

# OBJECTIVES

### 3 OBJECTIVES OF THE STUDY

This research work was aimed towards exploring the non conventional methods for improved extraction from plants. For the study, the following non conventional methods were utilized:

- a) MAE
- b) UAE

These non conventional extraction methods were compared with the following conventional methods of extraction:

- a) Infusion
- b) Decoction
- c) Maceration
- d) Percolation

*Pterocarpus marsupium*, a plant well known for its antidiabetic activity, was selected as the model drug. This drug, being heartwood, should be one of the most difficult drugs to be extracted using conventional methods, for which the above non conventional methods, MAE and UAE, were employed.

The study was designed to be performed in the following steps:

- 3.1 To perform the aqueous and ethanol conventional extraction methods.

- 3.2** To perform the aqueous and ethanol microwave-assisted extraction method and optimize the technique.
- 3.3** To perform the aqueous and ethanol ultrasound-assisted extraction method and optimize the technique.
- 3.4** To perform the comparative evaluation of the extracts obtained from conventional method, optimized MAE and optimized UAE by preliminary phytochemical screening, thin layer chromatography and high performance liquid chromatography.
- 3.5** To perform the antidiabetic activity of the different extracts obtained from conventional method and non-conventional methods and to compare their efficacy.