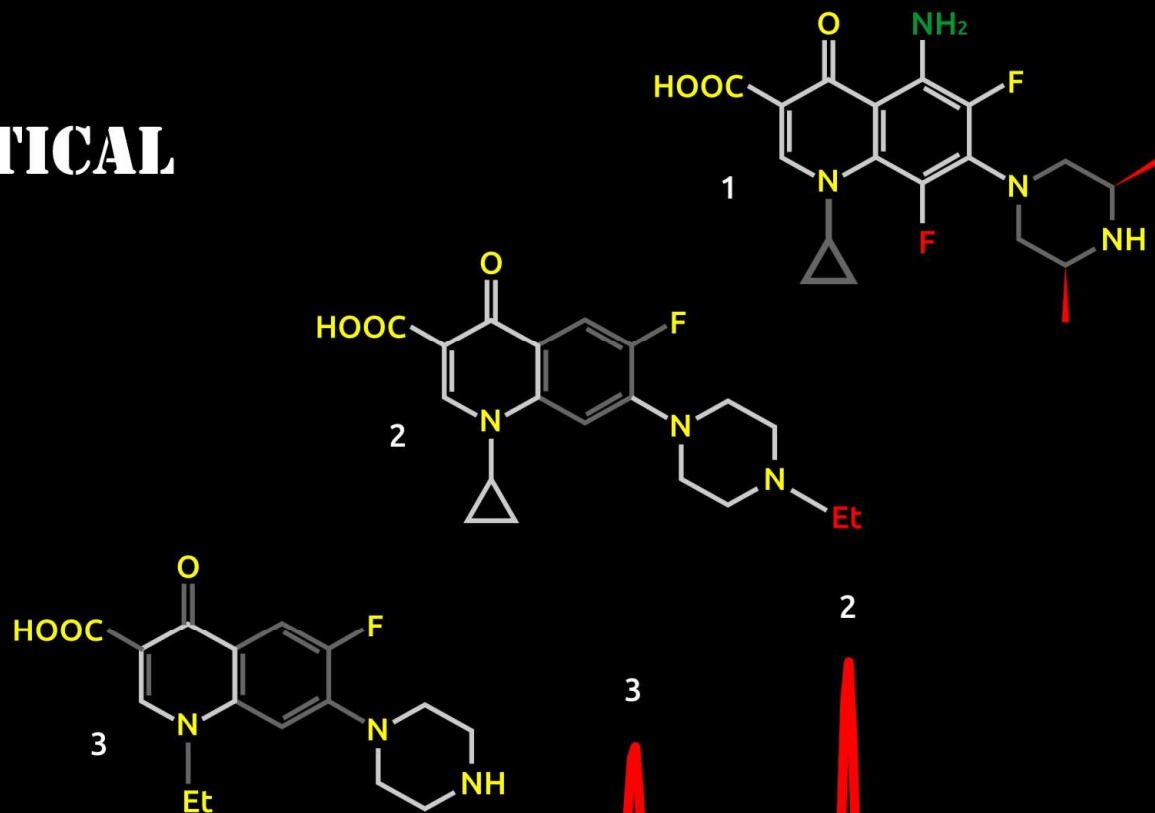
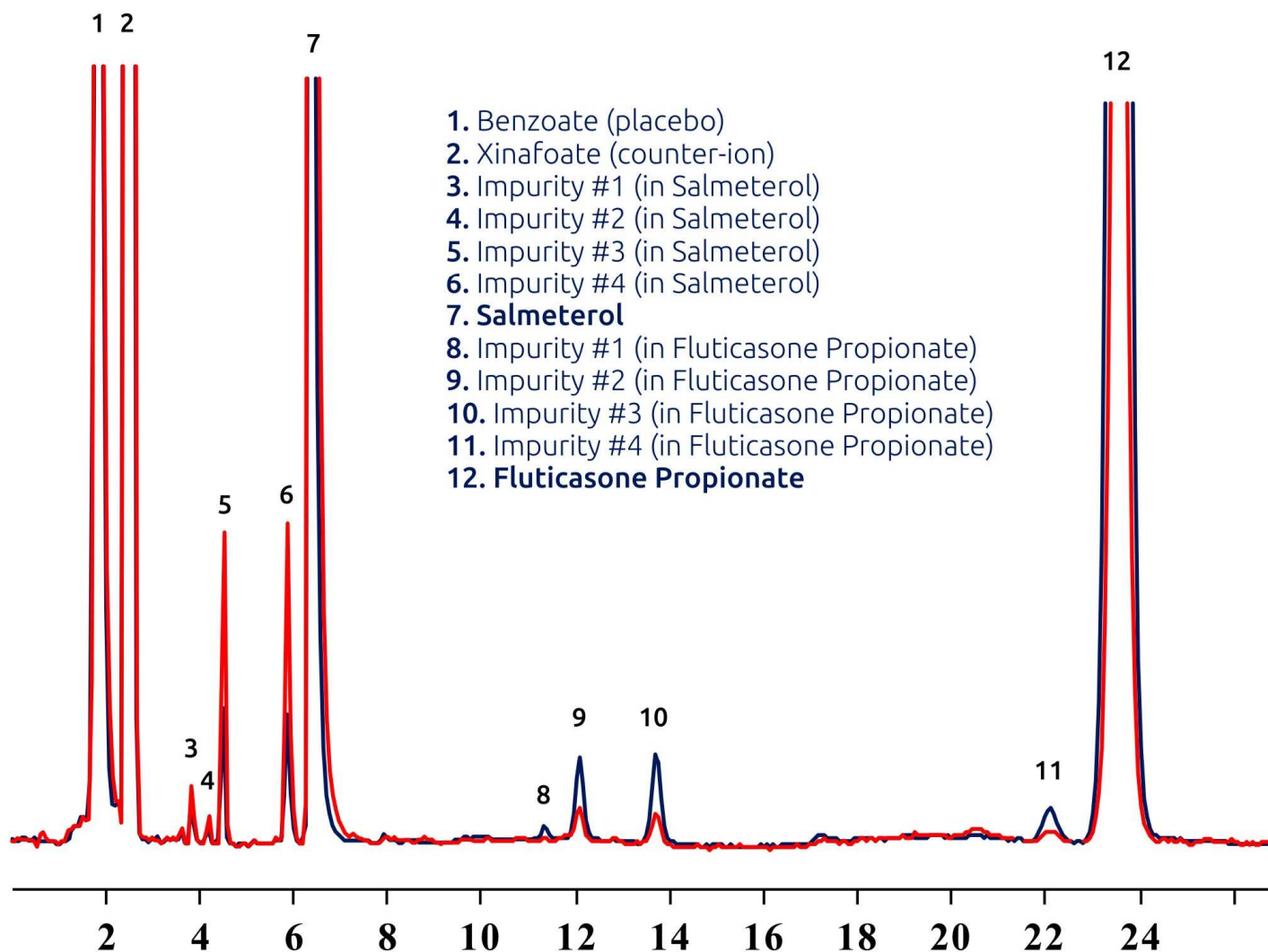


