9. SUMMARY

- Pharmacognostical standardization of AKF laid down the standards of raw material as well as the prepared formulation for the first time which will be useful for establishing the Pharmacopoeial standards.

- The values obtained from the preliminary standardization are accurate and reproducible. This will make the scientist and industrialist who intend to do research on this formulation easy and convenient.

- Standardization of herbal formulation using modern tool would be achieved by this protocol for the first time. The toxicological evaluation viz pesticide residues, heavy metal contamination and total microbial limit of herbal formulation using recent advanced analytical tools have been carried out for the first time in keen interest of uplifting the herbal drug to the global standards.

- Phytochemical screening including TLC and HPTLC using reference standard have been carried out to standardize the individual herbal drug which is involved in the formulation for the first time and they are also identified in the finished formulation.

- Sophisticated, modern instruments were used as an advanced tool in phyto-pharmaceutical evaluation of polyherbal formulations so as to prescribe the quality standards for better therapeutic efficacy.

- TLC and HPTLC profile of aqueous extracts of AKF provides a suitable method for monitoring the identity and purity and also standardization of the drug.
Pharmacological evaluation of AKF proves the ethnic claim. In addition to decreased blood glucose level, the formulation has also effect on overall metabolic variables as evidenced by its property to lower lipid profile.

Since type II diabetes mellitus is a metabolic disorder characterized by hyperglycemia, hyperlipidemia and insulin resistance. Drug therapy aiming at overall amelioration of the disorder is more desirable than a drug which decreases blood glucose alone.

The result of our study shows that AKF not only normalizes blood glucose but also the hyperglycemia. It also showed in improvement in body weight and insulin levels and lipid profile of the animals.

Thus the current study may pave a pathway to develop a novel formulation from a traditional dosage form to combat Diabetes mellitus and its associated complications.

Modernization of the traditional formulation AKF has been carried out for the first time.

Phyto-pharmaceutical studies are encouraging and beneficial to develop a convenient modern dosage forms.

Based on testing results and stability data of different batches, it is concluded that results from batch no FD/AKF/200/15 is excellent when compared to other batches. So, the manufacturing formula used on batch No. FD/AKF/200/15 can be finalized for the tablets.
Based on testing results and stability data of different batches, it is concluded that results from batch no FD/AKF/203/15 is excellent when compared to other batches. So, the manufacturing formula used on batch No.FD/AKF/203/15 can be finalized for the capsule.

In a nut shell, the current investigation will be useful to make quality anti-diabetic product from the ancient traditional formulation. This research has validated the scientific claim for the folkloric medicine. The disadvantage of the selected formulation has been nullified. Modernization of traditional formulation has been achieved.