## README FILE.

# **MATERIALS CHARACTERISATION**

## BY

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# SUBMITTED AT LOUGHBOROUGH UNIVERSITY UK

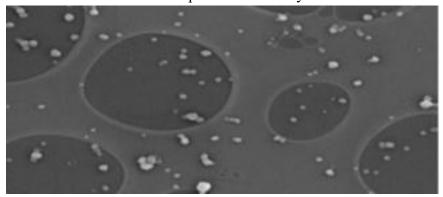
## December 2021.

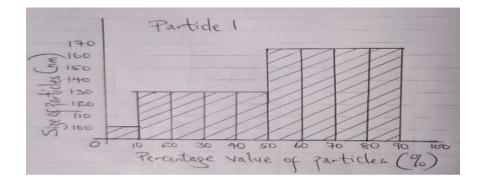
# 1. OVERVIEW.

The project focussed on identifying a polymer material manufactured using the Raft Polymerization Technique. The raft technique allows good control of molecular weight. The project involved the sample preparation, study of experimental samples using the SEM, DLS, SEC, and the NMR.

# 2. ANALYSIS AND RESULTS.

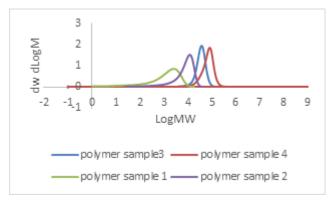
Below are some of the excerpts from the study.



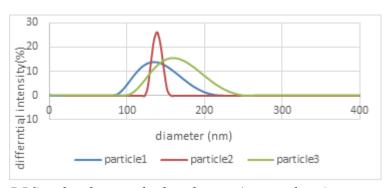


Particle 1 SEM image and particle size distribution graph (images above).

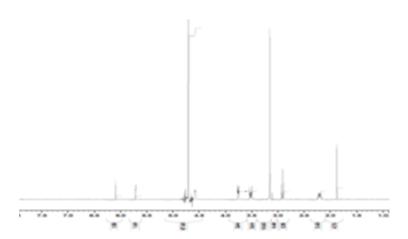
The SEC and DLS techniques were also performed to study the process and the distribution of the sizes of the samples.



SEC molecular weight distribution (image above).



DLS molecular weight distribution (image above).



NMR spectra used in the desired polymer study (image above).

# 3. CONCLUSION.

The best sample was chosen for the medical application intended. The particle size technique was efficient in the study of the materials and future work recommendations were made.