

Technology to Obtain Buransh Extract with Increased Recovery of TSS, Acid, Vitamin C and Anthocyanins

Rhododendron means "rose tree." The name *Rhododendron* came from the Greek word rhodon, means a rose and dendron means a tree. The family of *Rhododendron* is Ericaceae. *Rhododendrons* were originally found in Nepal but they are also distributed in the mountain tracts of Europe, Asia, Malaya, and North America. The *Rhododendron arboreum* is common in the temperate Himalayas, from Indus to Bhutan between the altitudes of 4000 to 11000 ft., in Khasi hills between 4000 to 6000 ft., and also in Manipur. It is also found in the open grassland in the Western Ghats, the Nilgiris, the Pulney, and the hills of Travancore above 5000 ft. in altitude.

In India most of the *Rhododendron* species are found in the Himalayan region. The first of many *Rhododendrons* which were to come from the southeastern Asia was the tree species, *R. arboreum* with blood-red flowers. In India *Rhododendron arboreum* is the only one species that seems to be cultivated in some hill stations and that too very rarely.

Rhododendron arboreum is locally known as buransh in Garhwal, brons in Almora, bras in Kumaon, bhorans and ghonas in Nepal, billi in Nilgiris, ardawal in Punjab and alingi in Tamil.

Deep red or pale pink flowers have sweetish sour taste. Some species of *Rhododendron* are toxic to animals and have hallucinogenic and laxative effects on human, but the poisonous properties of only few of them are known. It is likely that several may possess toxic properties.

Buransh flowers are eaten by the local people in some parts of the Himalayas, but may produce toxicity if consumed in large quantities because of poisonous nature of plant and presence of glucosides ericolin. However, *Rhododendron arboreum* flowers also possess pharmacological and anticancer properties. The red blooms of buransh flowers is supposed to be good for the heart patients.

Traditionally, the petals of the flowers are used in the preparation of chutney by the hill people. At home scale, small quantities of juice extracted from flower is used for preparing jelly and squash, and syrup. *Rhododendron lapponicum* leaves and flowering tops can be infused and drunk as tea. White flowers of *Rhododendrons* can also be used for the preparation of jelly. Squash is one of the most popular products made from buransh flowers and the very first major step for preparation of any drink is to obtain extract from the buransh petals and that is employed in the preparation of squash. Greater extract yield along with higher recovery of total soluble solids (TSS), acid, vitamins, and colour are always preferred for making the finished product having low cost of production but with better nutritive and sensory qualities.

Advantages:

1. Better extract yield and more recovery of recovery of TSS, acid, vitamin C, and anthocyanins
2. Reduction in cost of production of RTS due to better quality of buransh extract