

Background

Thermo mechanical Analysis (TMA) is the study of the relationships between a sample's length (volume) and its temperature. A dilatometer is used to determine the linear thermal expansion of a solid as a function of temperature. Unlike the classical methods in which the experimental setup is kept as free of forces as possible, in thermo mechanical analysis, a constant, usually small load acts on the specimen. The measured expansion of the specimen can be used to determine the coefficient of linear thermal expansion. Workshop on TMA is to provide experience and knowledge about the characterization of TMA especially on its importance and value in characterization of polymers, biocomposites, natural fibre reinforced polymeric materials, etc. for researchers (student and staff). This workshop will be delivered in two sessions, the 1st session will cover theoretical aspects of TMA-how to use it and what values and possible data output from it and how to analyze the value obtained. 2nd session will cover practical demonstration of TMA machine and software utilized for characterization of samples. It will also cover sample preparation, dimension and live demonstration of sample analysis. This workshop is essential to expand and strengthen knowledge of TMA, to study behaviour of polymeric materials and it allows for quick and easy determination of material properties.

9.00 a.m. Registration

9.30 a.m. Introduction and principle of TMA.

10.30 a.m. Morning Tea break

11.00 a.m. How to analyze TMA with examples

2.30 p.m. Lunch

2.00 p.m. Familiarize with machine, sample preparation, and software

3.30 p.m. Demo of Analysis of samples

4.30 p.m. Distribution of Certificate and feedback from Participants

5.00 p.m. Refreshment

INSTITUTE TROPICAL FORESTRY AND FOREST PRODUCTS
(INTROP)

Workshop on Thermal Mechanical Analyzer (TMA)



| 1 JUNE 2016 | 9.00 AM-5 PM |
| SEMINAR ROOM, INTROP |

Organized by:
Laboratory of Biocomposite Technology,
INTROP, UPM