

Figure S1. Screening of back-extraction solvent on extraction efficiency of FPSE.

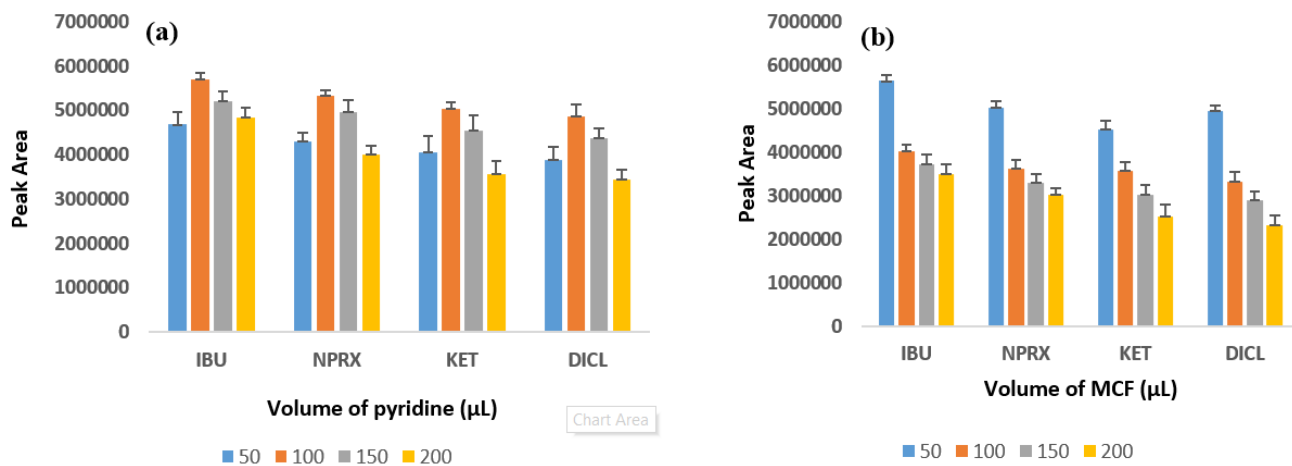


Figure S2. Optimization of derivatizing reagent for NASIDs: (a) volume of pyridine (μL) (b) volume of MCF (μL).

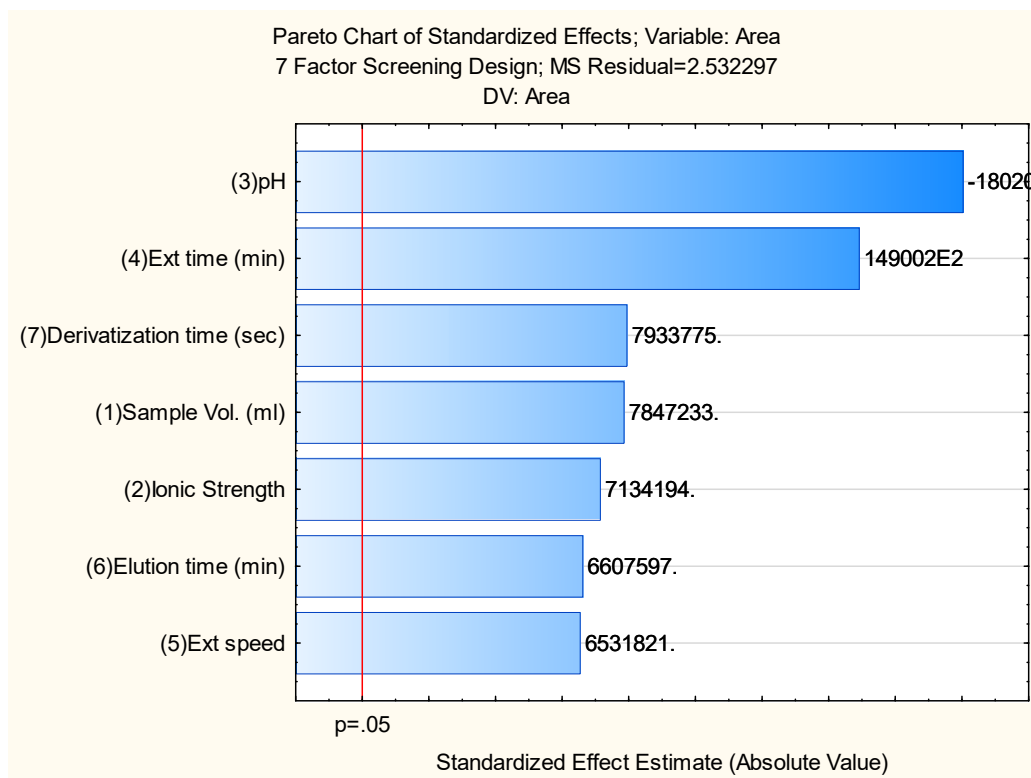


Figure S3. Pareto diagram of calculated main effect for PBD.