HPLC IN PHARMACEUTICAL ANALYSIS



ELSICO. BEAUTY IN SEPARATION

HPLC separation of impurities in a complex pharmaceutical form

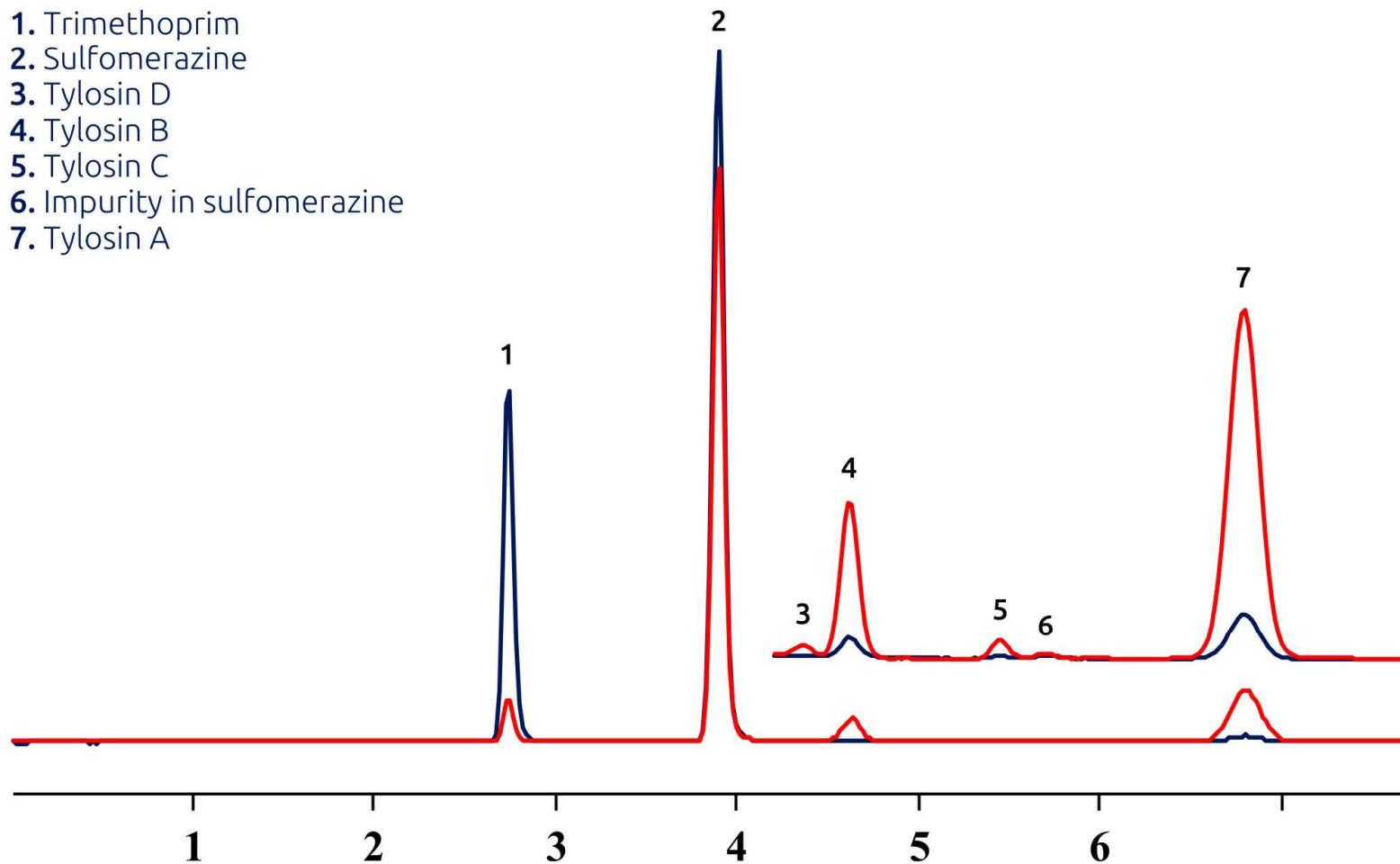


Match between customer's requirements and obtained values

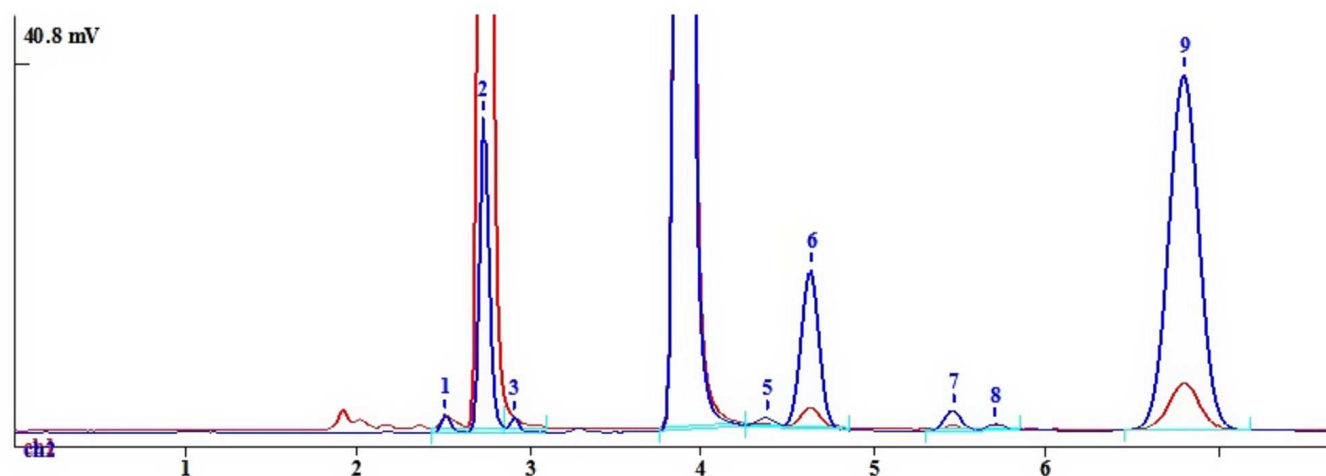
Parameter	Required Value	Obtained value	Match
Benzoate co-elution with analytes	Inadmissible	Done	+
Xinafoate co-elution with analytes	Inadmissible	Done	+
Efficiency of Salmeterol peak	> 3'000	9'400	+
Efficiency of Fluticasone peak	> 3'000	23'500	+
Asymmetry factor of Salmeterol peak	< 2,5	1,7	+
Asymmetry factor of Fluticasone peak	< 2,5	1,0	+
Resolution of the pair Imp.E/Salmeterol	>1,0	1,5	+
Resolution of the pair Imp.G/Fluticasone	>1,0	2,3	+

