
Petrography and Geochemistry of Granitoids from Betul Crystalline Complex, Central India

A.M. Pophare*, I.K. Sheikh and B.H. Raut

Department of Geology, Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur-440 001, India

**E-mail: apophare@gmail.com*

Abstract

The Betul crystalline complex (BCC) forms a conspicuous litho-tectonic unit of the Central Indian Tectonic Zone (CITZ). The BCC occurs in central part of CITZ in between the northern Mahakoshal belt and southern Sausar belt and comprises of three distinct rock associations, i) Supracrustal rocks, ii) Mafic-Ultramafic suites and iii) Syn- to post-kinematic granitic rock and bimodal volcanics. The rocks of BCC have undergone three phases of progressive deformation and its environs were evolved near continental margin arc. Two phases of granitic emplacements are evident in BCC. Geochemical characterisation of basement granitoids of the BCC was carried out during the present work. The geochemical characteristics of these granitoids are comparable with I-type granites, which are metaluminous to peraluminous in nature and belongs to medium to high-K calc-alkaline series that displays characteristics of typical volcanic arc granites related to the active continental margin.

Keywords: Petrography, Geochemistry, I-type granite, Betul crystalline complex, Satpura mobile belt, CITZ.