PREFACE

Analytical method development is an emerging and challenging field in analytical chemistry for the analysis of chemical substances used for medicinal, agricultural, food, pharmaceutical drug products and industries etc. Pharmaceutical industry is growing day by day at a faster pace and the combination of dosage forms are being introduced to reduce the intake of multiple individual drugs. This is mainly because of diseases are being cured by multi-component therapy where two or more drugs are used for treatment.

The development of a suitable method has been playing a very important role in the pharmaceutical drug development. Analysts have a bigger challenge in identifying, sampling and assaying drugs in combination products. The major task for the researchers is to develop a single test method that can provide results for all the contents of drugs present in the combination dosage form.

In view of the above discussions, combined dosage forms were selected, for which new methods were developed. All these methods found to be accurate, precise, simple and economic. All the work was done in accordance with the International Conference on Harmonization (ICH) guidelines for method development and validation.

The entire research work was categorized as below:

1. Analytical method development and validation for the simultaneous estimation of Sofosbuvir and Daclatasvir drug product by RP-HPLC method.
2. Development and validation for the simultaneous estimation of Lamivudine and Dolutegravir in drug product by RP-HPLC method.
3. Development and validation of RP-HPLC method for the simultaneous estimation of Emtricitabine and Tenofovir Alafenamide in bulk and tablet dosage form.
4. Development and validation for the simultaneous estimation of Sacubitril and Valsartan in drug product by RP-HPLC method.