Fast RP/HILIC separation of six basic drugs and their impurities

1. Trimethoprim
2. Sulfamerazine
3. Tylosin D
4. Tylosin B
5. Tylosin C
6. Impurity in sulfamerazine
7. Tylosin A

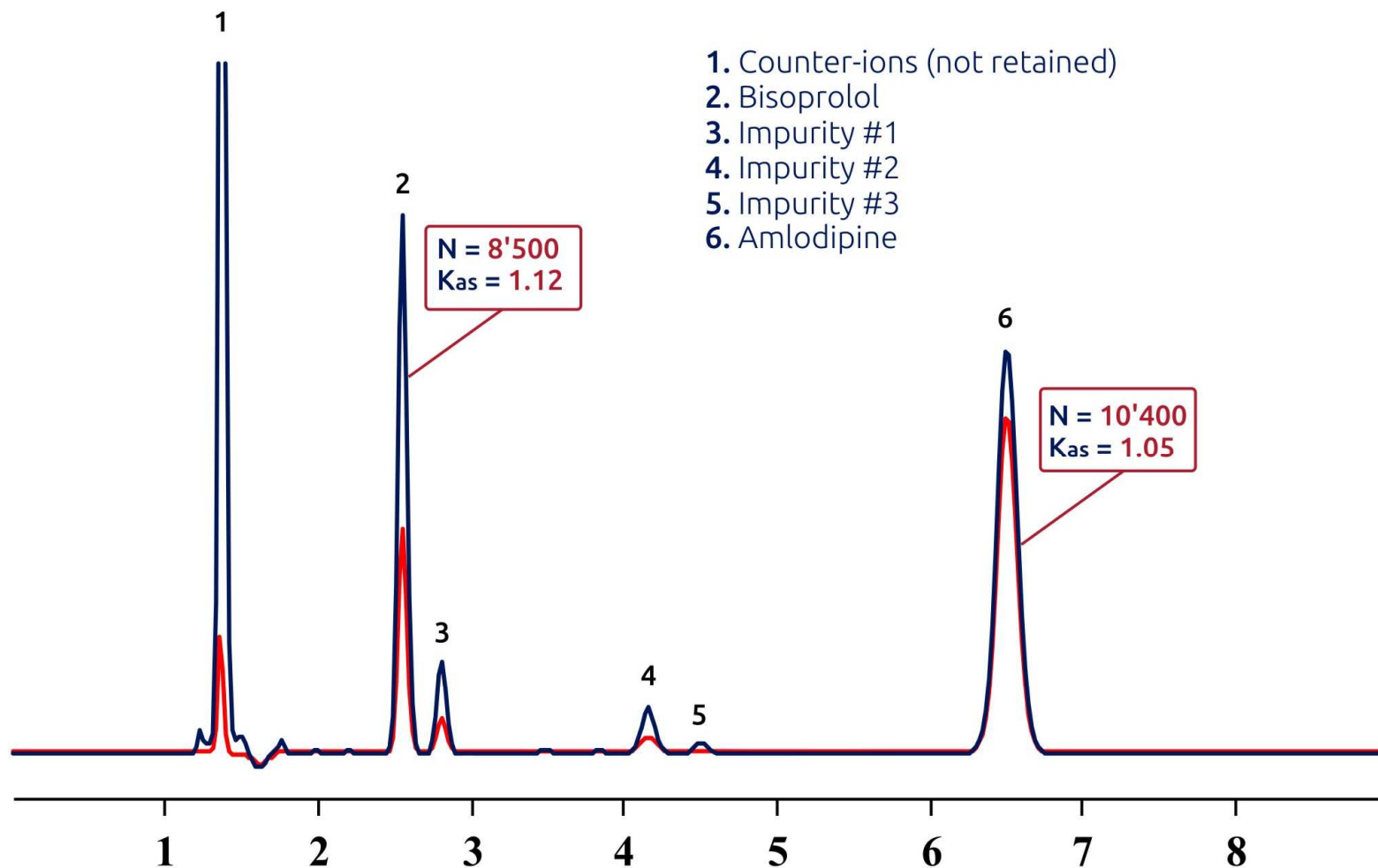


Validation of method's specificity. Example of validation report



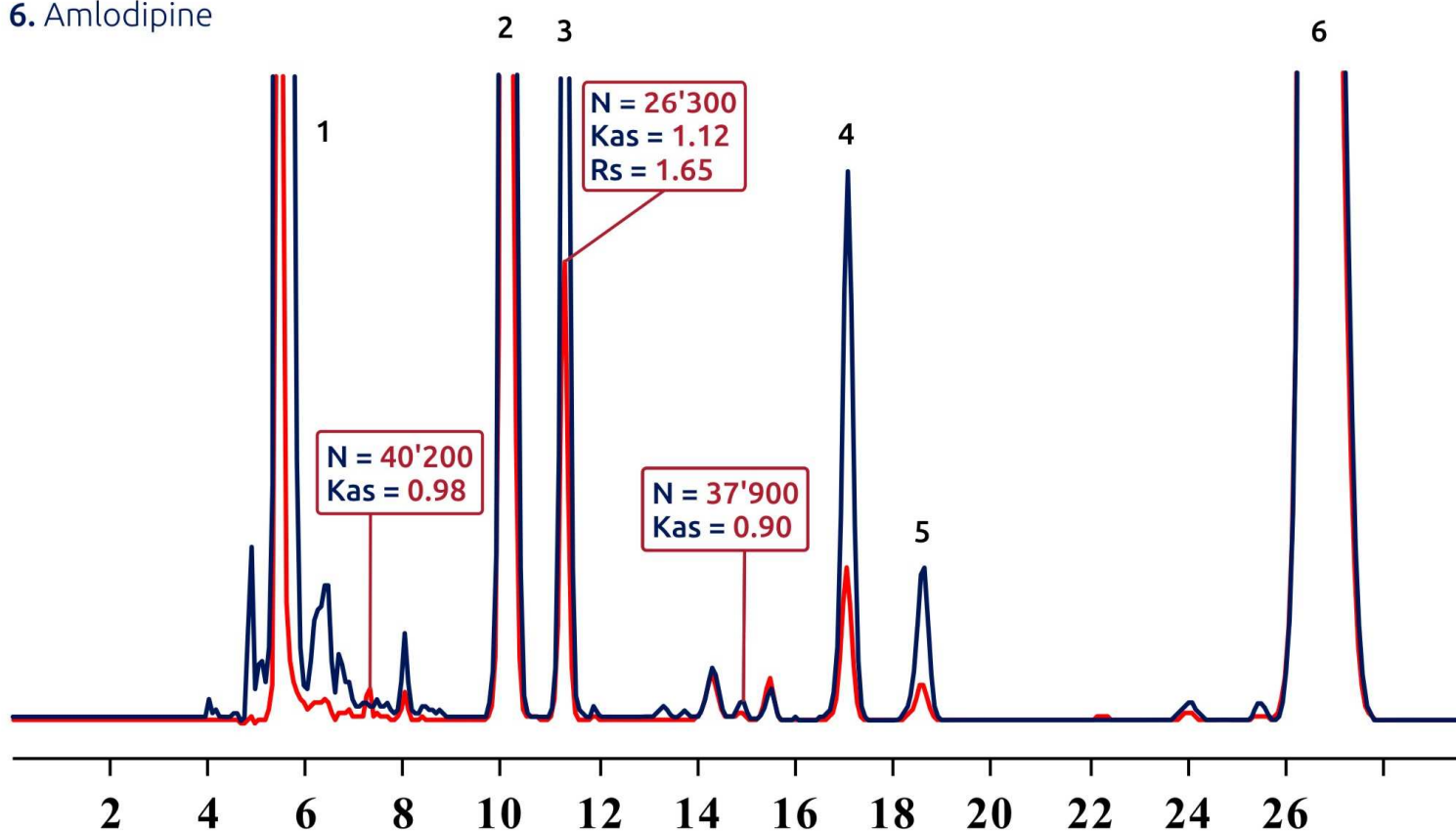
Component	tR, min	Resolution n/n+1	Efficiency	Asymmetry factor
1. Unidentified degradation product #1	2.504	2.25	10'541	1.27
2. Trimethoprim	2.726	1.94	11'472	1.28
3. Unidentified impurity #1	2.906	9.59	17'895	1.05
4. Sulfamerazine	3.887	2.71	16'822	1.00
5. Tylosin D	4.364	1.21	9'505	0.97
6. Tylosin B	4.619	4.32	9'077	1.01
7. Tylosin C	5.447	1.26	13'287	1.19
8. Unidentified impurity #2	5.699	4.09	11'754	0.98
9. Tylosin A	6.791		7'009	1.00
Pass criterium		> 1.2	> 2000	< 2.0

