HPLC analysis was carried out using an HPLC-UV system (Agilent 1100, Agilent Technologies Inc., Santa Clara, CA, USA) with a Zorbax SB C18 column (150×2.1 mm with 3.5 µm particle size; Agilent Technologies Inc., USA). The column was thermostatically controlled at 30°C. Gradient elution was various and performed under every obtained chromatogram where solvent (A) was 0.1% trifluoroacetic acid and solvent (B) – 100% methanol (for HPLC, gradient grade, Aquametry, Russia). The flow rate was 0.25 mL/min. The elution volume varied from one to five µL depending on the concentration of prepared solution. Peaks were detected using a maximum wavelength of 255 nm. Peaks from solvents were not included in the purity calculations.

Sample preparation. The samples were dissolved in MeOH and an aliquot of this solution was injected.

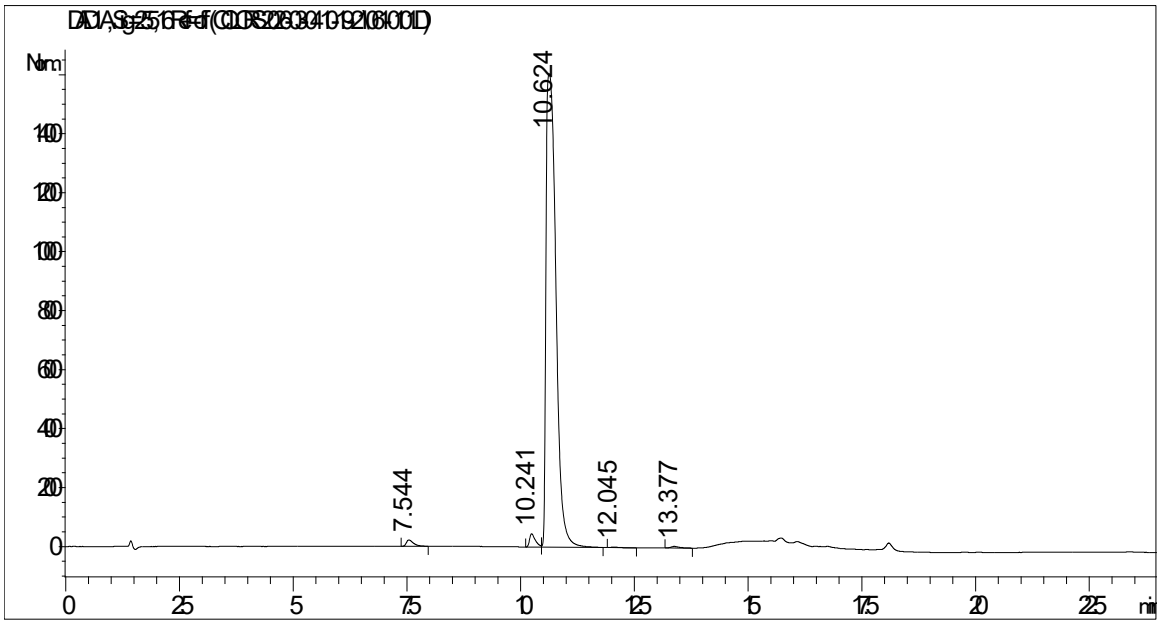

Figure 1. Compound **11a**. **Gradient elution** was used for separation the peak of main compound and other peaks: from 50%(B) to 70%(B) for 5 min, 70%(B) for 5 min, from 70%(B) to 100%(B) for 1 min, 100%(B) for 7 min, from 100%(B) to 50%(B) for 1 min, 50%(B) for 3 min. **Purity** was equal 96.9%.

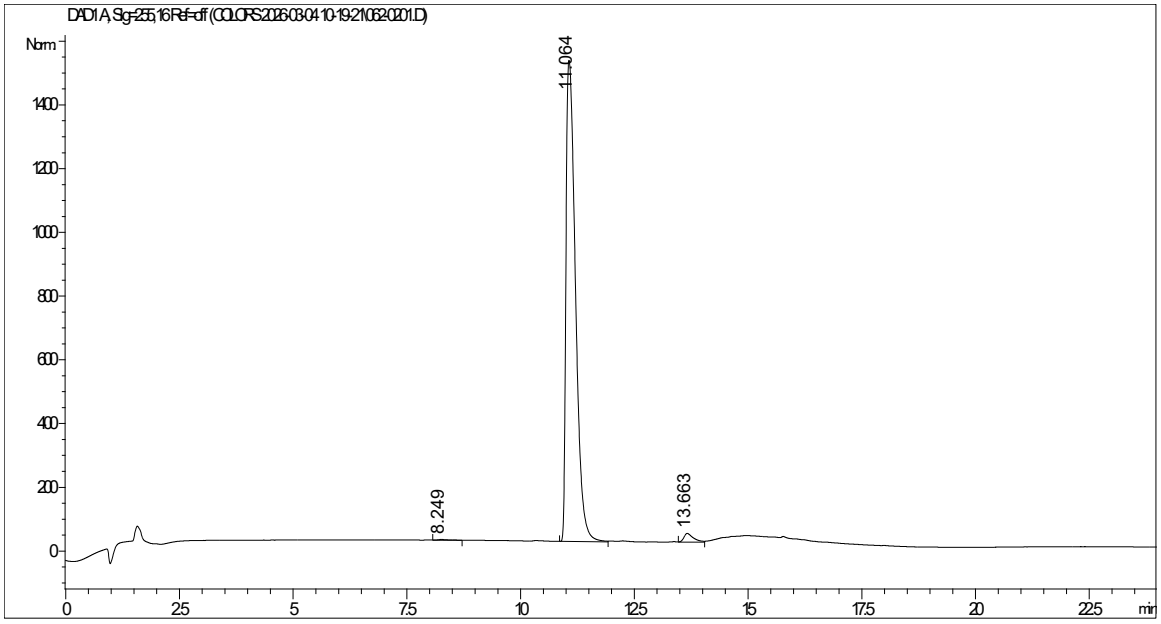

Figure 2. Compound **11d**. **Gradient elution** was used for separation the peak of main compound and other peaks: from 50%(B) to 70%(B) for 5 min, 70%(B) for 5 min, from 70%(B) to 100%(B) for 1 min, 100%(B) for 7 min, from 100%(B) to 50%(B) for 1 min, 50%(B) for 3 min. **Purity** was equal 98.0%.

