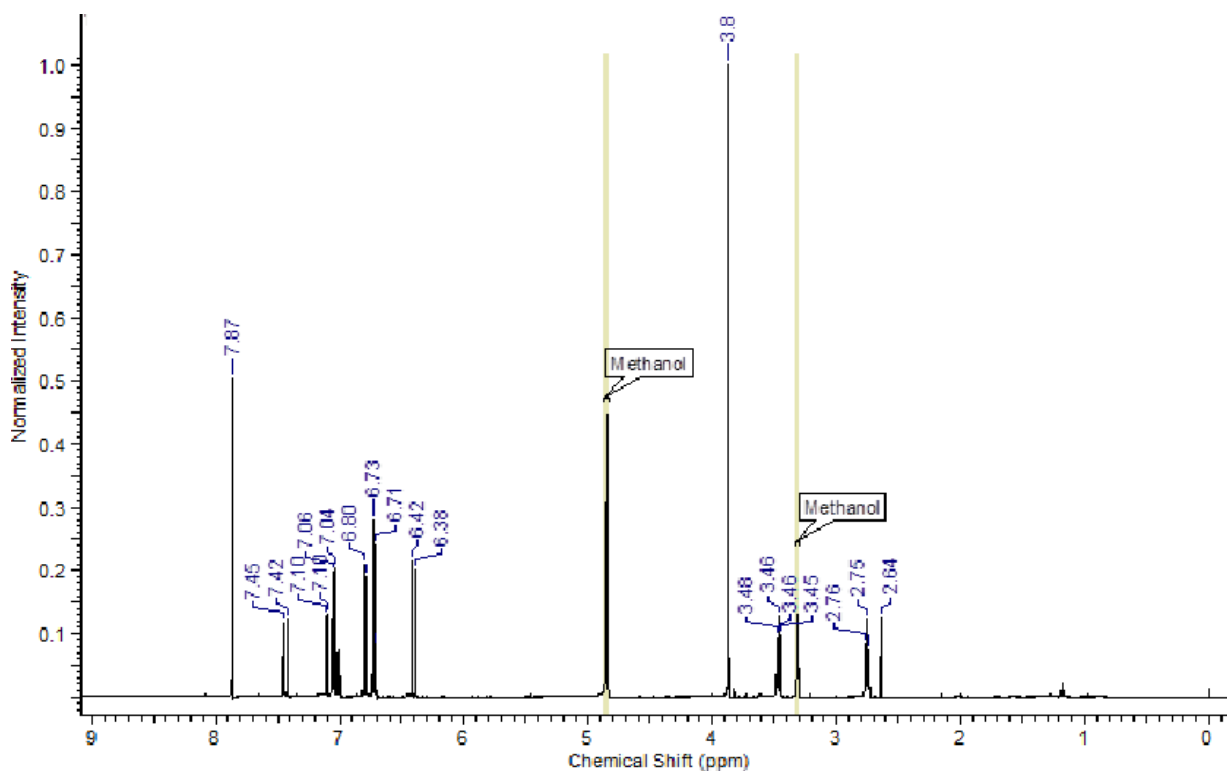


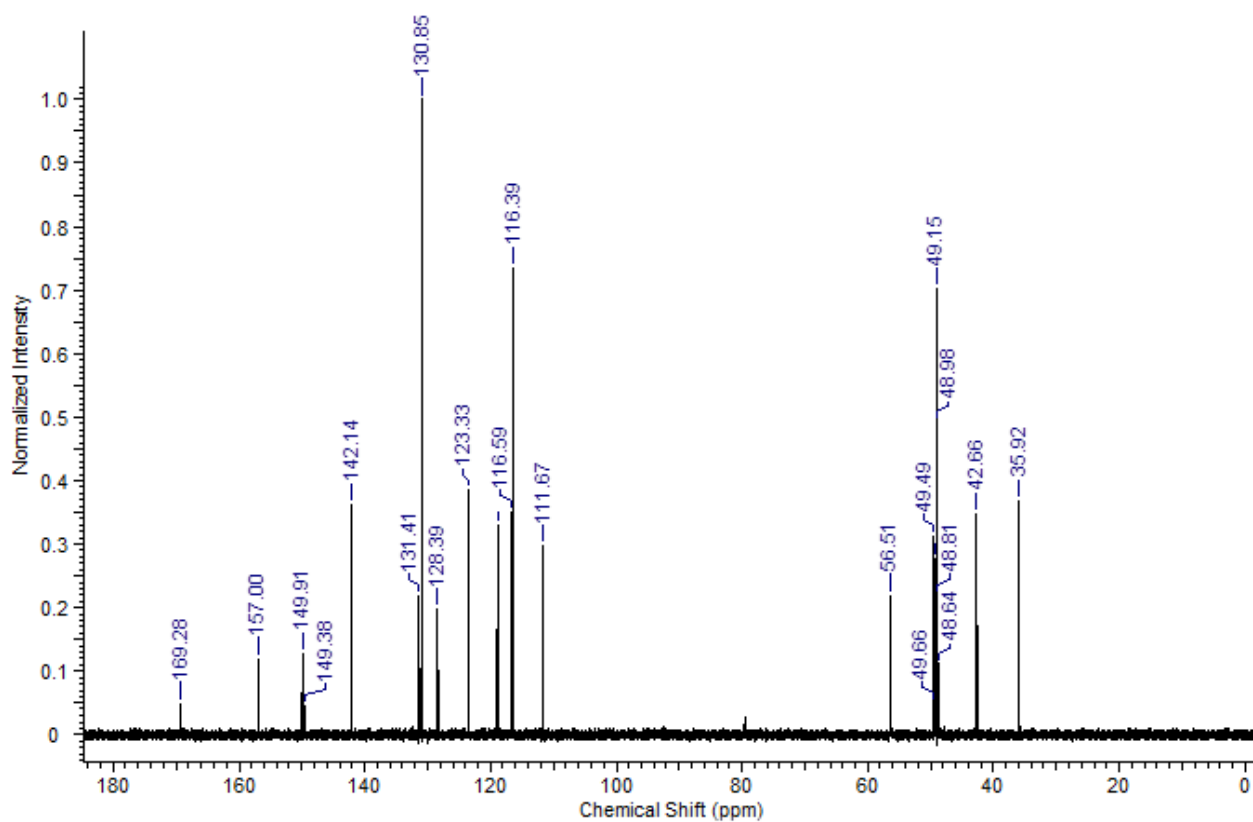
