

DETERIORATION OF PHYSICO-CHEMICAL PROPERTIES OF CHILGOZA
(*PINUS GERARDIANA* WALL) SEED DURING STORAGE

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SUMMARY

The physico-chemical changes in the chilgoza (*Pinus gerardiana* Wall.) seed during storage for a period of one year were studied. Maximum deteriorative changes were observed in the seed during June to Nov. the latter half of the storage period. Seed turned dark blackish brown in colour and emitted rancid moldy odour. The moisture, gross weight and oil content of seed was markedly reduced. The oil changed from pale yellow to dirty range in colour, emitted rancid odour and changed from semi-drying to non drying nature. The free fatty acid contents, saponification and peroxide values of oil increased with storage while iodine value decreased. The total nitrogen, protein, non reducing sugar and total sugar of seed showed a marked reduction towards the end of the storage period.

INTRODUCTION

Pinus gerardiana a gymnospermous plant yields delicious edible seed, known as "Chilgoza". High oil (49.9%), protein (15.9%) and carbohydrates (21.6%) make the chilgoza of great economic value which generally get heavily infected by fungi during its transportation and storage (Singh, 1982; Singh and Gupta 1989). It is commonly observed that the fungi alter the physical and chemical nature of the various stored products by decreasing their germinability, causing heating and mustiness, producing toxins which if consumed may be injurious. The informations on the chemical changes brought about in the protein, carbohydrates, fats and vitamins in chilgoza seed under storage are lacking. The present experiment was undertaken to findout the changes in colour, odour and gross weight of seed, oil and its quality, total nitrogen, protein and sugars of chilgoza seed during storage round the year.

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