

DRYING TECHNOLOGIES FOR GOOD QUALITY CRUDE DRUG

PRODUCTION OF MEDICINAL PLANTS – A REVIEW

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ABSTRACT

Drying of medicinal plant parts is an inevitable process in the postharvest handling and drug development process in phyto – pharmaceutical industries. The medicinal crude drugs can be dried either naturally under the influence of solar energy or wind or artificially under controlled conditions of temperature, humidity and airflow. The crude drugs can be dried naturally by air drying, sun drying as well as using different kinds of solar driers like direct, indirect, mixed mode and hybrid solar driers. Mechanical drying can be done in equipment working in atmospheric pressure conditions like, kiln driers, cabinet driers, tunnel driers fluidised bed driers, spray driers, microwave driers and infrared radiation driers. Equipment working under reduced pressure conditions commonly called sub – atmospheric driers which include, vacuum driers and freeze driers can also be used that are highly efficient compared to atmospheric driers. Osmotic dehydration is yet another innovative drying technique which can modify the crude drug and create a new product with the use of osmotic agents like sugar, salt etc. Among the different drying techniques available, an ideal method for a particular crude drug can be standardised only by comparing the existing drying techniques since, the drying process depends on several parameters of crude drug as well as the technique adopted.

KEYWORDS: Mechanical, Natural, Osmotic, Vacuum, Freeze

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