• To prepare and study the dosage form Mashi and its types systematically by applying modern parameters of evaluation to the raw material, its dosage forms and processes involved therein.

• To study the effects of in process techniques which are commonly used in the preparation of bhasma viz shodhana, marana and bhavana.

• To study Composition of the authentic bhasma prepared by traditional method with the Marketed bhasma.

• To study acute and sub acute toxicity of these materials

• To evaluate the role of bioinorganic constituents in the Mashi and Bhasma for Pharmacological action.

3.1 COCONUT HUSK

The *Cocos nucifera* Linn. (Palmae) is one of the most beautiful and useful trees in the world. It provides a variety of useful products like fuel, food and timber. Every part of the tree is being utilized for some purpose or other and hence it is called as *Kalpavriksha*\(^\text{15}\), meaning the tree of the Heaven, which provides all the necessities of the life.

According to Ayurvedic literature, coconut husk has been claimed to have a variety of medicinal properties. Ayurvedic literature revealed that mashi, an Ayurvedic dosage form; is effective in treatment of various diseases\(^\text{76,104}\). This fact encouraged us to concentrate on the scientific study of mashi. Ayurvedic practitioners in and around Pune city use this drug as antiemetic. This fact provided us the primary point for the
evaluation of the antiemetic activity. From the literature survey it was observed that it has antiemetic activity in the Bahirdhum padhati mashi (BPM) form. Hence an attempt was made to judge antiemetic activity with Anterdhum padhati mashi (APM) and other extracts of the husk. Since BPM and APM are two different methods, it was decided to study the structural differences by using modern instrumental method (FTIR, DSC, HPLC, and XRD).

Literature revealed that the drug contains a high percentage of potassium. Since potassium is an osmotic diuretic, an attempt was made to judge the diuretic activity. The scientific data is available for antimicrobial activity and antioxidant activity of an aqueous extract of an unripe husk; hence an attempt was made to judge these activities with an alcoholic extract of unripe husk and mashi.

Coconut husk contains tannins such as catechin and epicatechin. Tannins show anthelmintic and analgesic activities. Mashi retains the organic constituents supporting the evidence for judging its anthelmintic and analgesic activity.

Before concentrating on the various activities, it was aimed to subject for toxicity studies to check the safety and adverse effects caused by the drugs.

3.2 Hen Egg shell {Modern (white) and Gavaran (Brown)}

Although an egg forms an essential component of the diets of human beings across the globe, almost always its shell is disposed off. This leads
to an extensive wastage of shells. Ayurveda has utilized this waste material and formulated a bhasma called as Kukkutandatvac bhasma. In India Hen egg shells are available in white and brown colour, thereby providing us with the impetus to study both the forms.

The main objective for this drug was to investigate the effect of Shodhana, Marana and Bhavana processes on the egg shell by modern instrumental methods. Literature revealed that egg shell bhasma is use in leukemia and arthritis\textsuperscript{76}. Ayurvedic practitioners mainly use this bhasma for arthritis and as a calcium supplement in geriatrics and pregnant ladies. Hence an attempt was made to evaluate its antiarthritic activity. Literature showed that calcium is the main constituent in the shell. As calcium acts as antacid also; its antacid activity was also evaluated.

### 3.3 BANANA PEEL

- This vegetable product is easily available and cheap and No scientific data on the claimed uses is available.
- Ayurvedic practitioners use this drug in the form of ash as an antacid and diuretic.
- Systematic/Pharmacognostical work on this medicinally useful product, which can be used for its standardization, is not much reported.