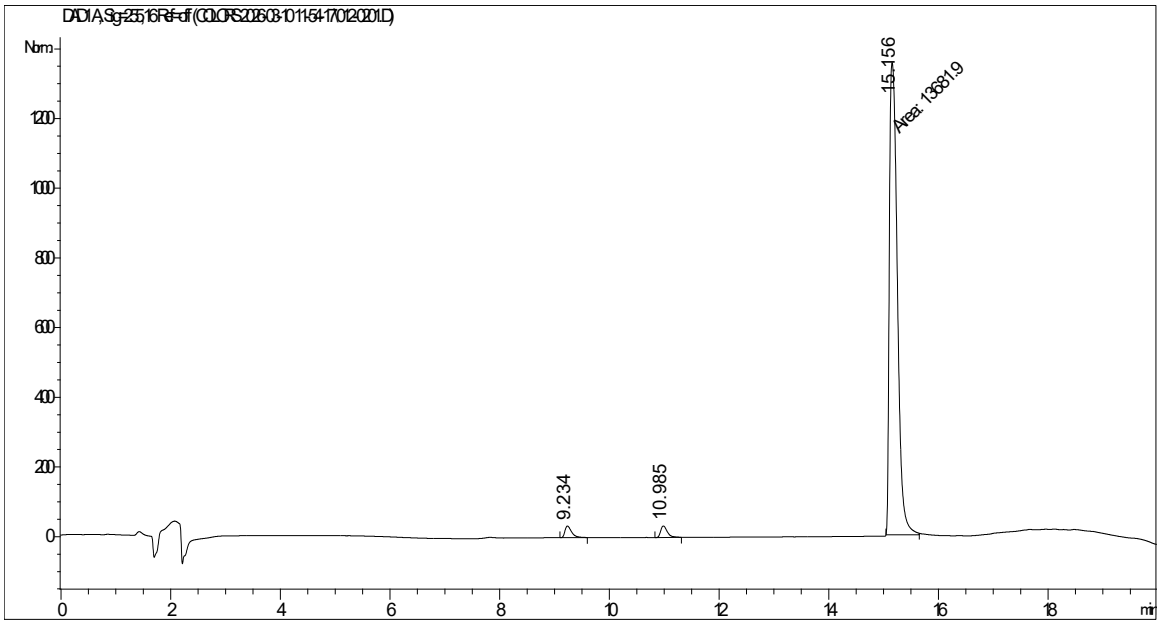

Figure 3. Compound **11e**. **Gradient elution** was used for separation the peak of main compound and other peaks: from 50%(B) to 70%(B) for 5 min, 70%(B) for 5 min, from 70%(B) to 100%(B) for 1 min, 100%(B) for 7 min, from 100%(B) to 50%(B) for 1 min, 50%(B) for 3 min. **Purity** was equal 96.1%.

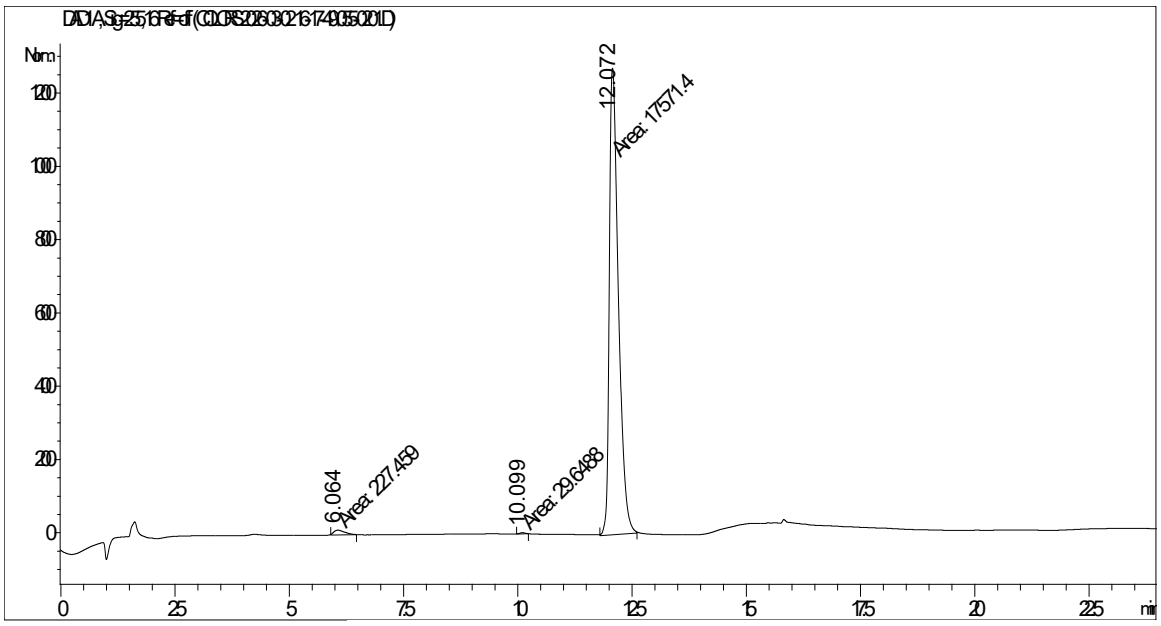

Figure 4. Compound **12a**. **Gradient elution** was used for separation the peak of main compound and other peaks: from 50%(B) to 70%(B) for 5 min, 70%(B) for 5 min, from 70%(B) to 100%(B) for 1 min, 100%(B) for 7 min, from 100%(B) to 50%(B) for 1 min, 50%(B) for 3 min. **Purity** was equal 98.6%.