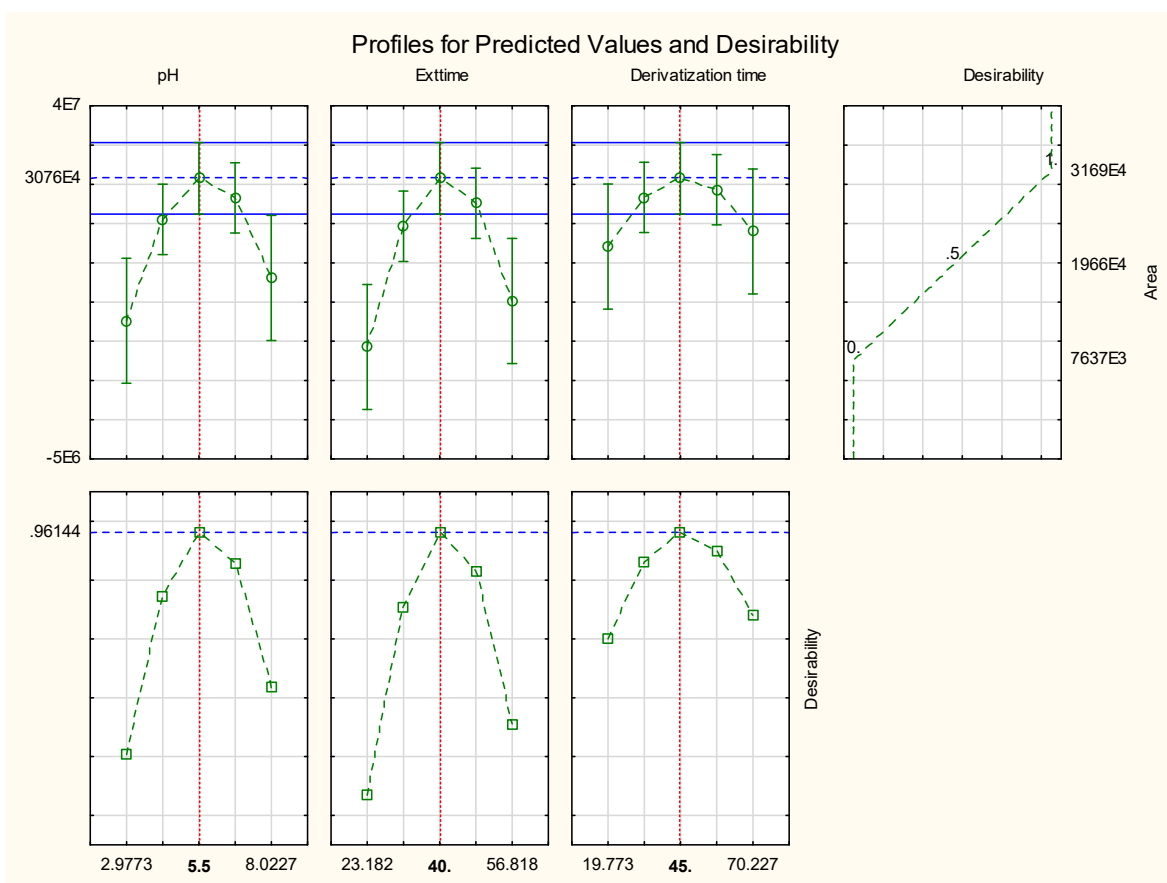


Figure S4. Desirability function plot showing the optimum range of significant factors.

| SAMPLE PREPARATION AND ANALYSIS | | PRE-ANALYSIS PROCESSES | |
|---------------------------------|---------------------------|---|---|
| Sample preparation | | Yield and conditions | |
| 1. Collection: | off-line ▼ | I. Yield: | >89% ▼ |
| 2. Preservation: | Chemical or physical ▼ | II. Temperature/time: | Room temp., > 1 h, He ▼ |
| 3. Transport: | Required ▼ | Relation to Green Economy | |
| 4. Storage: | Under normal conditio ▼ | III. Number of rules met: | 5-6 ▼ |
| 5. Type of method: | Extraction required ▼ | Reagents and solvents | |
| 6. Scale of extraction: | Micro-extraction ▼ | IVa. Health hazard: | Moderately toxic; couli ▼ |
| 7. Solvents/reagents used: | Non-green solvents/re ▼ | IVb. Safety hazard: | Highest NFPA flammal ▼ |
| 8. Additional treatments: | Simple treatments ▼ | Instrumentation | |
| Reagents and solvents | | Va. Technical setup: | Common setup ▼ |
| 9. Amount: | < 10 mL (< 10 g) ▼ | Vb. Energy: | ≤0.1 kWh per sample ▼ |
| 10. Health hazard: | Moderately toxic; couli ▼ | Vc. Occupational hazard: | Hermetization of analy ▼ |
| 11. Safety hazard: | Highest NFPA flammal ▼ | Workup and purification | |
| instrumentation | | Vla. End products workup, purification: | None or simple proces ▼ |
| 12. Energy: | > 1.5 kWh per sample ▼ | Vlb. Purity: | >98% ▼ |
| 13. Occupational hazard: | Hermetic sealing of the ▼ | E-factor | |
| 14. Waste: | < 1 mL (< 1 g) ▼ | VII. E-factor input: | 0 <input type="text"/> <input type="button" value="Apply"/> |
| 15. Waste treatment: | No treatment ▼ | | |
| Method type | | | |
| Type of analysis: | Qualitative and quantit ▼ | | |

Figure S5. Input parameters and their values in ComplexGAPI software for the proposed method.