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Detoxification and estimation of Atropine and Hyoscine from Datura seeds by HPLC analysis

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Abstract

Background: *Datura metel* Linn. is an important Ayurvedic medicinal plant used for the treatment of inflammation, respiratory decongestion, skin infection, dental problems, stimulation of central nervous system and alopecia. Since *Datura* is toxic at therapeutic dose, hence its toxicity must be removed before subjecting to medicinal purposes. **Objective:** In the present study seeds of *Datura* detoxified by Ayurvedic process (*Sodhana*). Attempt has been made to identify the chemical constituents responsible for the toxicity by measuring the level of major chemical constituents before and after the detoxification of seeds. **Materials and Methods:** In the present study, seeds of *Datura* were detoxified by two different Ayurvedic process using Cow's milk and Cow's urine. Levels of atropine and hyoscine before and after the purification of seeds were determined by HPLC analysis. **Results:** The quantity of hyoscine and atropine in unpurified sample was found to be 0.109 % & 0.197 % of dried weight of *Datura* seeds. The quantity of hyoscine and atropine in dried seeds of *Datura* was found to be 0.012 % & 0.043 % and 0.004 % & 0.022 % purified with Cow's milk (**Method-2**) and in both Cow's milk and cow's urine (**Method -1**) respectively. **Conclusion:** It may be concluded that toxic effect of *Datura* seeds are due