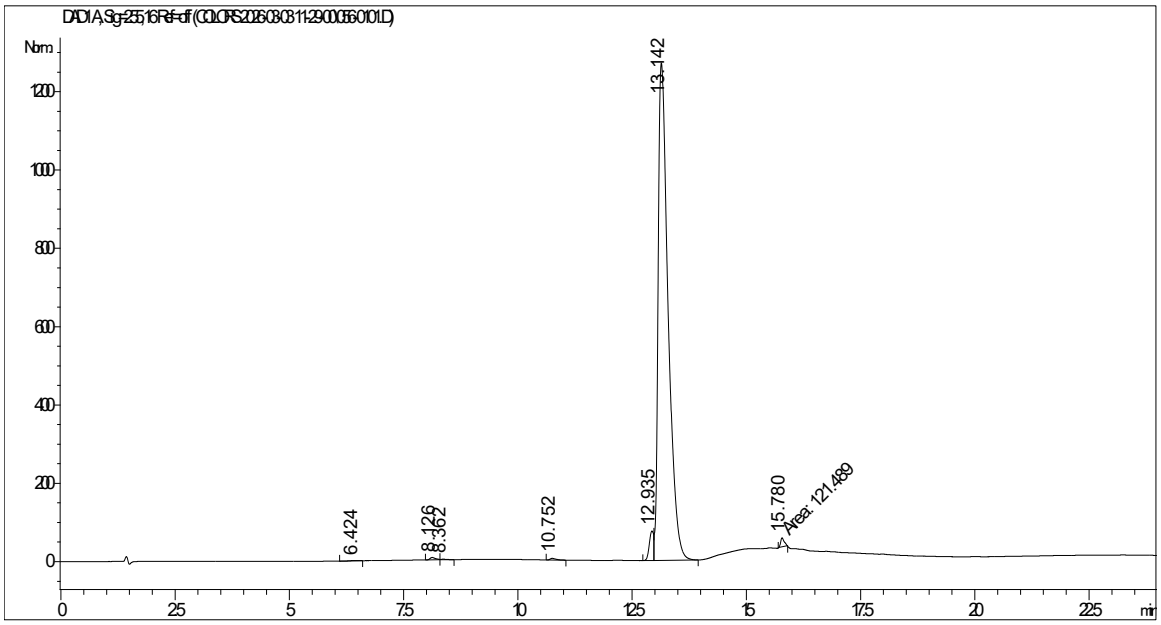

Figure 5. Compound **12d**. **Gradient elution** was used for separation the peak of main compound and other peaks: from 50%(B) to 70%(B) for 5 min, 70%(B) for 5 min, from 70%(B) to 100%(B) for 1 min, 100%(B) for 7 min, from 100%(B) to 50%(B) for 1 min, 50%(B) for 3 min. **Purity** was equal 96.3%.

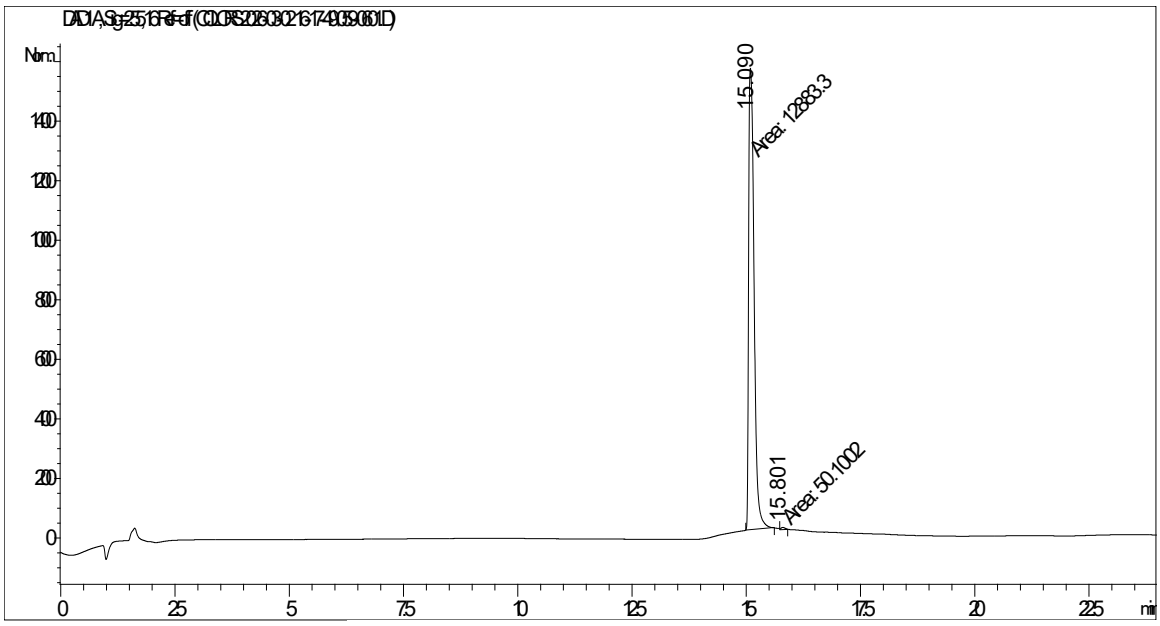

Figure 6. Compound **13a**. **Gradient elution** was used for separation the peak of main compound and other peaks: from 50%(B) to 70%(B) for 5 min, 70%(B) for 5 min, from 70%(B) to 100%(B) for 1 min, 100%(B) for 7 min, from 100%(B) to 50%(B) for 1 min, 50%(B) for 3 min. **Purity** was equal 99.6%.

