

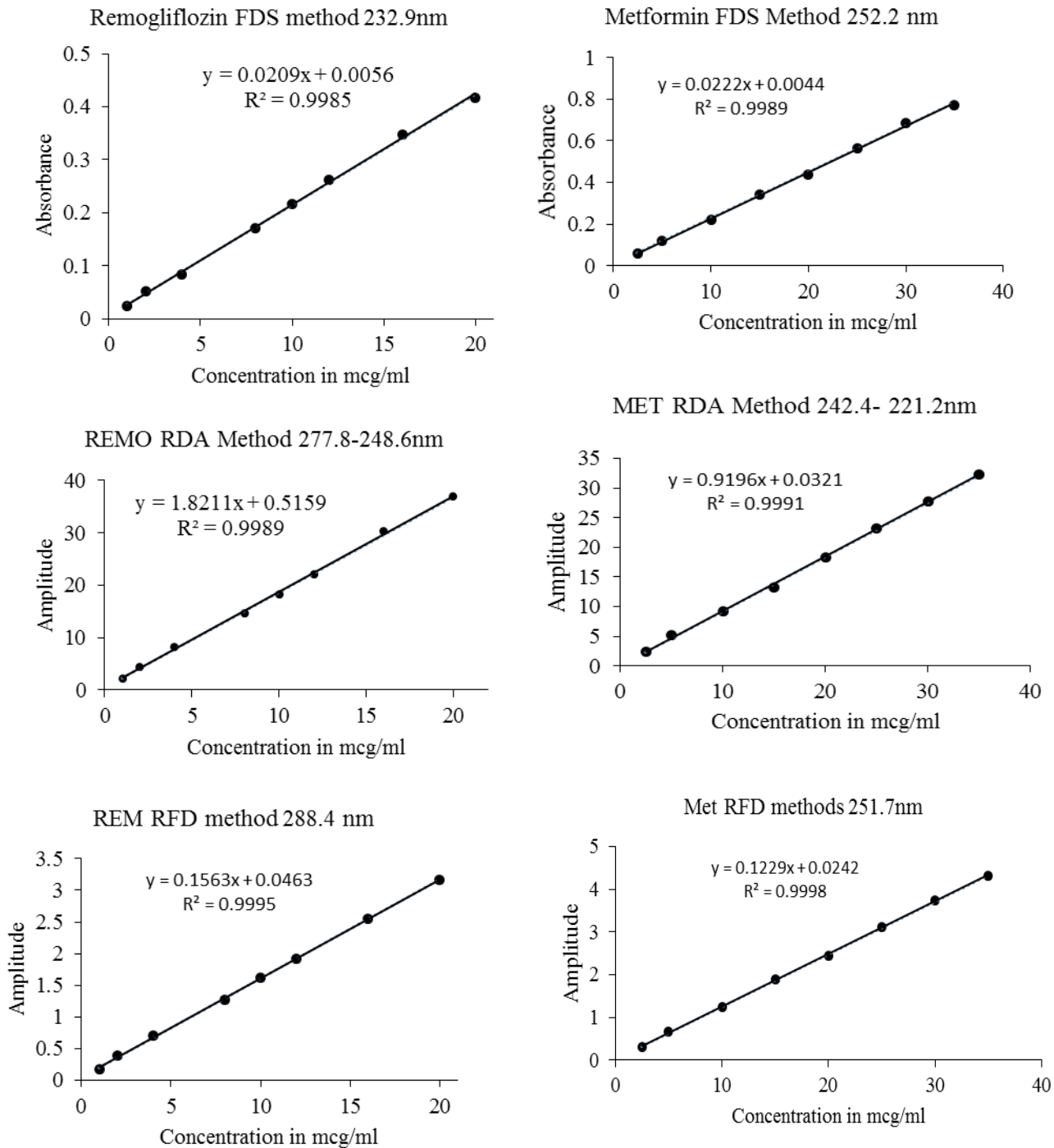


Figure S1 : Calibration curves for REM and MET by First derivative spectroscopic method (FDS), Ratio absorption derivative (RAD) and Ratio First derivative method (RFD)

