

List of abbreviations

% Deg- Percentage Degradation

%RSD- % Relative standard deviation

°C - Degree Celsius

ACN- Acetonitrile

Adj R²- Adjusted R²

ANOVA- Analysis of Variance

AP- Adequate Precision

API- Active pharmaceutical ingredient

AQbD- Analytical Quality by Design

ATP- Analytical target profile

ATR – Attenuated total reflectance

AUC total -Total area under curve

BBD- Box-Behnken design

CCD- Central composite design

CDER - Center for drug evaluation and research

CE- Capillary Electrophoresis

CEC- Capillary Electro-chromatography

CET- Cetrimide

CF – Counterfeit sample

CH- Chlorhexidine gluconate

CLS- Classical least squares

C_{max}- Peak plasma concentration

CNX - Controlled noise and experimental approach

Conc. - Concentration

CPH- Cyproheptadine Hydrochloride
CQA- Critical Quality Attributes
DCM- Dichloromethane
DDW- Double distilled water
DF- Degree of Freedom
DMS- Dimethyl Sulfate
DMSO- Dimethyl sulphoxide
DOE- Design of experiments
DP's- Degradation products
DP1- Degradation product 1
DP2- Degradation product 2
DP3- Degradation product 3
DS- Design Space
ELSD- Evaporative Light Scattering Detector
EU- Extended Uncertainty
FBB- Fast blue B
FFD- Full Factorial Design
FM - Formulation sample
FMEA- Failure Mode Effect Analysis
FQM- Full Quadratic Model
FTICR- Fourier Transform Ion Cyclotron Resonance
FT-IR Spectroscopy- Fourier Transform Infrared Spectroscopy
GAA- Glacial Acetic Acid
GC- Gas Chromatography

H - Hours

H₂O₂- Hydrogen Peroxide

HCA – Hierchial cluster analysis

HCl- Hydrochloric Acid

HILIC- Hydrophilic Interaction Liquid Chromatography

HMBC- Heteronuclear Multiple Bond Correlation

HPLC- High Performance Liquid Chromatography

HPTLC- High Performance Thin Layer Chromatography

HQC - High quality control concentration

HSQC- Heteronuclear Single Quantum Correlation

ICH- International conference of Harmonization

ILS- Inverse least squares

IP- Intermediate Precision

IPA-Isopropyl alcohol

KMnO₄- Potassium Permanganate

KOH- Potassium hydroxide

LC- Liquid Chromatography

LLE- Liquid liquid extraction

LOD- Limit of detection

LOF- Lack of Fit

LOQ- Limit of Quantitation

LQC - Low quality control concentration

m/z- mass to charge ratio

M1- Metabolite 1

MeOH- Methanol

MFD- Microfluidic device
Min- minutes
mM- millimole
MMA-Methyl malonic acid
MODR- Method Operable Design Region
MQC - Medium quality control concentration
MS- Mass Spectroscopy
MW- Molecular Weight
NaOH- Sodium hydroxide
NCE- New Chemical Entity
NIPALS- Non-iterative Partial least squares
NIR- Near Infra red
Nm- nanometer
NMR- Nuclear Magnetic Resonance
OXZ - Oxcarbazepine
PC's – Principal components
PCA – Principal component analysis
PL – Placebo sample
PLS- Partial least squares
POM- Pomalidomide
ppm - Parts per million
Pred R²- Predicted R²
PRESS- Predicted Residual Error Sum of Squares
QBD- Quality by design
RA- Risk Assessment

Rep- Repeatability

REU- Relative Extended Uncertainty

RIA vial- Radioimmunoassay vial

RMSEP- Root mean squares error of prediction

RQM- Reduced Quadratic Model

RSD- Relative Standard Deviation

RSM- Response Surface Methodology

RT- Retention time

SD- Standard Deviation

Sil- Sildenafil

SPE- Solid phase extraction

SS- Sum of Squares

TAD-Tadalafil

TDI- Total Daily Intake

TEA- Triethyl Amine

Temp- Temperature

TLC- Thin Layer Chromatography

Tmax - Time required to reach Cmax

TOF- Time of Flight

UPLC- Ultrahigh Performance Liquid Chromatography

USFDA- US Food and Drug Administration

UV- Ultraviolet

Ver - Verdenafil

WDA - Withanolide A

WFA - Withaferin A

ZCP- Zero crossing point

Atmospheric Pressure Chemical Ionization (APCI),
Chemical Ionization (CI),
Electron Impact (EI),
Electrospray ionization (ESI),
Fast atom bombardment (FAB)
Field desorption / Field ionization (FD / FI),
Matrix-assisted laser desorption ionization (MALDI)
Thermospray ionization (TSP).
Electro spray ionization (ESI)
(HMBC- NMR Hetero nuclear Multiple Bond Correlation),
(HSQC- NMR) Hetero nuclear Single Quantum Correlation
XRF- X- ray fluorescence