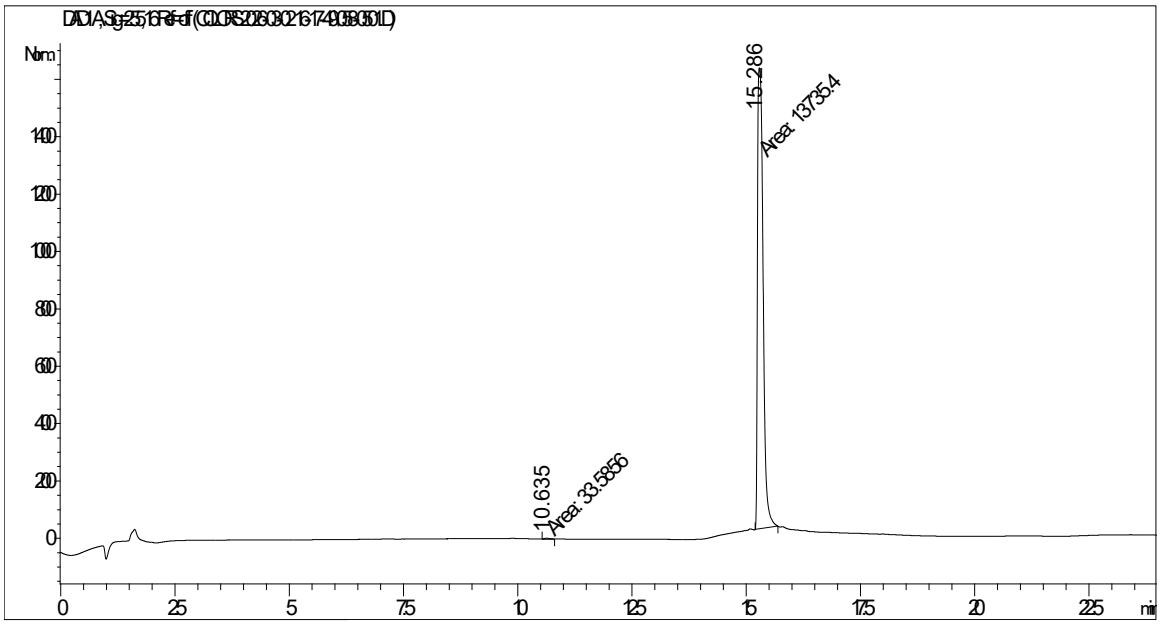

Figure 7. Compound **13b**. **Gradient elution** was used for separation the peak of main compound and other peaks: from 50%(B) to 70%(B) for 5 min, 70%(B) for 5 min, from 70%(B) to 100%(B) for 1 min, 100%(B) for 7 min, from 100%(B) to 50%(B) for 1 min, 50%(B) for 3 min. **Purity** was equal 99.8%.

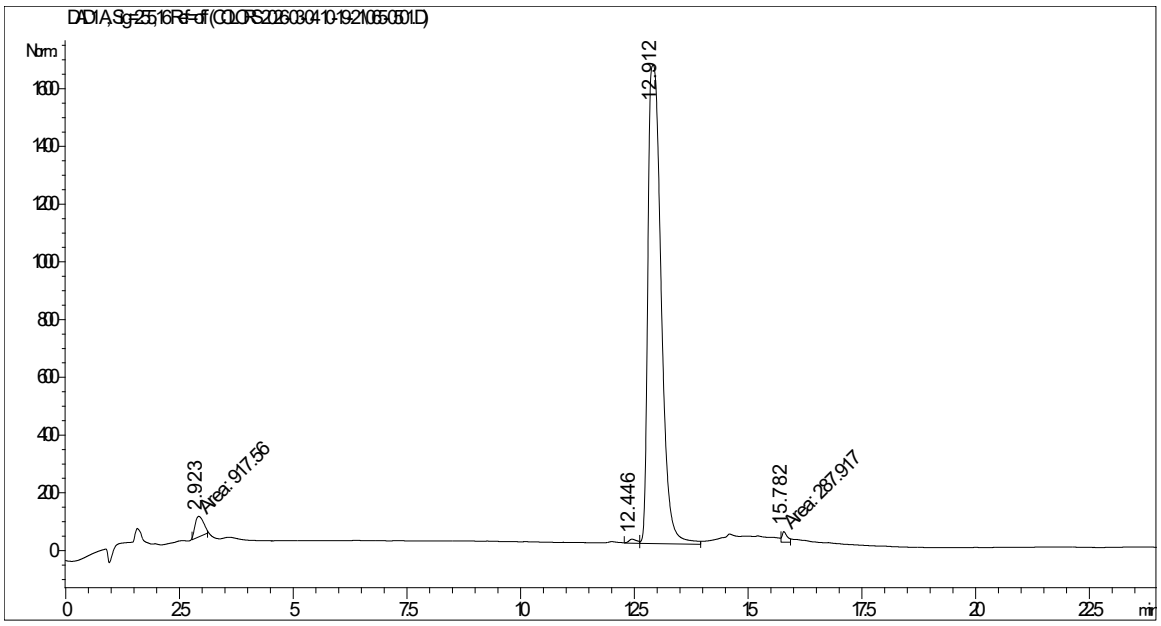

Figure 8. Compound **13c**. **Gradient elution** was used for separation the peak of main compound and other peaks: from 50%(B) to 70%(B) for 5 min, 70%(B) for 5 min, from 70%(B) to 100%(B) for 1 min, 100%(B) for 7 min, from 100%(B) to 50%(B) for 1 min, 50%(B) for 3 min. **Purity** was equal 96.0%.

