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Characterization of Different Clay Varieties in Sri Lanka for Industrial Utilizations

Author/Presenter- Suresh Aluvihara

Introduction

- Clay is an exceptional soil variety among other soil types because of the specific physic-chemical and mechanical properties of clayey soils.
- According to the past and recent research outcomes, there were investigated a series of specific industrial uses of different clay varieties.
- In the existing research, there were expected to characterized different Sri Lankan clay varieties based upon their industrial applicability.

Materials and Methodology

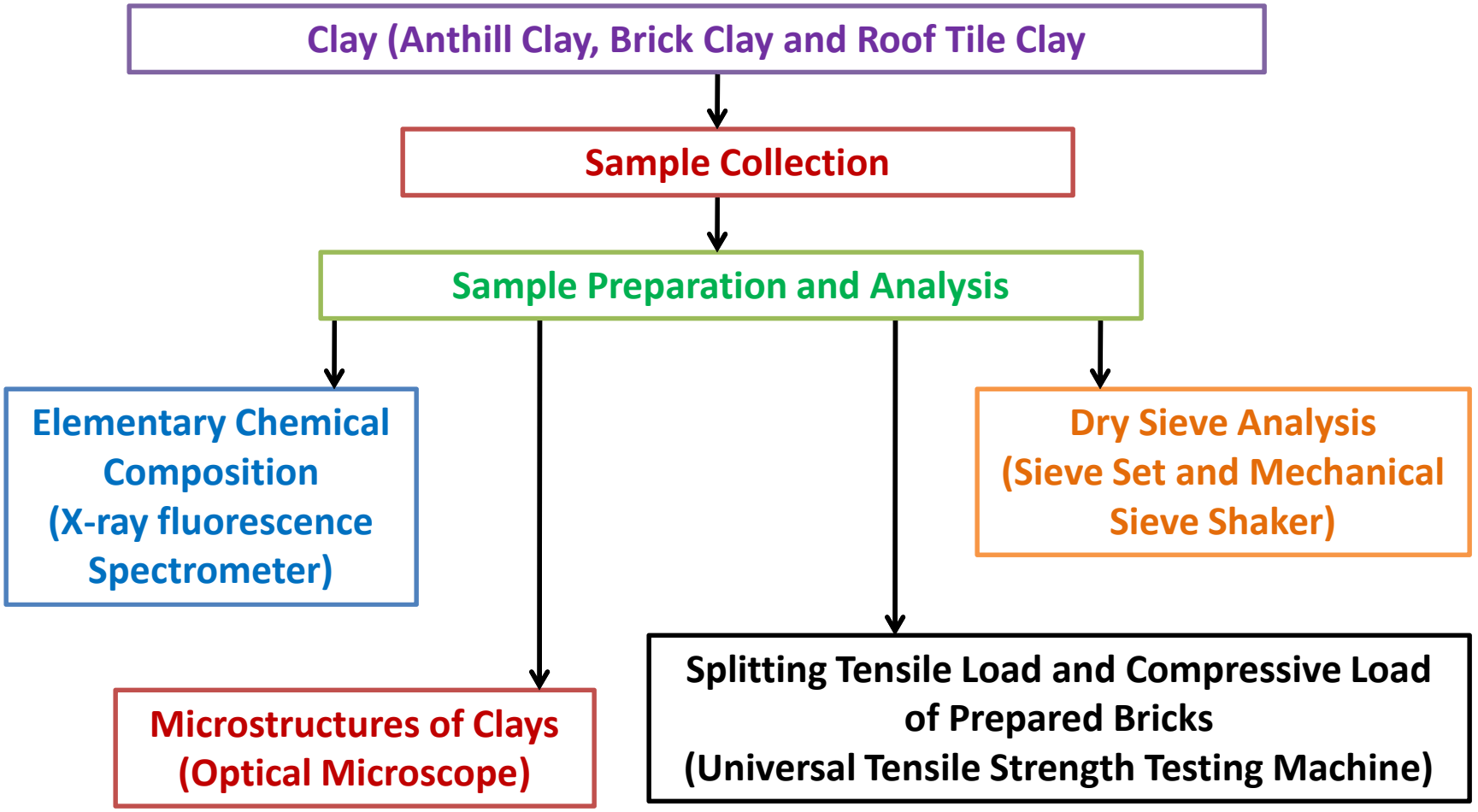

Figure 1. Schematic diagram of the methodology of the research

Results and Discussion

Table 1. The basic outcomes of the research

Characteristic	Anthill Clay	Brick Clay	Roof Tile Clay
Elemental Chemical Composition	Fe- 82.06% Ti- 4.84% K- 12.28%	Fe- 84.38% Ti- 5.92% Ca- 7.56%	Fe- 75.72% Ti- 2.95% K- 12.67%
Particle Size Distribution	Gap-graded arrangement and finer particles	Uniformly-graded arrangement and coarse particles	Well- graded arrangement and finer particles
Splitting Tensile Load (lb)	155	110	460
Compressive Load (lb)	19250	15900	>29200

Conclusion

- There were observed at least 75% of Fe in each and every clay type, well grading arrangement of particles with finer sizes and more strengthen brick structures of fine grained clays.

References

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THANK YOU

Author/Presenter: Suresh Aluvihara

Affiliation: Department of Chemical and Process Engineering, University of Peradeniya, Peradeniya, 20400, Sri Lanka.

Email: sureshaluvihare@gmail.com

Telephone/Telegram No: +94758578194