctoral Research Program at The Institute of Physical and Chemical Research (RIKEN Japan) for 2 years under the Japan Scientific Exchange Program and Science and Technology Agency Fellowship program, Govt.of Japan, we have developed a novel carrier free Multi Tracer Technique and it has been successfully applied for the tracing metabolism in different disease model mice and some medicinal plants.

INDUSTRY RELEVANCE: Analysis of Medicinal Plants, Waste Water and Fly Ash, Determination of toxic and trace elements present in Environmental and Biological Samples, Metabolism of trace elements in biological systems, Chemical separation by solvent extraction process, Applications of Multi-tracer technique, Handling of modern scientific instrument, Phyto chemistry, useful for all natural systems.

RESEARCH OUTCOMES :About 36 Journal research papers and 56 papers in Proceedings of International/ National Conferences have been published on this Ph.D. and PDF work.