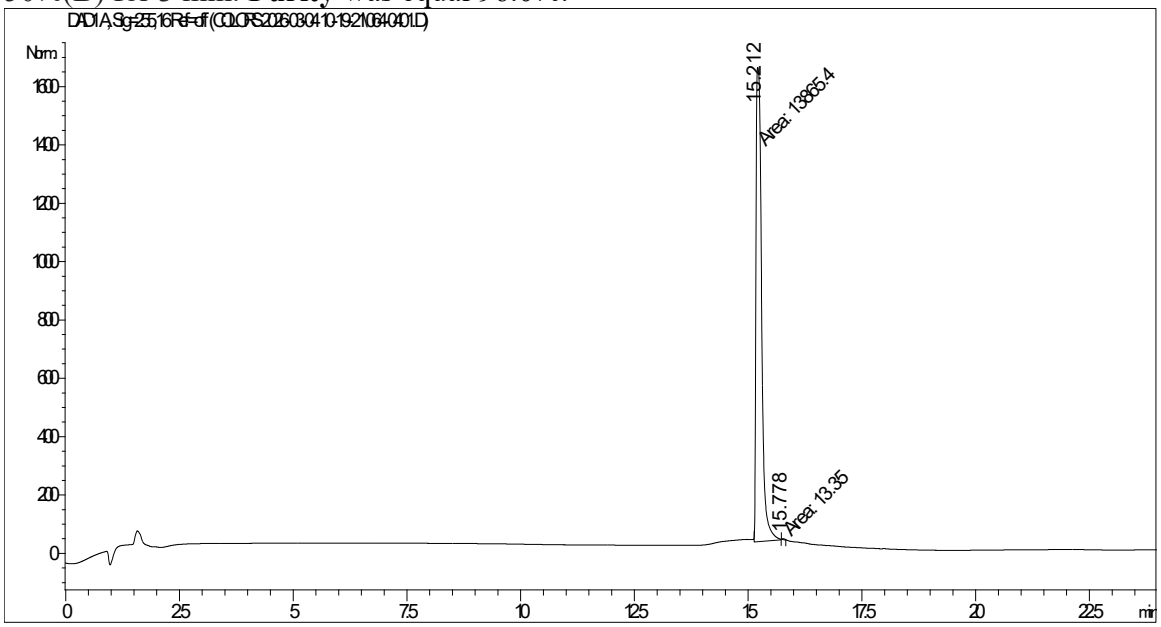

Figure 9. Compound **13d**. **Gradient elution** was used for separation the peak of main compound and other peaks: from 50%(B) to 70%(B) for 5 min, 70%(B) for 5 min, from 70%(B) to 100%(B) for 1 min, 100%(B) for 7 min, from 100%(B) to 50%(B) for 1 min, 50%(B) for 3 min. **Purity** was equal 99.9%.

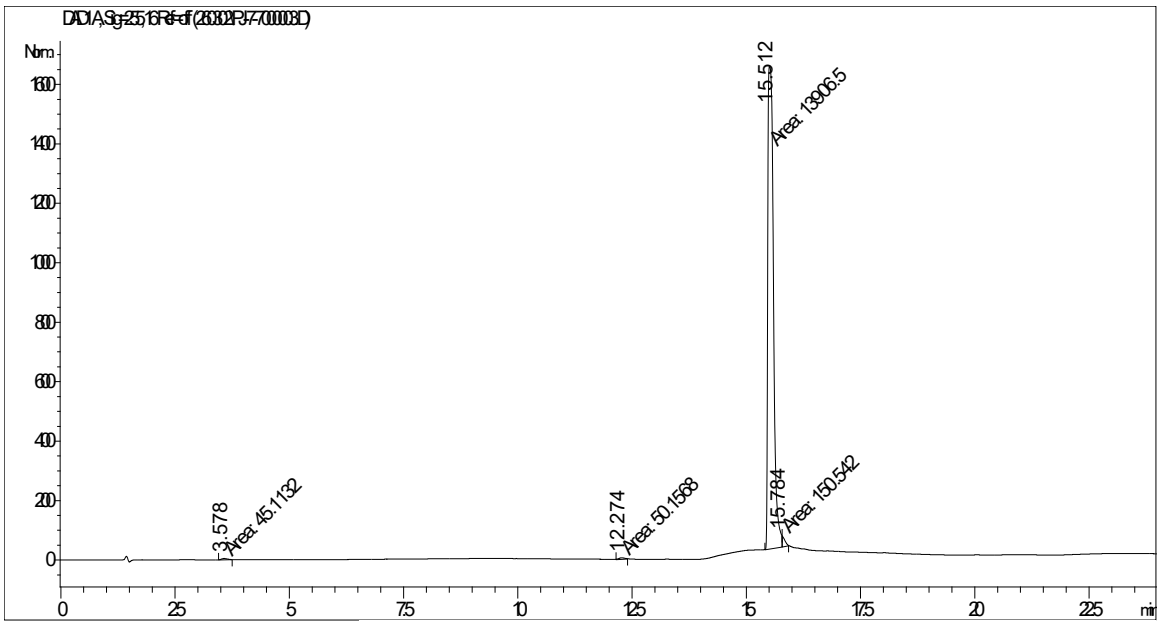

Figure 10. Compound **15a**. **Gradient elution** was used for separation the peak of main compound and other peaks: from 50%(B) to 70%(B) for 5 min, 70%(B) for 5 min, from 70%(B) to 100%(B) for 1 min, 100%(B) for 7 min, from 100%(B) to 50%(B) for 1 min, 50%(B) for 3 min. **Purity** was equal 98.3%.

