



## **PROJECT COMPLETION REPORT**

1. **Project Number** : 8224
2. **Title of the Project** : Chitra Acrylosorb Fluid Solidification System
3. **Funding Agency Name** :  
TRC, COVID Project
4. **Project Reference Number provided by the Funding Agency:**  
TRC/8224/PSN dated 28/04/2020
5. **Principal Investigator (Name & Address) :**  
Dr. Manju S., Scientist E, Division of Dental Products, Department of Biomaterial Science and Technology, Biomedical Technology Wing, SCTIMST
6. **Co-Investigators (Name & Address):**
  1. Dr. Manoj Komath (Co-PI)  
Scientist G, Division of Bioceramics, Department of Biomaterial Science and Technology, Biomedical Technology Wing, SCTIMST
  2. Dr. Ajay Prasad Hrishii (Co-PI)  
Additional Professor,  
Neuroanaesthesiology, SCTIMST
7. **Implementing Institution** : Sree Chitra Tirunal Institute for Medical Sciences and Technology, Trivandrum
8. **Collaborating Institutions** : SCTIMST
9. **Date of Commencement** : 01-05-2020
10. **Duration** : 3 months
11. **Date of Completion** : 31<sup>st</sup> July 2020
12. **Objectives as approved :**  
Development of Acrylosorb Respiratory Secretion Solidification System based on wide spectrum disinfectant impregnated superabsorbent polymer granules

- 13. Deviation made from original objectives if any, while implementing the project and reasons thereof :**

Nil

- 14. Field/Experimental work giving full details of summary of methods adopted, data collected supported by necessary tables, charts, diagrams and photographs :**

Disposal of respiratory secretions of patients suffering from highly contagious diseases such as COVID 19, tuberculosis (TB) and influenza, poses high risk of infection among healthcare workers. The Chitra AcryloSorb canister liner bags are highly effective for the safe management of infected respiratory secretions in hospitals. The canister bags are lined with super-absorbent polymer powder containing a disinfectant, named “AcryloSorb”. The AcryloSorb canister liner bags can absorb 500 mL of fluid secretions and solidify it immediately. In addition to that the whole system will be decontaminated within no time because of the presence of disinfectant. The liner structure has a patented design which allows the progressive absorbent availability

- 15. Detailed analysis of results :**

- 16. Summary sheet of not more than 2 pages under following heads :  
(Title, Introduction, Rationale, Objectives, Methodology, Results, Translational Potential)**

- 17. Contributions made towards increasing the state of knowledge in the subject :**

- 18. Conclusions summarising the achievements and indication of scope for future work :**



Developed Chitra Acrylosorb Canister Liner Bags. The know-how of the technology is transferred to “Romsons Scientific and Surgical Pvt. Ltd”., Agra. Field trials were done in SCTIMST and Ananthapuri hospital, Trivandrum

**19. Science and Technology benefits accrued :**

**a. List of research publications with complete details :**

1. M. Saraswathy, M. Komath, D.D. Ragini, P.S. SarojiniAmma, S.S. Lathikumari, M.N. Akhandanandan, Bactericidal Activity of Superabsorbent Polymer Granules for Their Applications in Respiratory Fluid Solidification Systems, *ACS Omega* (2023), Vol. 8, pp. 25114–25121
2. P.R. Sankar, S.L. Lathikumari, M. Saraswathy, Superabsorbent Polymer Sponge for Saliva Absorption Pad, *Journal of Advanced Oral Research* (2023), Vol. 14, pp. 36–43

**b. Manpower trained on the project :**

- i. **Research Scientists or Research Fellows** : Nil
- ii. **No. of PhD’s produced** : nil
- iii. **Other Technical Personnel trained** : 1 MTech Project student

**c. Patents taken, if any** : Trademark application filed for “Chitra AcryloSorb” Application No. 4681143 dated 30-09-2020

**PATENTS**

1. A system for spillage control and fluid waste management in hospitals. Application No. 202041019872 dated 11-05-2020
2. Disposable disinfectant absorbent sponge. Application No. 202041015399 dated 08-04-2020

3. A Saliva Absorption Pad,  
Indian Patent App.  
202141051940 filed on 12-11-  
2021

d. **Products developed, if any**

: Chitra Acrylosorb Canister Liner  
Bags.

The know-how of the  
technology is transferred to  
“Romsons Scientific and  
Surgical Pvt. Ltd”., Agra

20. **Abstract: (In 300 words for possible publication in ..... Bulletin)**

a. **Background:**

b. **Materials:**

c. **Results:**

d. **Conclusion:**

21. **Procurement/Usage of Equipment:**

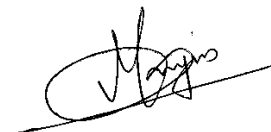
a. **Details of Equipment:**

Sl. No.	Name of Equipment	Make/ Model	Cost (Rs.)	Date of Installation	Utilisation	Remarks regarding maintenance breakdown
1	Mechanical Stirrer	IKA Eurostar 20 digital	100000		100%	

b. **Suggestions for disposal of equipment(s):**

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**Dr. Manju S.**



**(Name and Signature of PIs with date)**

**Routing:** Signed copy of “Project completion Report” by PI → [root@sctimst.ac.in](mailto:root@sctimst.ac.in), [rpc@sctimst.ac.in](mailto:rpc@sctimst.ac.in)