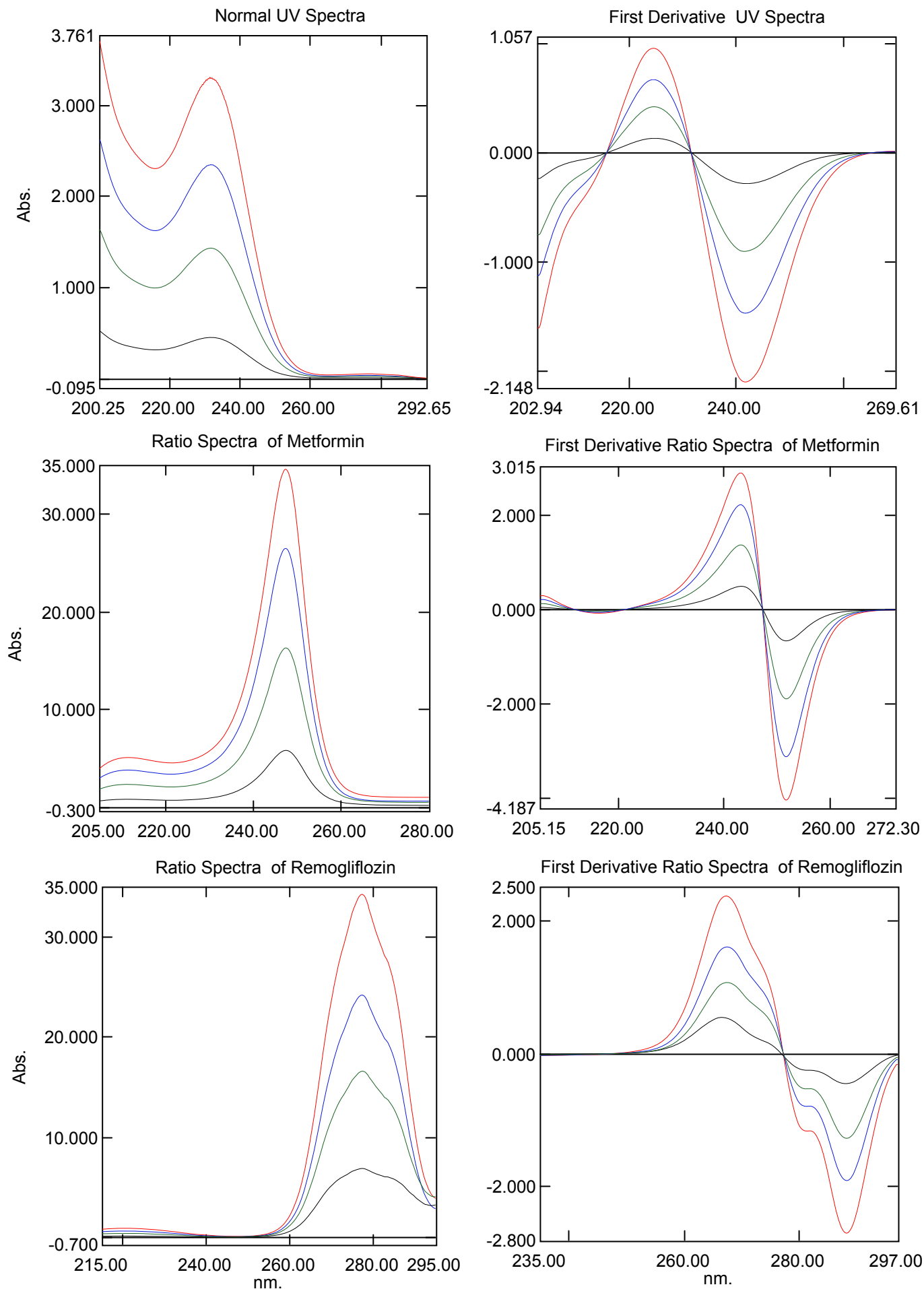


Figure S2: UV spectra of solutions consisting of 2.5, 7.5, 12.5, and 17.5 µg/ml of REM and 4, 14, 24, 32 µg/ml for accuracy and precision