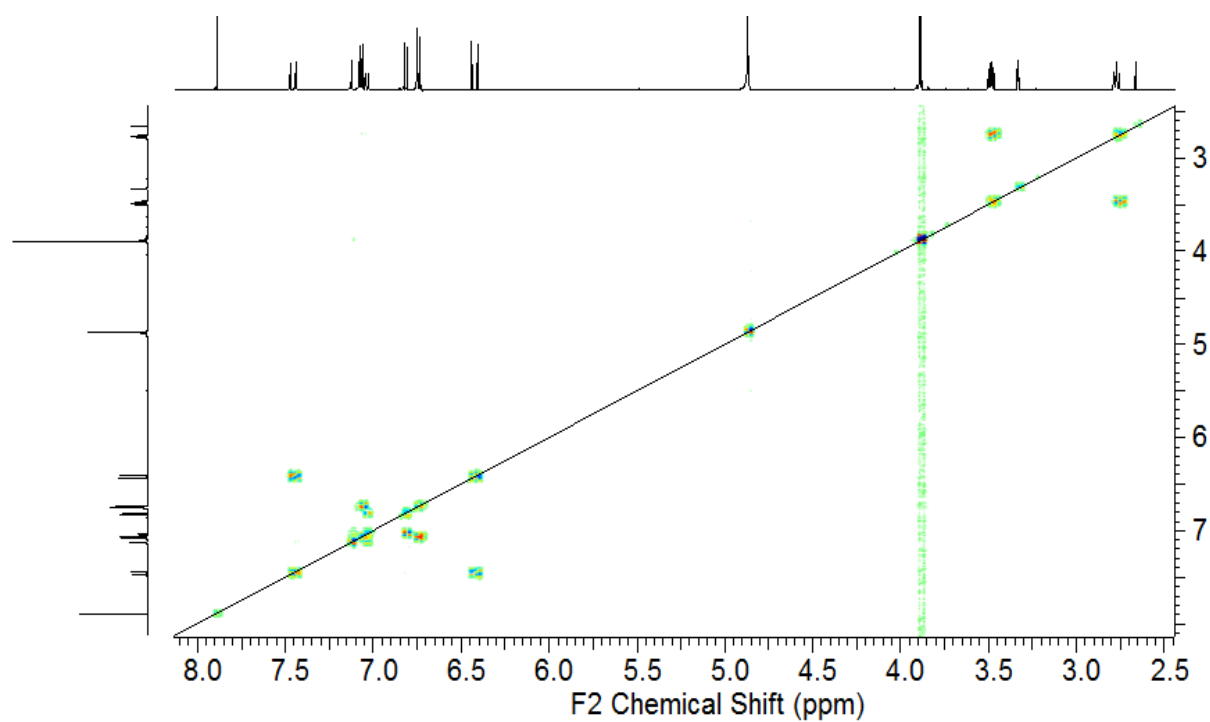
## Supplementary Materials

