

RESEARCH ARTICLE

Variation in arjunolic acid in bark of *Terminalia arjuna* from different geographical locations of India using high performance liquid chromatography

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SUMMARY

Major active ingredient of *Terminalia arjuna* bark, a triterpenoid saponins -arjunolic acid was determined in fifty-one accessions of different geographical locations from seven different states *i.e.* Madhya Pradesh, Orissa, Uttar Pradesh, Maharashtra, Jharkhand, Uttarakhand and Andhra Pradesh of India. Arjunolic acid was extracted from bark samples with the help of microwave assisted method and quantified by High Performance Liquid Chromatography (HPLC). A significant variation in arjunolic acid content was observed in bark from different regions. The quantity of arjunolic acid varied 0.01-0.29 µg/mg, maximum quantity was observed in Accession- UKDDL belongs to Uttarakhand, Western Himalayan region. The eastern plateau and hill region of the state produced the lowest amount, whereas the western Himalayan regions zone of the state had higher yields. The populations with high arjunolic acid content can be utilized for mass multiplication and genetic improvement.

Key Words : *Terminalia arjuna*, Bark, Arjunolic acid, Geographical regions, HPLC

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