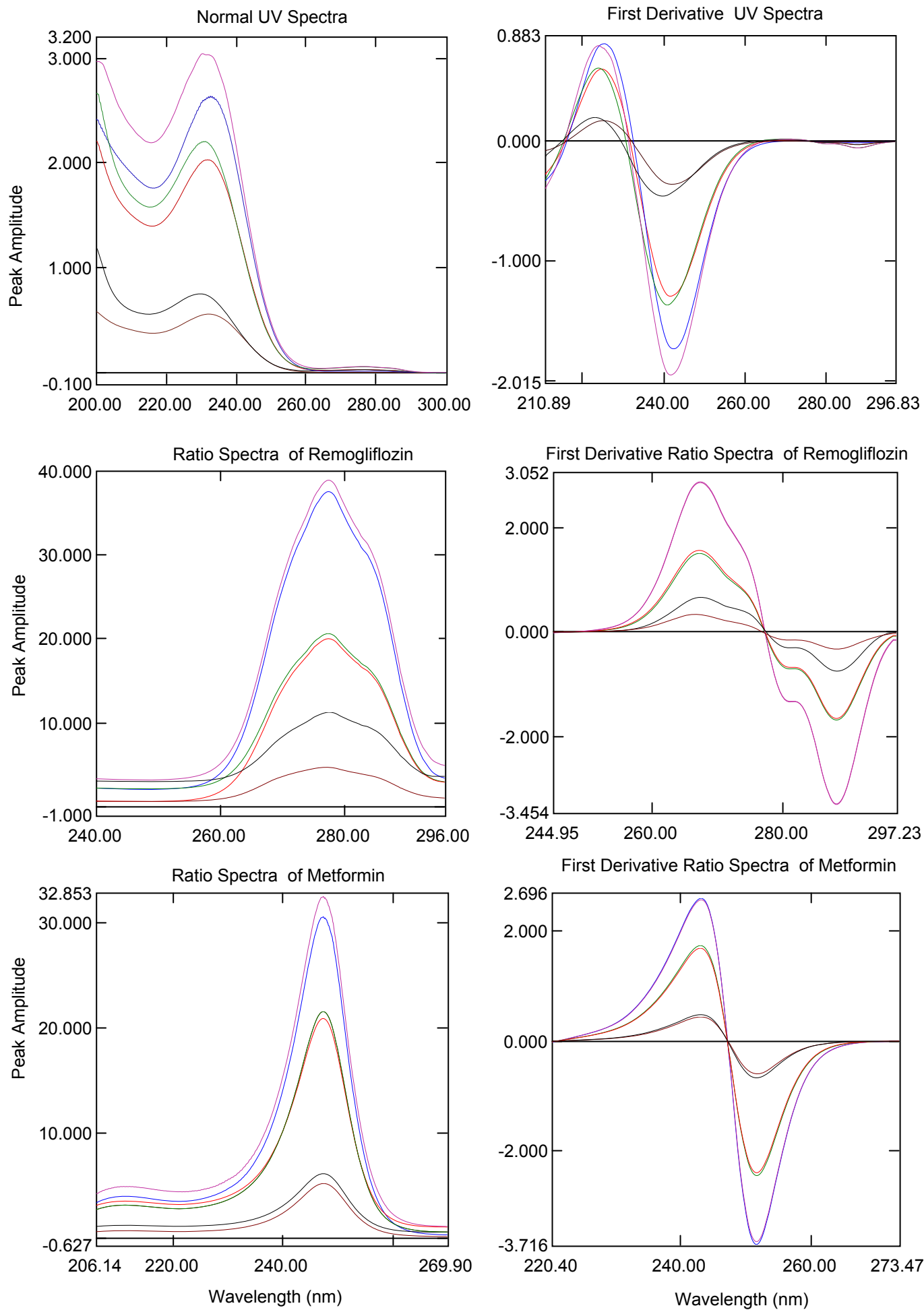


Figure S3: UV spectra of laboratory solutions consisting of REM:MET in ratio 2:5, 5:30, 10:5, 10:20, 20:20 and 20:30 µg/ml