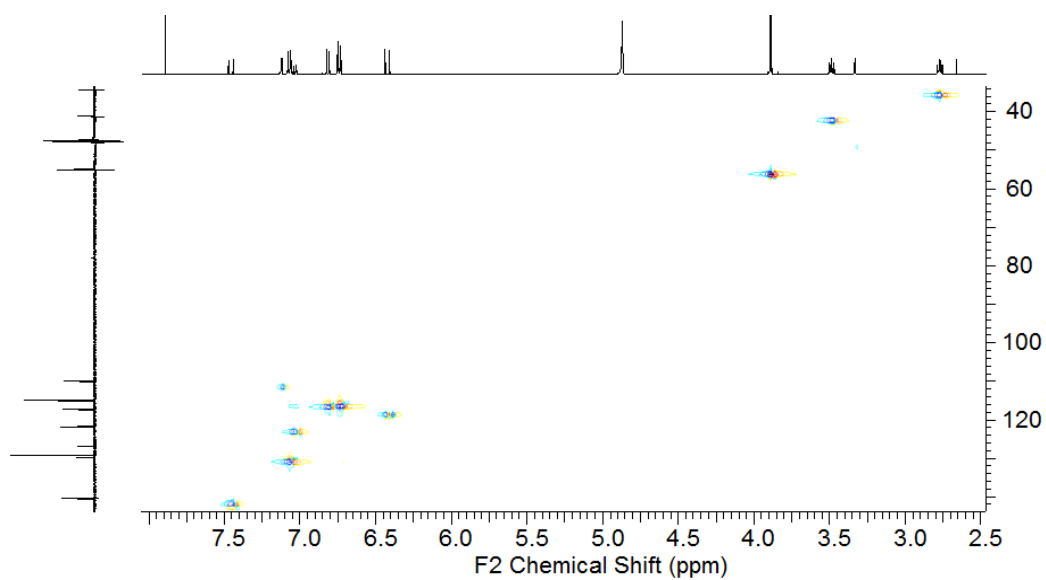
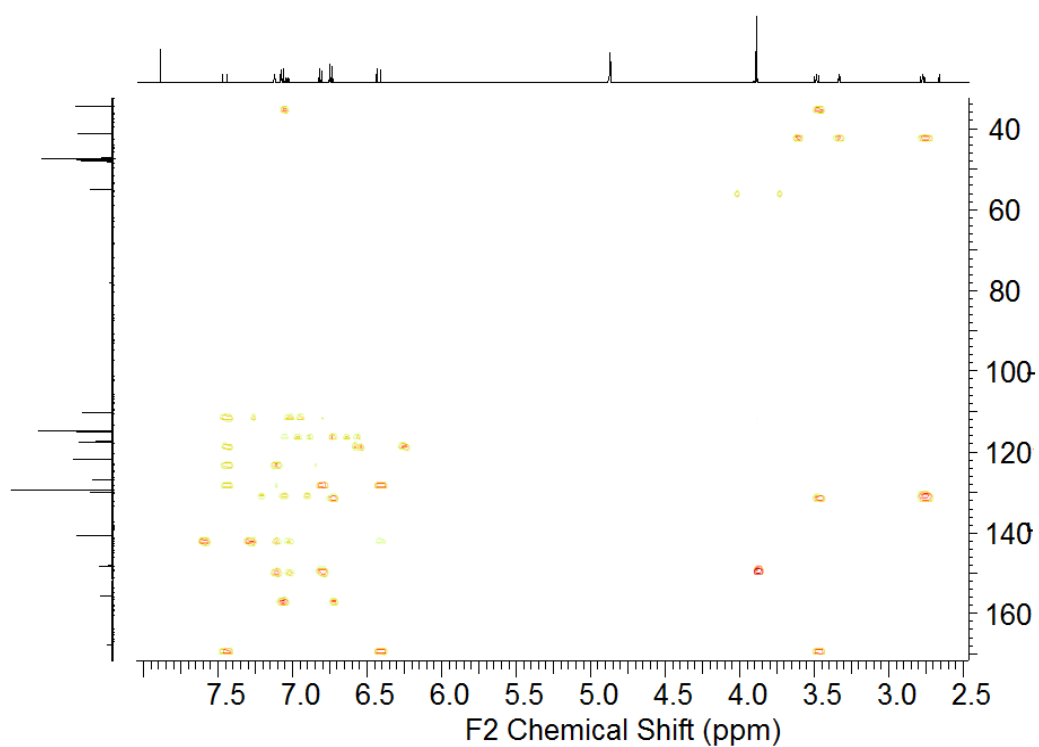
**Table S1.** Data of  $^1\text{H}$  and  $^{13}\text{C}$ -NMR from the compound n-trans-feruloyltyramine at 400 MHz for proton and 100 MHz for carbon (in methanol).

