



सत्यमेव जयते

GOVERNMENT OF INDIA

BHABHA ATOMIC RESEARCH CENTRE

RADIATION MEDICINE CENTRE

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Ref: RMC

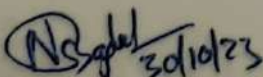
30<sup>th</sup> October, 2023

**CERTIFICATE**

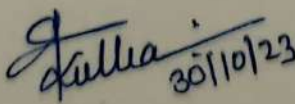
We certify that Kum. Kulsum Shah, student of M.Tech (Biotechnology) from the Ramniranjan Jhunjhunwala college Ghatkopar (W) Mumbai - 86, was selected to participate in an ongoing project at Radiation Medicine Centre, Bhabha Atomic Research Centre, titled "Standardization of *in-house* solid phase Total T4 RIA using monoclonal T4 antibody from T4-Clone HB-8500 of ATCC" from 15/05/2023 to 31/10/2023. During this period, she was given theoretical and practical training in:

- Culturing of hybridoma cells,
- Harvesting anti T4 antibodies produced by the hybridoma clones.
- Measurement of Antibody titre in culture filtrate.
- Purification of antibodies from culture filtrate
- Affinity chromatography using protein A/G columns.
- Immobilization of antibodies on polystyrene test tubes
- Standardization of liquid phase RIA and Solid phase RIA
- Standardization of Thyroglobulin – IRMA
- Characterization of recombinant protein by electrophoresis and ELISA

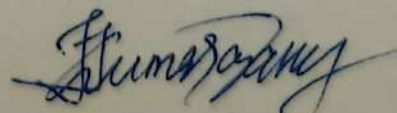
Ms. Kum. Kulsum Shah has shown very good technical skill and grasp of the subject. She has the eagerness to learn new concepts and has performed the techniques on her own after initial training. She is sincere, hard -working and her overall conduct has been very good.

 30/10/23

Shri Nawab Singh Baghel  
Head, RMC

 30/10/23

Dr (Smt) S. P. Kulkarni  
Head, Tuberculosis Immunology &  
Immunoassay Development Section



Dr. J. Kumarasamy  
Project Guide  
SO/E, RMC