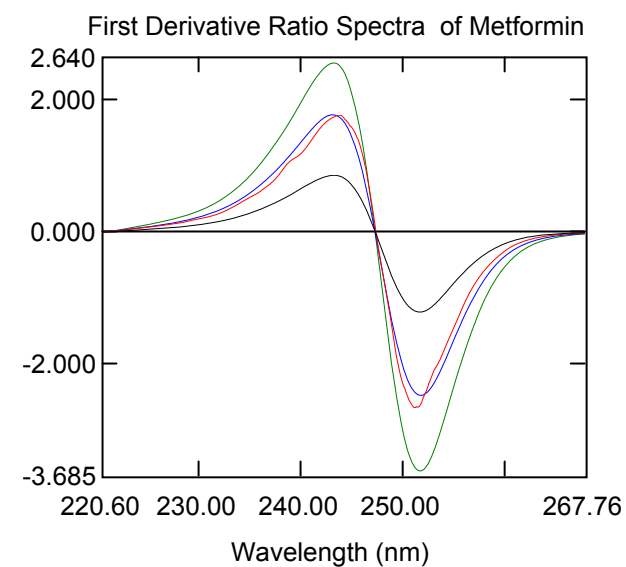
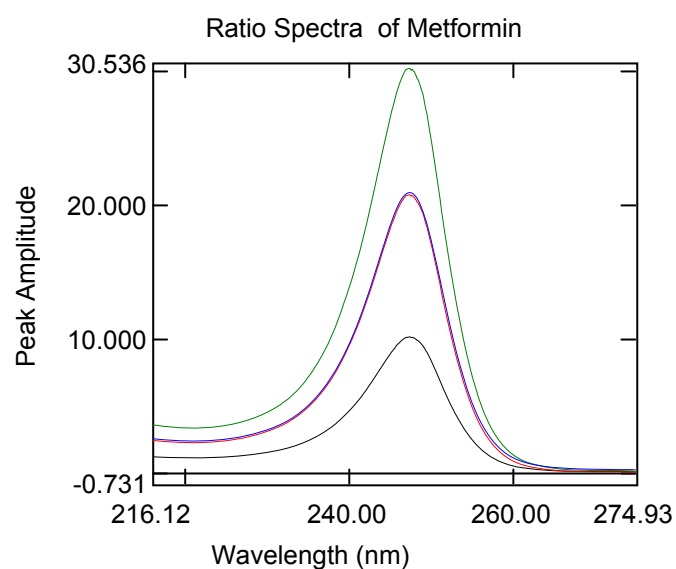
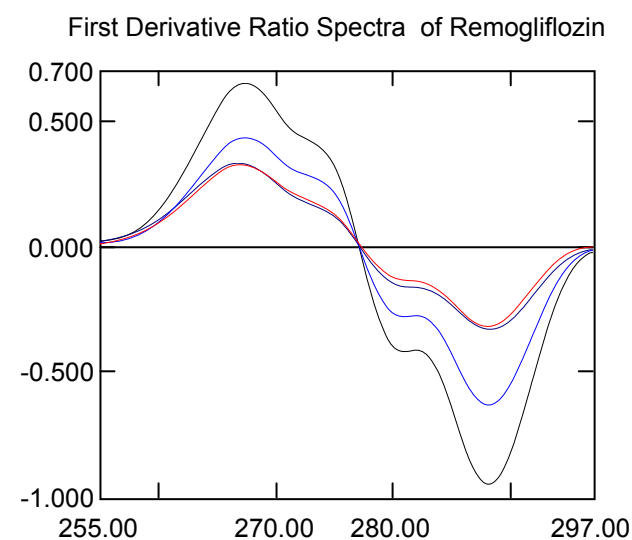
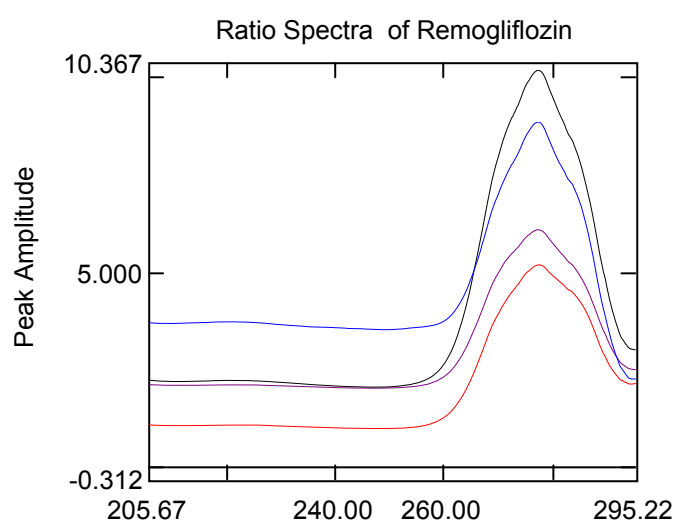
