



## Method Development, Validation and Impurity Profiling of Ticagrelor by Acid Degradation Method

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**Abstract :** A simple method is developed for impurity profiling of Ticagrelor by High Performance liquid Chromatography. Forced degradation under acidic condition were carried out. Only one degradant has been found. Cosmocil C<sub>18</sub> (250 x 4.6 mm i.d., 5 μ) column with mobile phase composed of 0.1% Formic acid:ACN in the ratio of 55:45% v/v at flow rate 1.0 mL/min was shown sharp peak and good resolution between drug and its degradant. The detection wavelength was used at 254nm. Acid degradant was isolated by prep-HPLC by using Thermo (100 x 10mm i.d., 5μ) Hypersil Gold semi-preparative column at flow rate 4.0 mL/min. The complete spectral analysis IR, <sup>1</sup>H NMR, <sup>13</sup>C NMR and LC-MS confirmed the chemical structure of impurity.

**Keywords :** Ticagrelor, Method Development, Validation, Isolation and Characterization of Unknown Impurity.

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