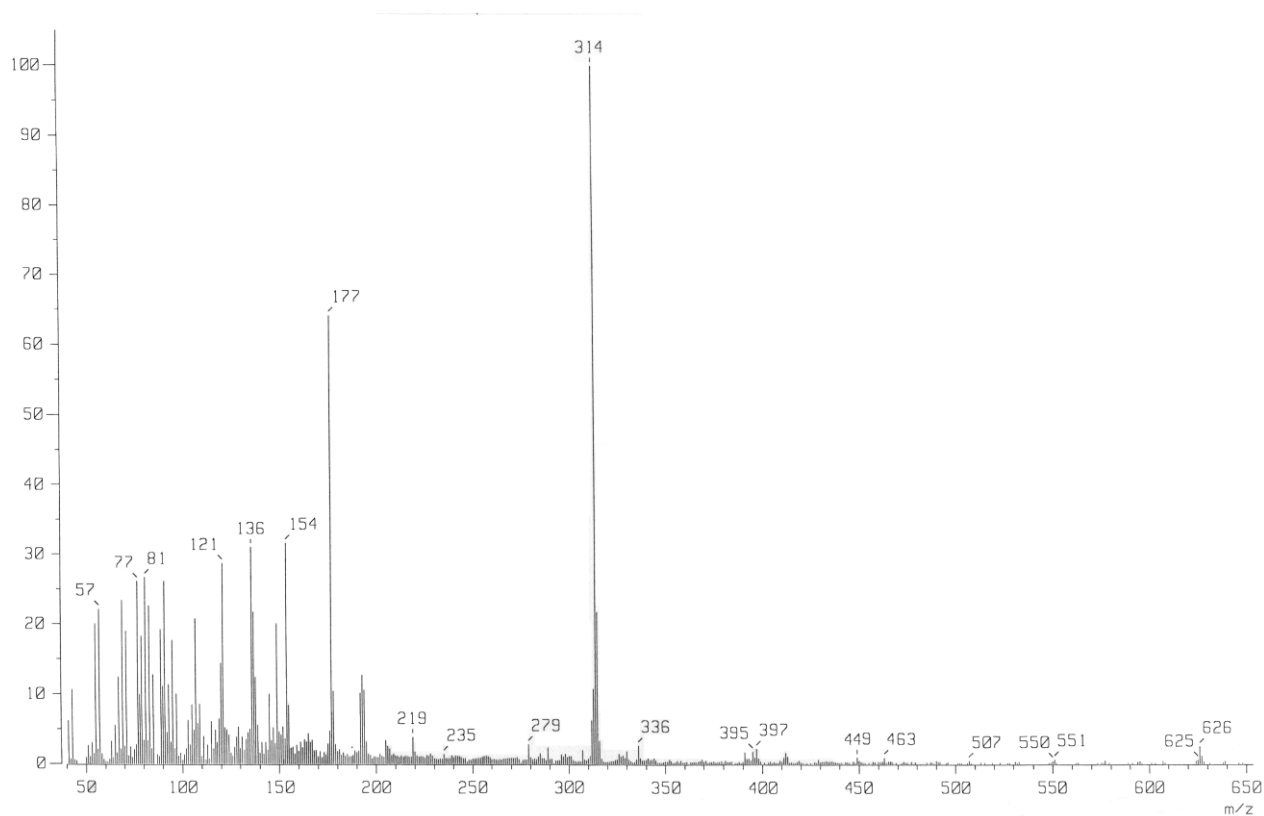
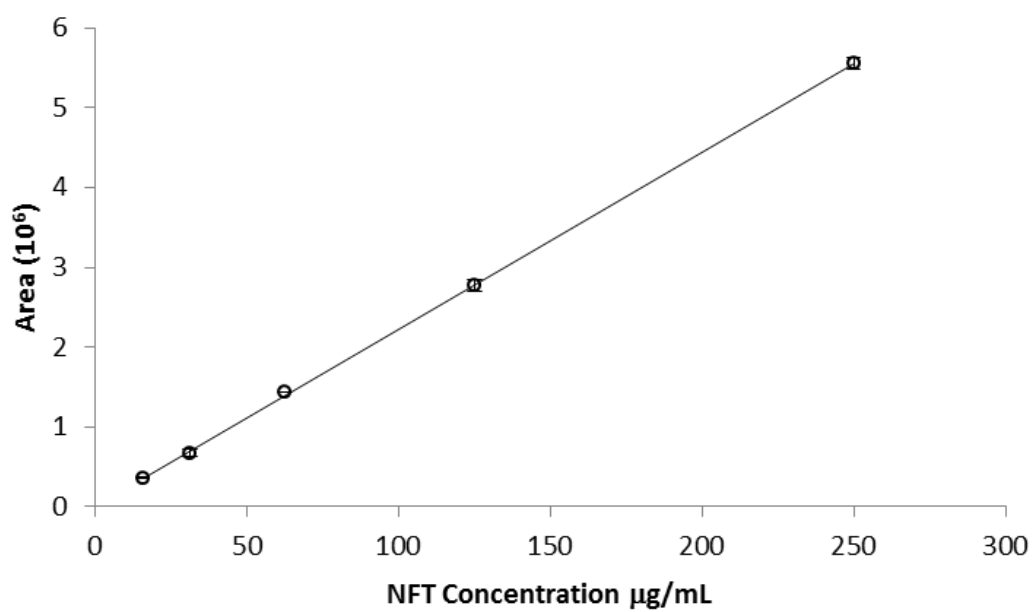
| No.               | $\delta_c$ | $\delta_H(J \text{ in Hz})$ | $\delta_C$ [39] |
|-------------------|------------|-----------------------------|-----------------|
| 1                 | 128.39     |                             | 129.77          |
| 2                 | 111.6      | 7.1 (d, 2)                  | 114.99          |
| 3                 | 149.3      |                             | 147.32          |
| 4                 | 149.9      |                             | 147.81          |
| 5                 | 116.5      | 6.79 (d, 8.2)               | 116.71          |
| 6                 | 123.33     | 7.0 (dd, 2, 8.2)            | 110.31          |
| 7                 | 142.1      | 7.43 (d, 15.6)              | 122.70          |
| 8                 | 118.8      | 6.4 (d, 15.6)               | 140.72          |
| 9                 | 169.28     |                             | 167.12          |
| -OCH <sub>3</sub> | 56.51      | 3.87 (s)                    | 55.56           |
| 1'                | 131.41     |                             | 127.0           |
| 2'                | 130.85     | 7.05 (d, 6.8)               | 115.17          |
| 3'                | 116.39     | 6.72 (d, 7.2)               | 129.40          |
| 4'                | 157        |                             | 155.16          |
| 5'                | 116.39     | 6.72 (d, 7.2)               | 129.40          |
| 6'                | 130.85     | 7.05 (d, 6.8)               | 115.17          |
| 7'                | 35.92      | 2.75 (dd, 7.1, 7.5)         | 34.39           |
| 8'                | 42.66      | 3.46 (dd, 7.2, 6.5)         | 40.56           |