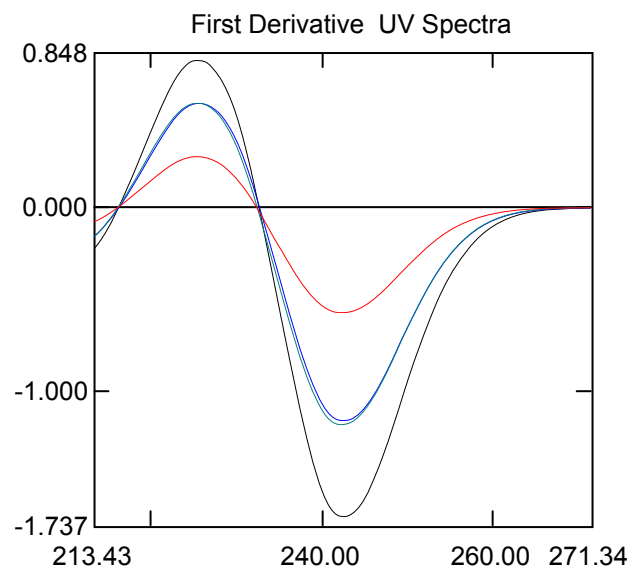
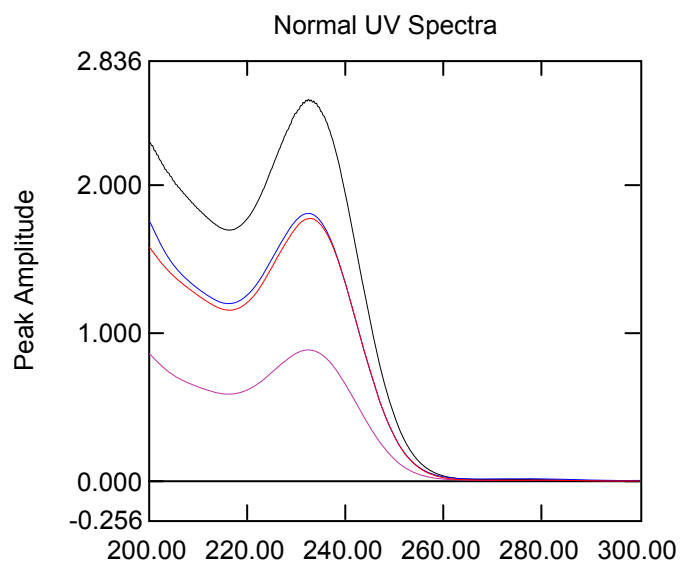
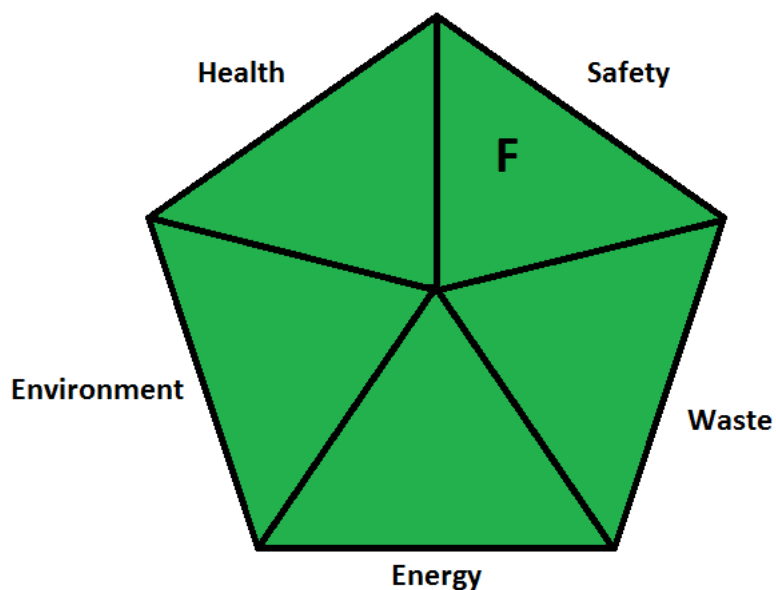