Fast RP determination of 2 basic drugs and their main impurities

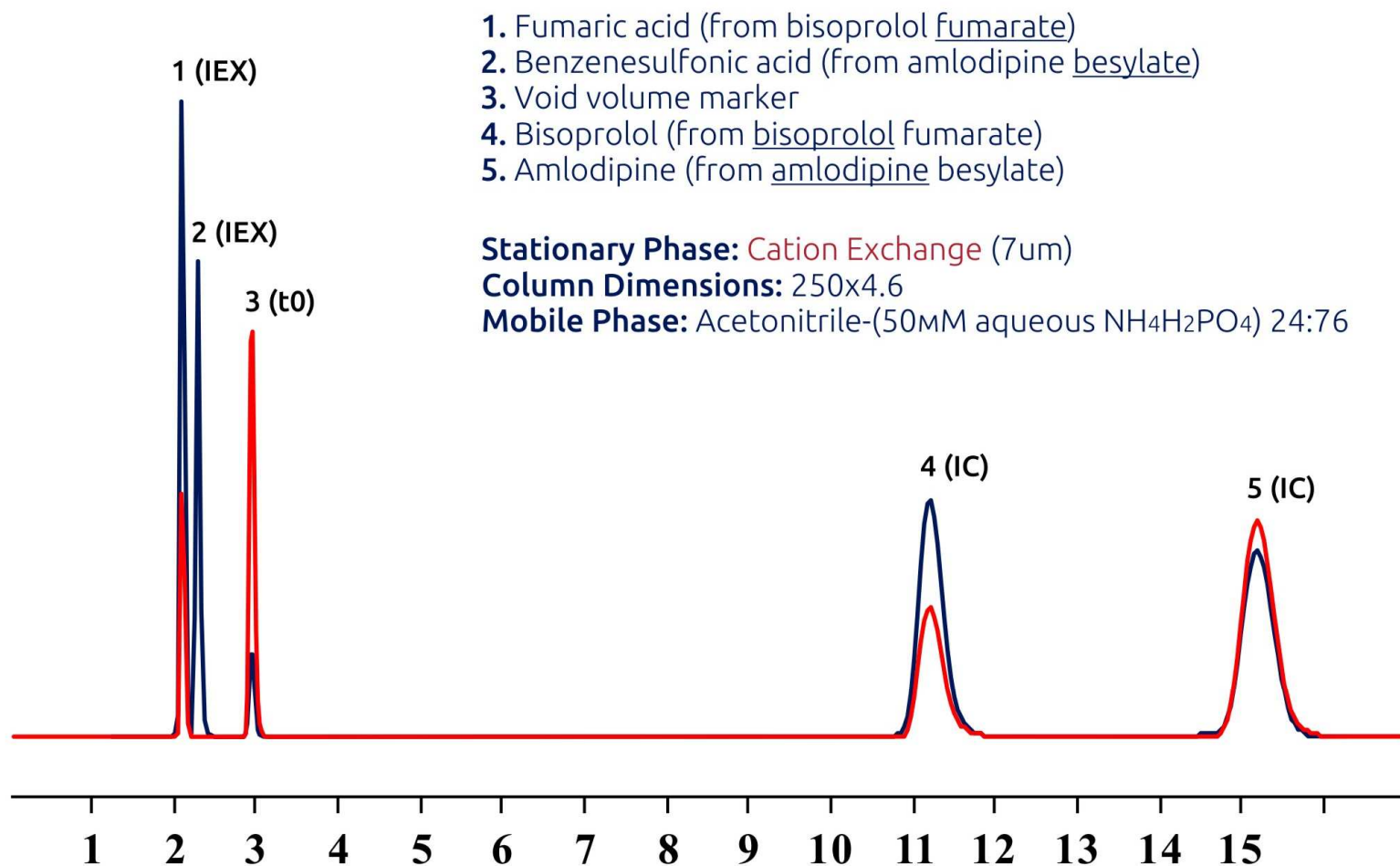


Semi-preparative RP separation of basic drugs' main and minor impurities

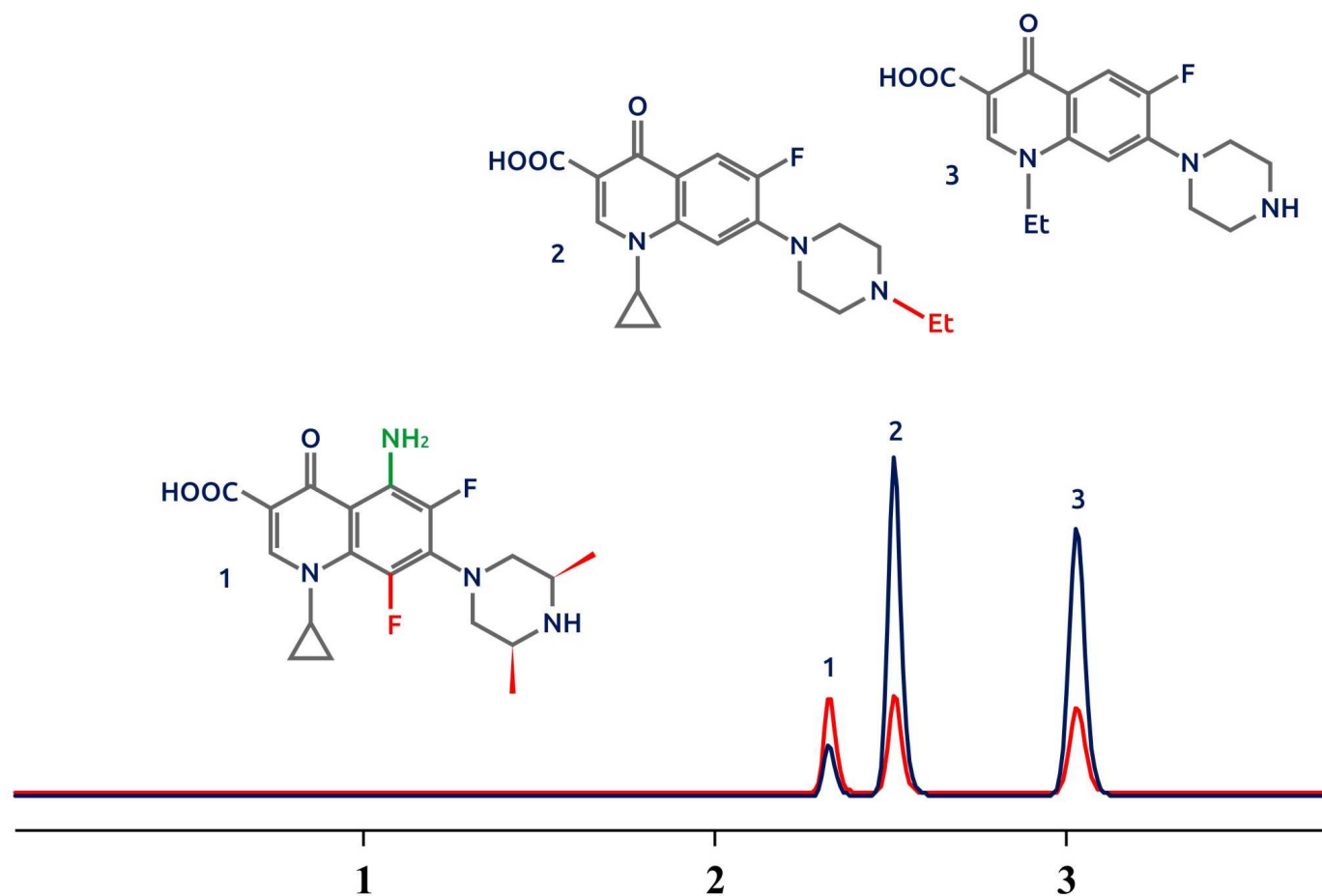
1. Counter-ions (not retained)
2. Bisoprolol
3. Impurity #1
4. Impurity #2
5. Impurity #3
6. Amlodipine



Simultaneous determination of drugs and their counter-ions in IC/IEX mode



HPLC separation of fluoroquinolone antibiotics in HILIC mode



HPLC separation of water soluble vitamins on NanoSpher WSVitamins HILIC

Stationary Phase: NanoSpher WSVitamins HILIC (3 μ m)

