8. CONCLUSIONS

*Strychnos nux-vomica L.*

* Shodhana enhanced the brittleness of nux-vomica seeds.

* Shodhana altered the pharmacognostic profile of nux-vomica seeds.

* Shodhana decreased the total alkaloidal content, strychnine and brucine contents and increased the concentrations of N-oxides of both the principal alkaloids and also removed the toxic loganic acid glycoside from the seeds of nux-vomica.

* Shodhana reduced the toxicity of the seeds and it may be attributed to the reduced concentration of principal alkaloids i.e. strychnine & brucine and absence of loganic acid.

* Shodhana significantly enhanced the hepatoprotective, nephroprotective, gastroprotective, analgesic and anti-inflammatory potency of nux-vomica seeds. This may be attributed to the increased concentrations of more potent N-oxides and their hydro derivatives.

* Ancient method of shodhana and a slightly modified method adopted by the native practitioner both possess significant detoxification and potentiation property. However, the method adopted by the native practitioner was found to be slightly better than the ancient method.
Commiphora mukul (Guggul)

* Shodhana enhanced the softness of guggul.

* Shodhana altered the pharmacognostic profile of guggul

* Shodhana decreased the guggulsterone E content in both shodhana processed guggul. But the concentration of guggulsterone Z is increased in cow milk swedana processed guggul, but it is decreased in triphala swedana processed guggul.

* Galloylglucose phytochemical was included in triphala kashaya processed guggul.

* Shodhana significantly enhanced the cardioprotective, antihyperlipidemic activity, gastroprotective and anti-inflammatory potency of guggul. This may be attributed to the increased concentration of guggulsterone Z in cow milk swedana processed guggul and galloyl glucose (a phytochemical present in triphala kashaya, which was added to guggul during processing with triphala kashaya).

* Addition of some unidentified phytochemicals/shodhana processing materials in shodhana processed guggul products may be responsible for enhanced therapeutic efficacy.

* Ancient method of shodhana possesses significantly detoxified and potentiated the guggul.
* Since maximum activity is seen with both shodhana processed guggul, it may be suggested that any one of ancient methods of shodhana processes may be adopted when it is intended to be used as cardioprotective, antihyperlipidemic, anti-ulcer and anti-inflammatory agent.

**Datura**

* Shodhana enhanced the brittleness of datura seeds.

* Shodhana altered the pharmacognostic profile of datura seeds.

* Shodhana decreased the total alkaloidal content; hyoscyamine content is increased in shodhana processed datura seeds. The completely shodhana processed datura seeds having more hyoscyamine concentration than partially processed seeds.

* Shodhana significantly enhanced the gastroprotective and anti-inflammatory potency of datura seeds.

* Ancient method of shodhana possesses significantly detoxified and potentiated properties.

* The potentiation of datura seeds by shodhana may be due to the decreased total tropane alkaloid content and increased concentration of hyoscyamine. Methyl acetoxy tropane may be responsible for the increased concentration of hyoscyamine in DM-3.

* Since maximum activity is seen with DM-3, it may be suggested that datura seeds after second method of shodhana is better. Therefore it
may be adopted while using them for treatment of inflammation and ulcers.

* Further it may be concluded that the traditional system of purification (shodhana) can influence the phytochemical, pharmacological and toxicological profile of the plant drugs and can be adopted to increase the safety, efficacy of herbs/herbal products.

It may be further concluded that the modern analytical techniques can be used as tools for integration of traditional knowledge with modern science and also to provide scientific basis for traditional knowledge.