Figure S4: UV spectra of formulation solutions consisting of REM:MET ($\mu\text{g/mL}$) 2:10, 4:20, 2:20 and 3:30 $\mu\text{g/ml}$

Supplementary Material



Category	Green	Yellow	Red
Health Hazard	Slightly toxic, slight irritant; NFPA health hazard score is 0 or 1.	Moderately toxic; could cause temporary incapacitation; NFPA = 2 or 3.	Serious injury on short term exposure; known or suspected small animal carcinogen; NFPA = 4.
Safety Hazard	Highest NFPA flammability, instability score of 0 or 1. No special hazards.	Highest NFPA flammability or instability score is 2 or 3, or a special hazard is used.	Highest NFPA flammability or instability score is 4.
Environmental Hazard	If less than 50 g of environmental hazards used.	If more than 50 g but less than 250 g used.	If more than 250 g used.
Energy	Wet chemistry method such as titration. Very little solvent evaporation.	Instrumental method such as GC, HPLC; moderate solvent evaporation.	Instrumental method such as GC-MS; high volume of solvent evaporated.
Waste amount	Total waste for processing one sample ≤ 50 g.	Total waste ≤ 250 g.	Total waste > 250 g.

Figure S5. Green assessment profile proposed by Raynie et al. [1]

References

D. Raynie, J. Driver, Green Assessment of Chemical Methods, In: 13th Annual Green Chemistry and Engineering Conference, *Maryland*, 2009.

Supplementary Material

Table S1. The penalty points (PPs) to calculate Analytical Eco-Scale [1]

Category	Sub-total PPs	Total PPs
Reagents		
Amount	<10 mL (<10 g)	1
	10-100 mL (10-100 g)	2
	>100 mL (>100 g)	3
Hazard	None	0
	Less severe hazard	1
	More severe hazard	2
Instruments		
Energy	<0.1 kWh per sample	0
	<1.5 kWh per sample	1
	>1.5 kWh per sample	2
Occupational hazard	Hermetization of analytical proces	0
	Emission of vapours to the atmosphere	3
Waste	None	0
	<1 mL (<1 g)	1
	1-10 mL (1-10 g)	3
	>10 mL (>10 g)	5
	Recycling	0
	Degradation	1
	Pasivation	2
	No treatment	3

Table S2: Green analytical procedure Index parameters [2]

Category	Green	Yellow	Red
Sample preparation			
Collection (1)	In-line	On-line or at-line	Off-line
Preservation (2)	None	Chemical or physical	Physico-chemical
Transport (3)	None	Required	–
Storage (4)	None	Under normal conditions	Under special conditions
Type of method: direct or indirect (5)	No sample preparation	Simple procedures, eg. filtration, decantation	Extraction required
Scale of extraction (6)	Nano-extraction	Micro-extraction	Macro-extraction
Solvents/reagents used (7)	Solvent-free methods	Green solvents/reagents used	Non-green solvents/reagents used
Additional treatments (8)	None	Simple treatments (clean up, solvent removal, etc.)	Advanced treatments (derivatization, mineralization, etc.)
Reagent and solvents			
Amount (9)	< 10 mL (< 10 g)	10–100 mL (10–100 g)	> 100 mL (> 100 g)
Health hazard (10)	Slightly toxic, slight irritant; NFPA health hazard score = 0 or 1.	Moderately toxic; could cause temporary incapacitation; NFPA = 2 or 3.	Serious injury on short-term exposure; known or suspected small animal carcinogen; NFPA = 4.
Safety hazard (11)	Highest NFPA flammability or instability score of 0 or 1. No special hazards.	Highest NFPA flammability or instability score of 2 or 3, or a special hazard is used.	Highest NFPA flammability or instability score of 4.
Instrumentation			
Energy (12)	≤0.1 kWh per sample	≤1.5 kWh per sample	> 1.5 kWh per sample
Occupational hazard (13)	Hermetic sealing of analytical process	–	Emission of vapours to the atmosphere
Waste (14)	< 1 mL (< 1 g)	1–10 mL (1–10 g)	> 10 mL (< 10 g)
Waste treatment (15)	Recycling	Degradation, passivation	No treatment
ADDITIONAL MARK: QUANTIFICATION			
Circle in the middle of GAPI: <i>Procedure for qualification and quantification</i>	No circle in the middle of GAPI: <i>Procedure only for qualification</i>		
NFPA: National Fire Protection Association			

References

- 1 Van Aken, K.; Streckowski, L.; Patiny, L. EcoScale, A semi-quantitative tool to select an organic preparation based on economical and ecological parameters. *Beilstein J. Org. Chem.* **2006**, *2*, 1–7.
- 2 Płotka-Wasyłka, J. A new tool for the evaluation of the analytical procedure: Green Analytical Procedure Index. *Talanta* **2018**, *181*, 204–209.