Column Dimensions: 250x4

Mobile Phase: Acetonitrile-(50mM aqueous NH₄H₂PO₄)-
H₃PO₄ 70:30:0.3

Flow Rate: 1.1 ml/min

Detection: UV 260 nm, 300 nm

P. Rutin

B2. Riboflavin

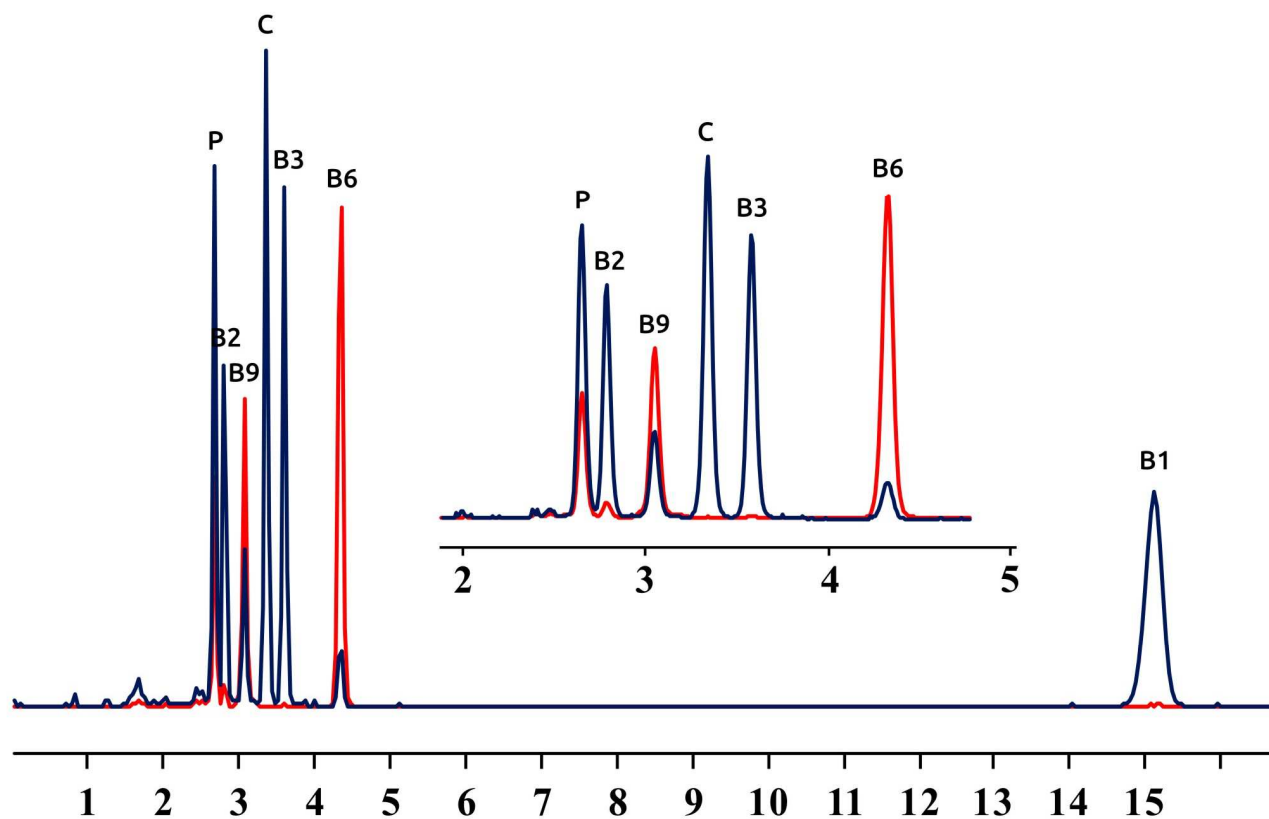
B9. Folic acid

C. Ascorbic acid

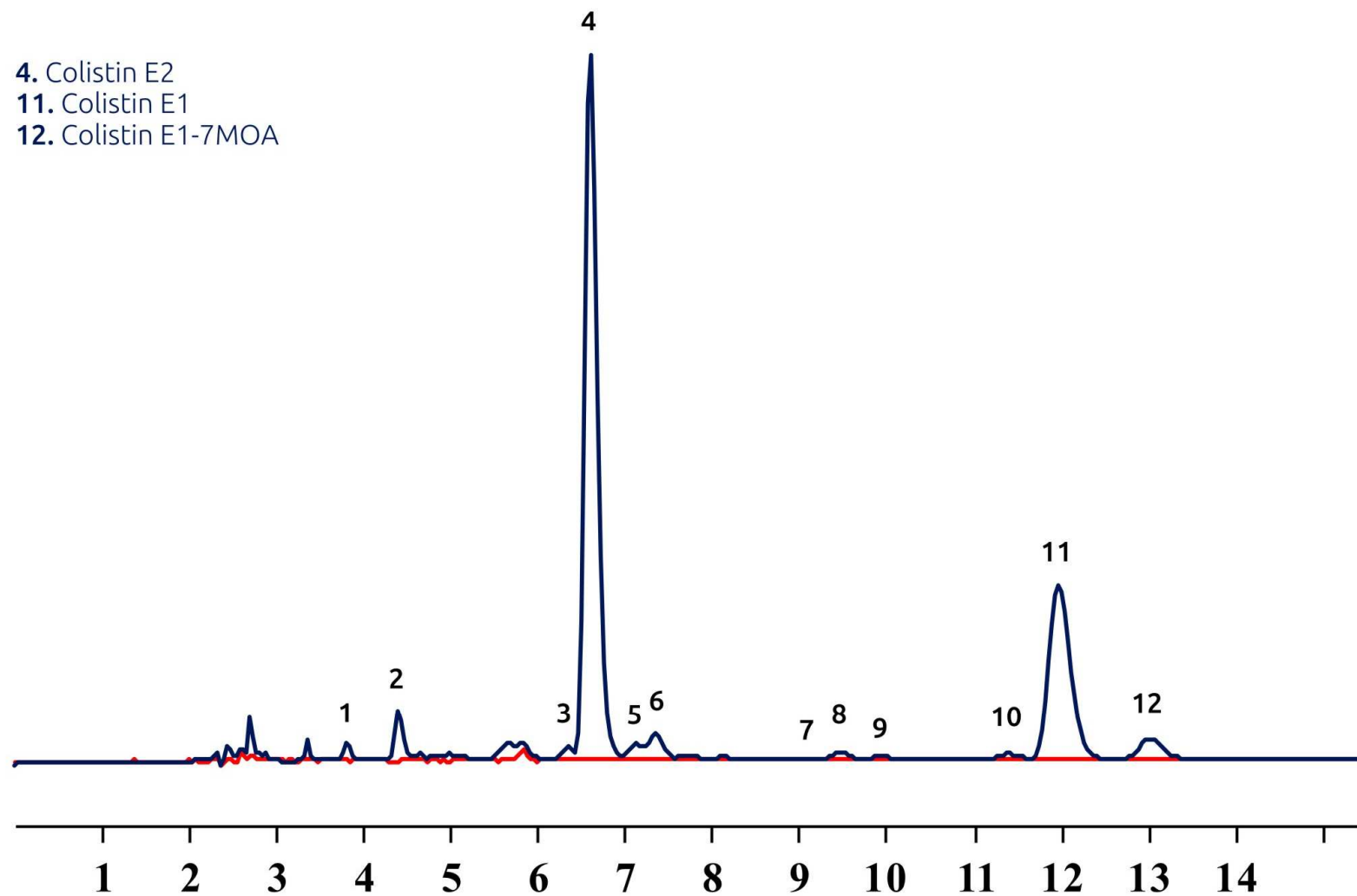
B3. Nicotinamide

B6. Pyridoxine

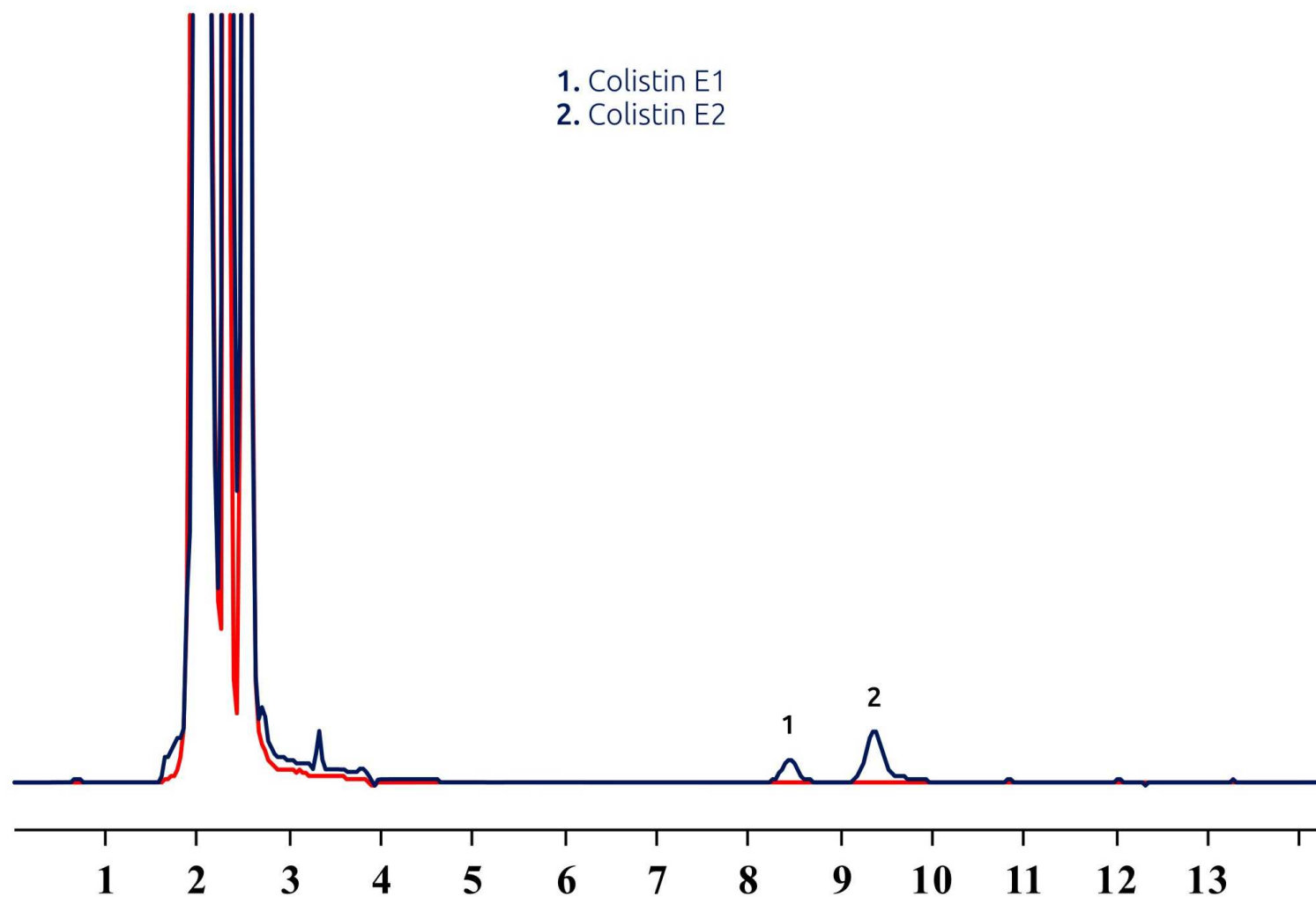
B1. Thiamine



RP/HILIC separation of Colistin substance