**Figure S1.**  $^1\text{H}$ -NMR ( $\text{CD}_3\text{OD}$ , 400 MHz) Compound 1.



**Figure S2.**  $^{13}\text{C}$ -NMR ( $\text{CD}_3\text{OD}$ , 400 MHz) Compound 1.**Figure S3.**  $^1\text{H}$ - $^1\text{H}$  COSY ( $\text{CD}_3\text{OD}$ , 400 MHz) Compound 1.

**Figure S4.** HSQC (CD<sub>3</sub>OD, 400 MHz) Compound 1.**Figure S5.** HMBC (CD<sub>3</sub>OD, 400 MHz) Compound 1.

**Figure S6.** IR spectra Compound 1.**Figure S7.** Calibration curve NFT.

**Table S2.** Parameters validation of HPLC method for the quantification of NTF.

| Parameter                       | Value               | Unit           |
|---------------------------------|---------------------|----------------|
| LOD                             | 4.09                | µg/mL          |
| LOQ                             | 11.28               | µg/mL          |
| Correlation                     | 0.9998              |                |
| Low concentration (5 µg/mL)     | 4.84 ± 0.72 (-3.2)  | µg/mL (Bias%*) |
| Medium concentration (50 µg/mL) | 49.37 ± 0.81 (-1.3) | µg/mL (Bias%*) |
| High concentration (125 µg/mL)  | 127.14 ± 1.15 (1.7) | µg/mL (Bias%*) |

\* (% Bias) = [(Cobs - Cnom)/Cnom] × 100.

**Table S3.** NFT relative concentration of the area under the curve the chromatographic peaks in each fraction.

| Retention Time (min) | SaAce       | F1          | F2           | F3          |
|----------------------|-------------|-------------|--------------|-------------|
| 7.183                | 2.49        |             | 2.29         |             |
| 8.339                |             |             |              | 11.40       |
| 8.766                |             | 7.84        |              | 4.16        |
| 9.304                |             | 4.59        | 13.74        | 16.55       |
| <u>10.186 (NTF)</u>  | <u>2.77</u> | <u>2.63</u> | <u>60.22</u> | <u>8.76</u> |
| 10.527               | 14.99       | 39.87       | 14.29        | 13.70       |
| 11.706               | 3.73        | 20.42       | 6.63         |             |
| 15.428               | 10.46       | 8.54        | 9.44         |             |
| 20.191               | 9.29        | 15.72       | 19.48        |             |
| Doses NTF µg/kg      | 69          | 66          | 600          | 219         |