

**Isolation and Structural elucidation of an Isothiocyanate compound from *Indigofera tinctoria* Linn. extract**

Veena Sharma and Rashmi Singh

Department of Bioscience and Biotechnology, Banasthali University, Niwai, Rajasthan-304022, India

**Corresponding author**

Prof. Veena Sharma

Department of Bioscience and Biotechnology

Banasthali University, Post: Banasthali-304022

Rajasthan, India

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

**Mob:** +91-9414543808

## ABSTRACT

*Indigofera tinctoria* is a well known medicinal plant that possesses several therapeutic activities. Isothiocyanate derivative from hydroethanolic extract of *Indigofera tinctoria* (HEIT) was isolated by means of chromatographic techniques i.e. adsorption chromatography, thin layer chromatography and HPLC. Structural characterization of isolated compound was done with the help of various spectroscopic techniques (LC-MS, <sup>1</sup>H NMR and FT-IR) and the possible structure was identified as 1-[1,2-Diisothiocyanato-2-(3-isothiocyanato-2,2-dimethyl-propylsulfanyl)-ethoxy]-3-isothiocyanato-2,2-dimethyl-propane (C<sub>16</sub>H<sub>22</sub>N<sub>4</sub>OS<sub>5</sub>; *m/z* 446.70; ITC-1). Maximum yield of ITC-1 was obtained as 22 mg/5 g HEIT with 97% purity.

**Keywords:** *Indigofera tinctoria*; HPLC; LC-MS; Column chromatography; Isothiocyanate compounds