Specific HILIC determination of Colistin in the complex pharmaceutical form



Separation of water soluble vitamins using column switching HPLC setup

B1. Thiamine

P. Rutin

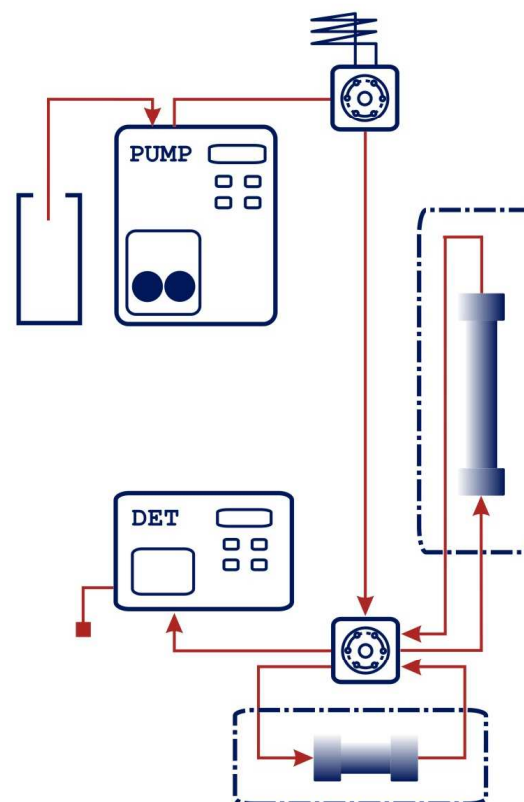
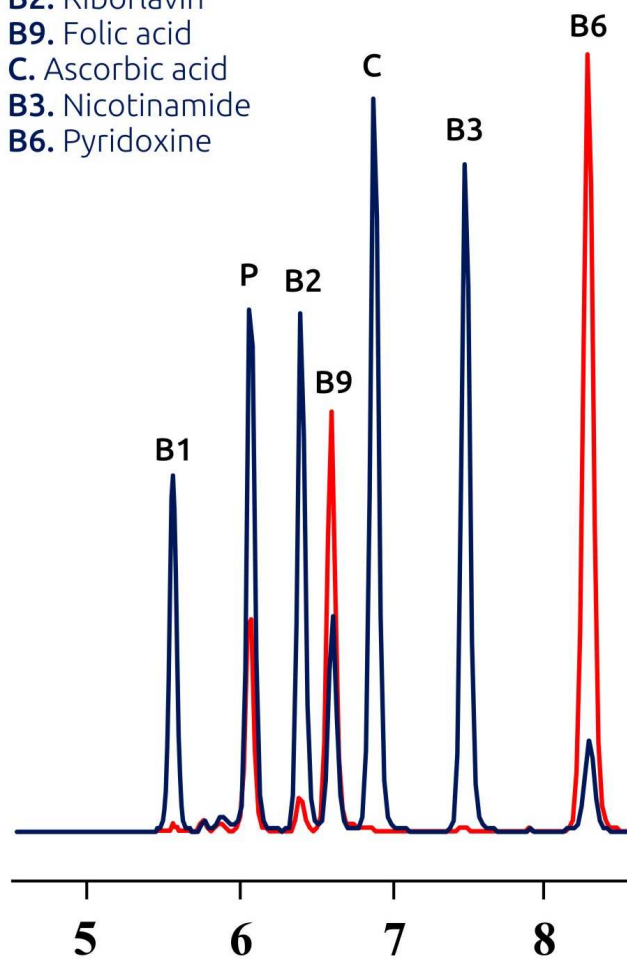
B2. Riboflavin

B9. Folic acid

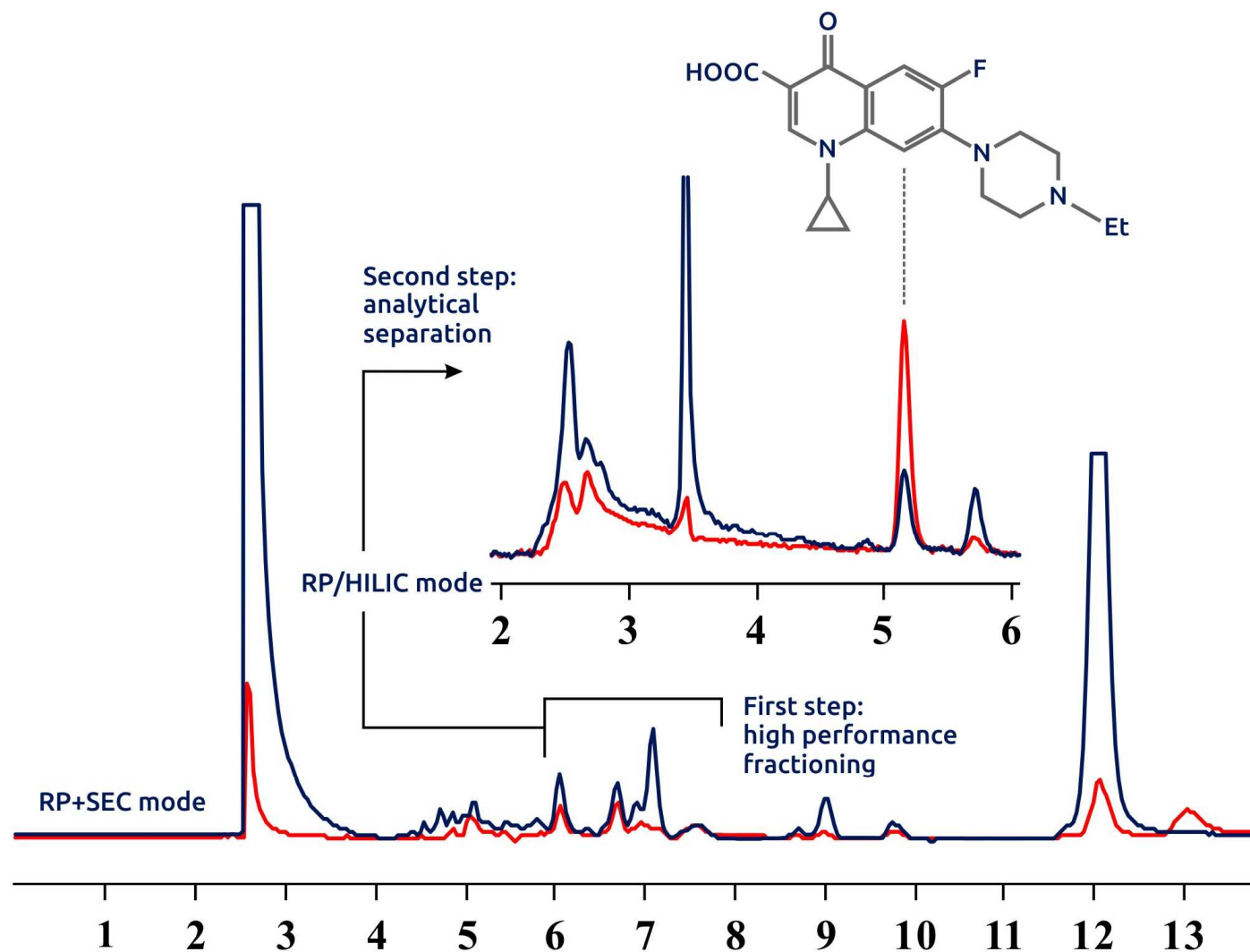
C. Ascorbic acid

B3. Nicotinamide

B6. Pyridoxine



Application of 'heart-cut' 2D HPLC setup for analysis of blood serum





Development of new HPLC methods Improvement of older HPLC methods

You pay for ready-to-use applications
Targeted applications
Isocratic elution
Standard detectors (UV, FLD, RID)
LC modes: RP, HILIC, IC, NP, SEC
Mixed LC modes: RP/HILIC, RP/IC, RP/CT

Corporate HPLC courses

Tunable schedule and list of topics
Levels from starter to proficiency
Solving problems on-line
Developing HPLC methods on-line



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