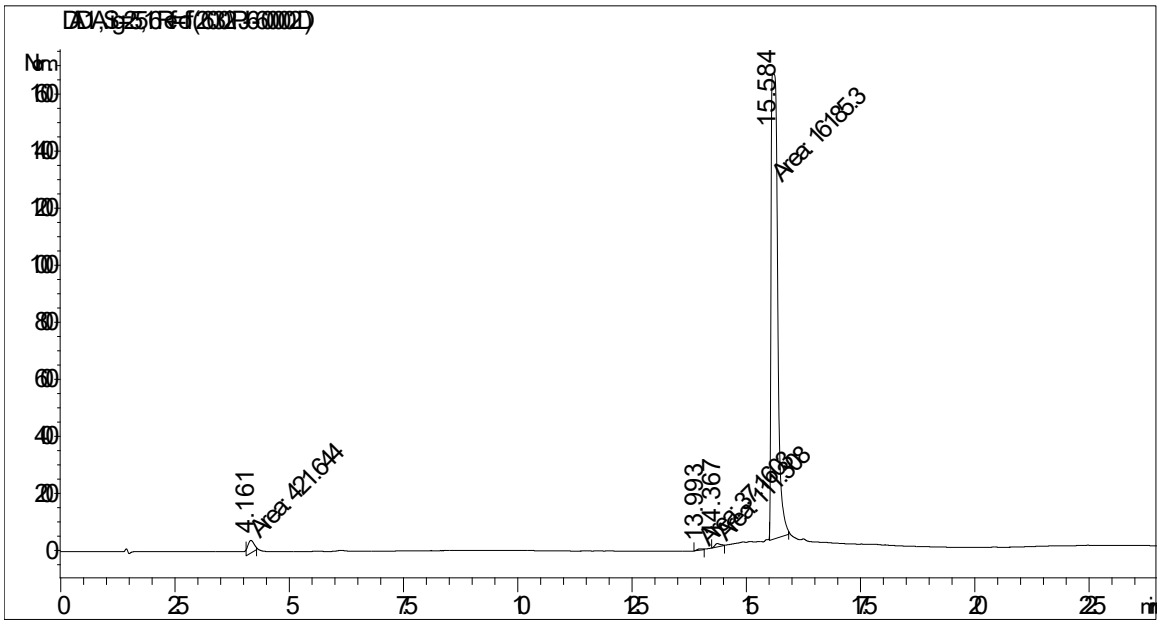

Figure 11. Compound **15b**. **Gradient elution** was used for separation the peak of main compound and other peaks: from 50%(B) to 70%(B) for 5 min, 70%(B) for 5 min, from 70%(B) to 100%(B) for 1 min, 100%(B) for 7 min, from 100%(B) to 50%(B) for 1 min, 50%(B) for 3 min. **Purity** was equal 96.6%.

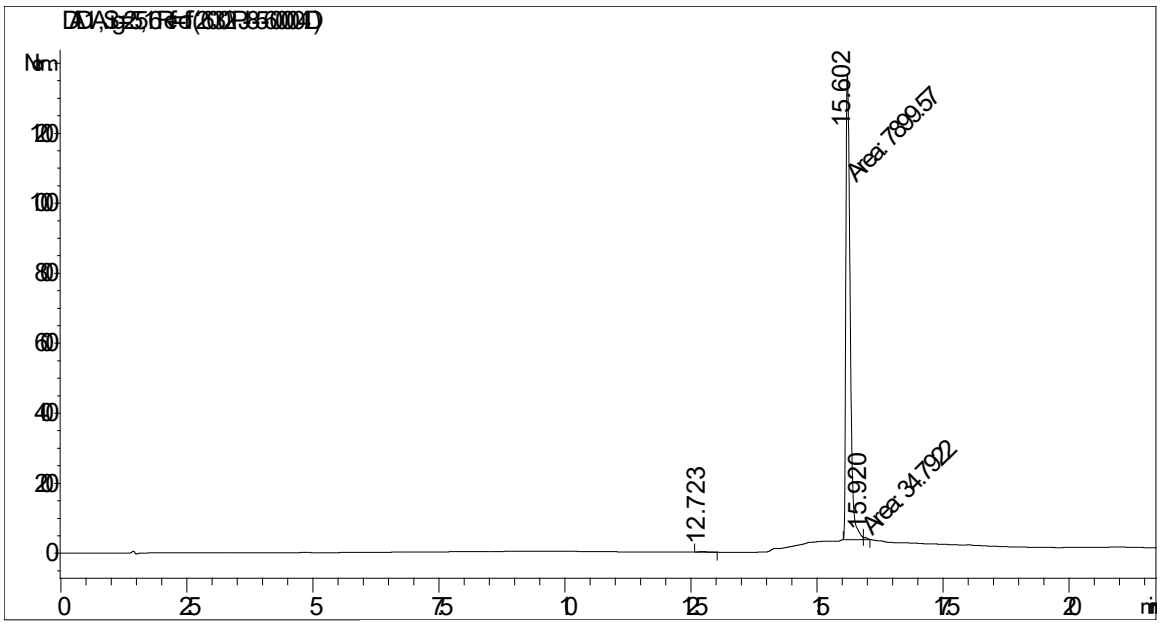

Figure 12. Compound **15d**. **Gradient elution** was used for separation the peak of main compound and other peaks: from 50%(B) to 70%(B) for 5 min, 70%(B) for 5 min, from 70%(B) to 100%(B) for 1 min, 100%(B) for 7 min, from 100%(B) to 50%(B) for 1 min, 50%(B) for 3 min. **Purity** was equal 99.3%.

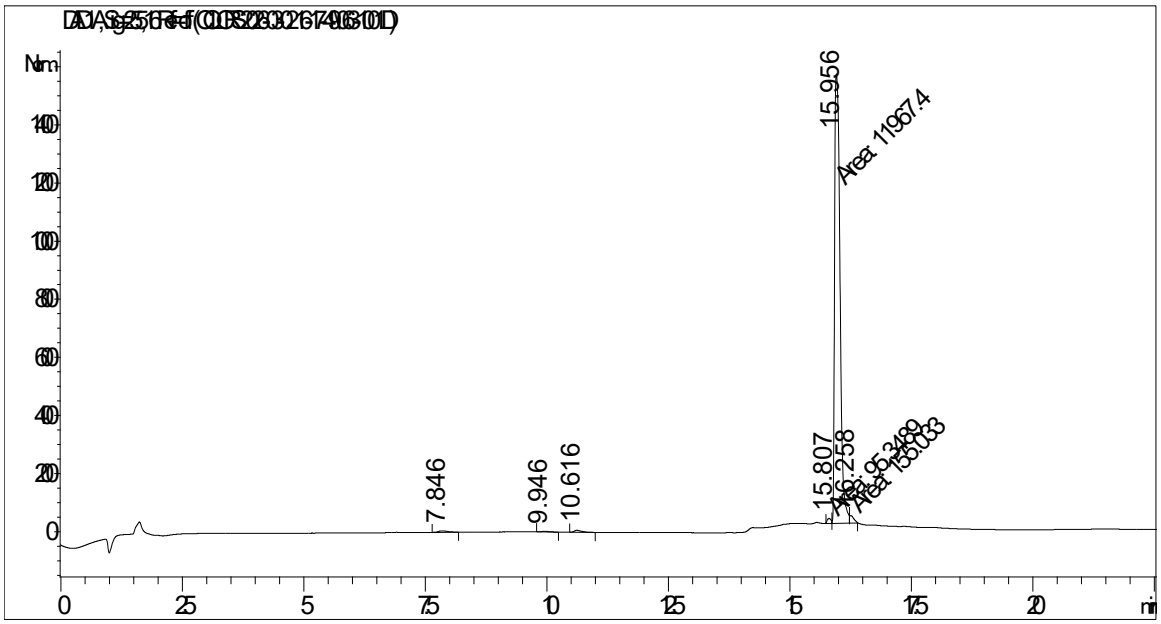

Figure 13. Compound **17b**. **Gradient elution** was used for separation the peak of main compound and other peaks: from 50%(B) to 70%(B) for 5 min, 70%(B) for 5 min, from 70%(B) to 100%(B) for 1 min, 100%(B) for 7 min, from 100%(B) to 50%(B) for 1 min, 50%(B) for 3 min. **Purity** was equal 96.6%.

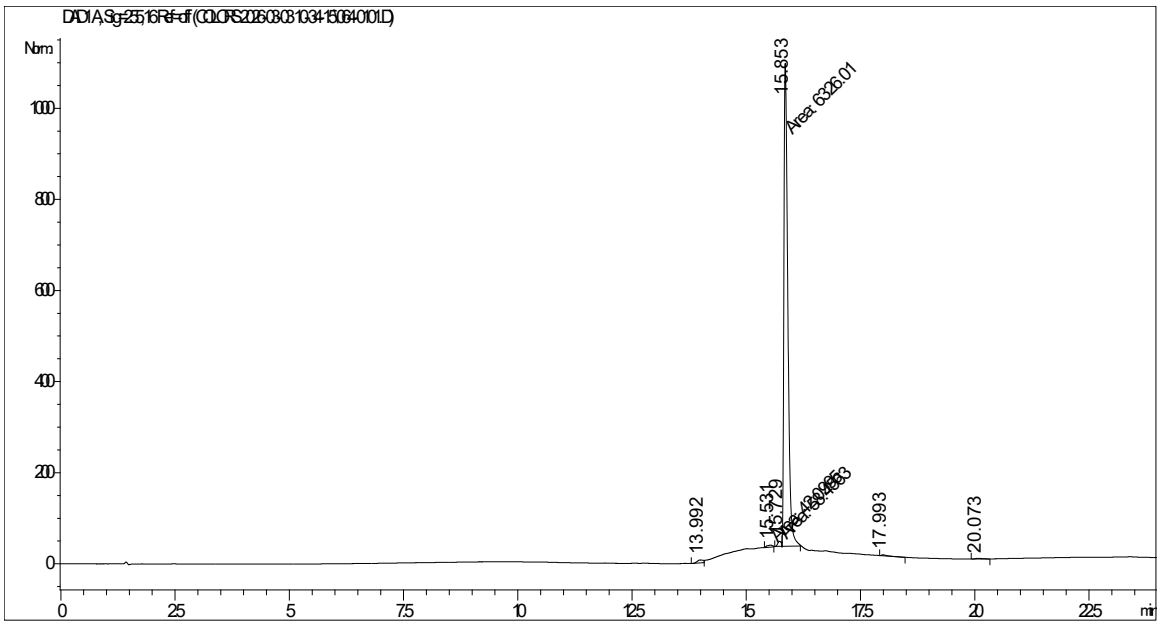

Figure 14. Compound **17d**. **Gradient elution** was used for separation the peak of main compound and other peaks: from 50%(B) to 70%(B) for 5 min, 70%(B) for 5 min, from 70%(B) to 100%(B) for 1 min, 100%(B) for 7 min, from 100%(B) to 50%(B) for 1 min, 50%(B) for 3 min. **Purity** was equal 97.0%.

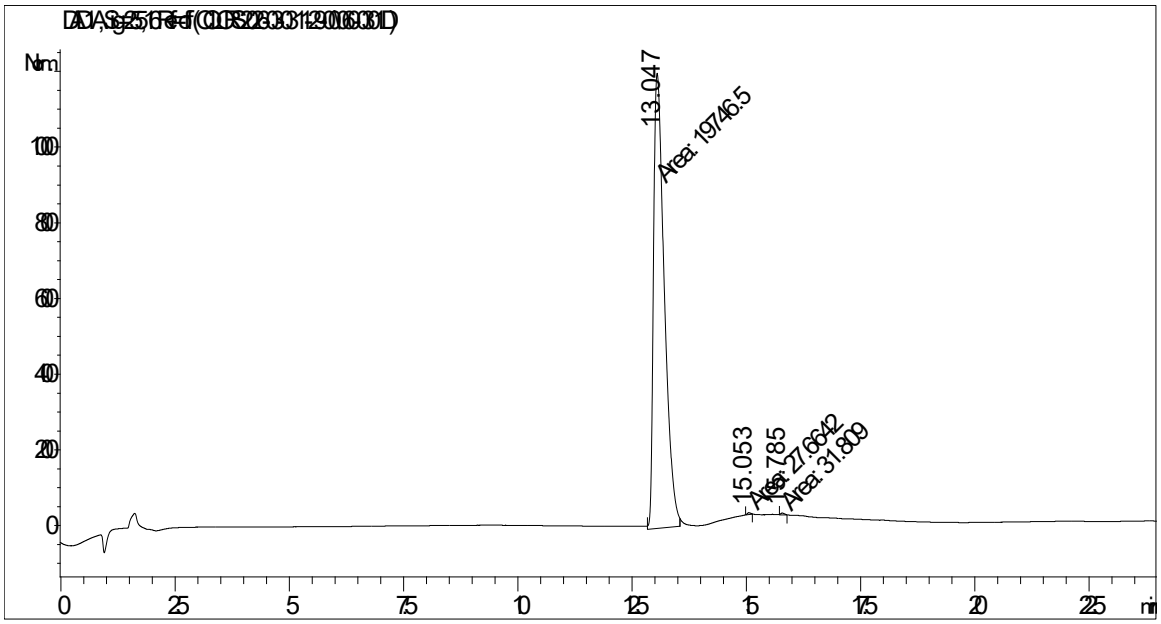

Figure 15. Compound **17e**. **Gradient elution** was used for separation the peak of main compound and other peaks: from 50%(B) to 70%(B) for 5 min, 70%(B) for 5 min, from 70%(B) to 100%(B) for 1 min, 100%(B) for 7 min, from 100%(B) to 50%(B) for 1 min, 50%(B) for 3 min. **Purity** was equal 99.7%.

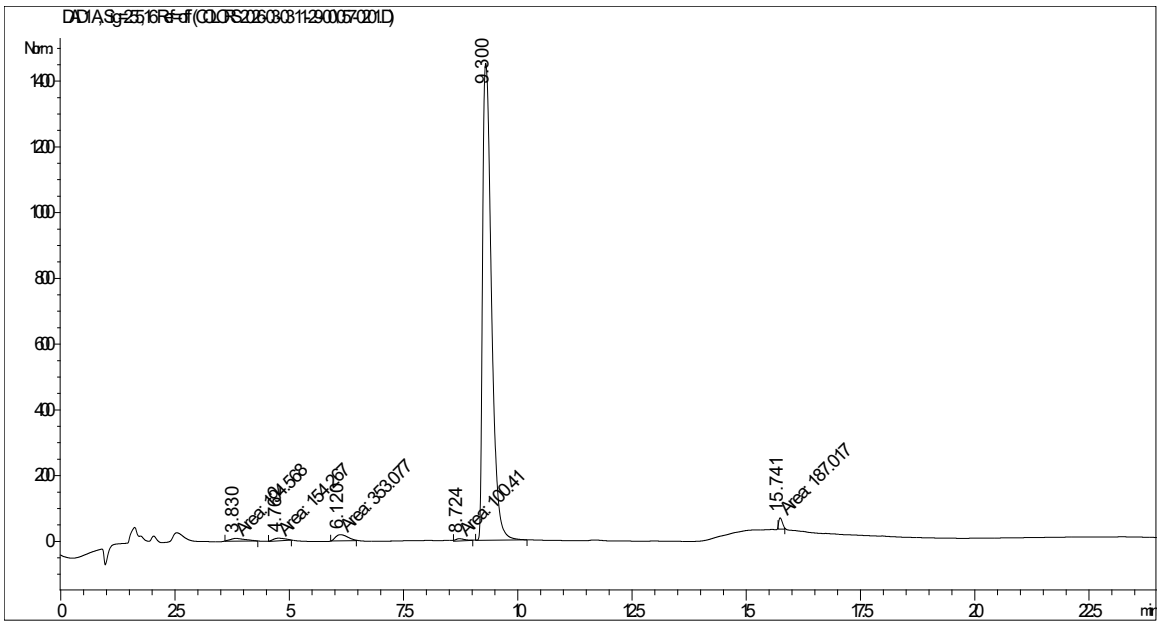

Figure 16. Compound **22a**. **Gradient elution** was used for separation the peak of main compound and other peaks: from 50%(B) to 70%(B) for 5 min, 70%(B) for 5 min, from 70%(B) to 100%(B) for 1 min, 100%(B) for 7 min, from 100%(B) to 50%(B) for 1 min, 50%(B) for 3 min. **Purity** was equal 95.2%.

GC-MS analysis was performed using an Agilent 5975C inert MSD with a 7890A GC system equipped with a flame ionization detector, an HP-5 capillary column (0.25 mm × 30 m 0.25 mm), and He as the carrier gas (flow rate 2 mL/min, flow division 99:1).

Sample preparation. The samples were dissolved in MeOH and an aliquot of this solution was injected.

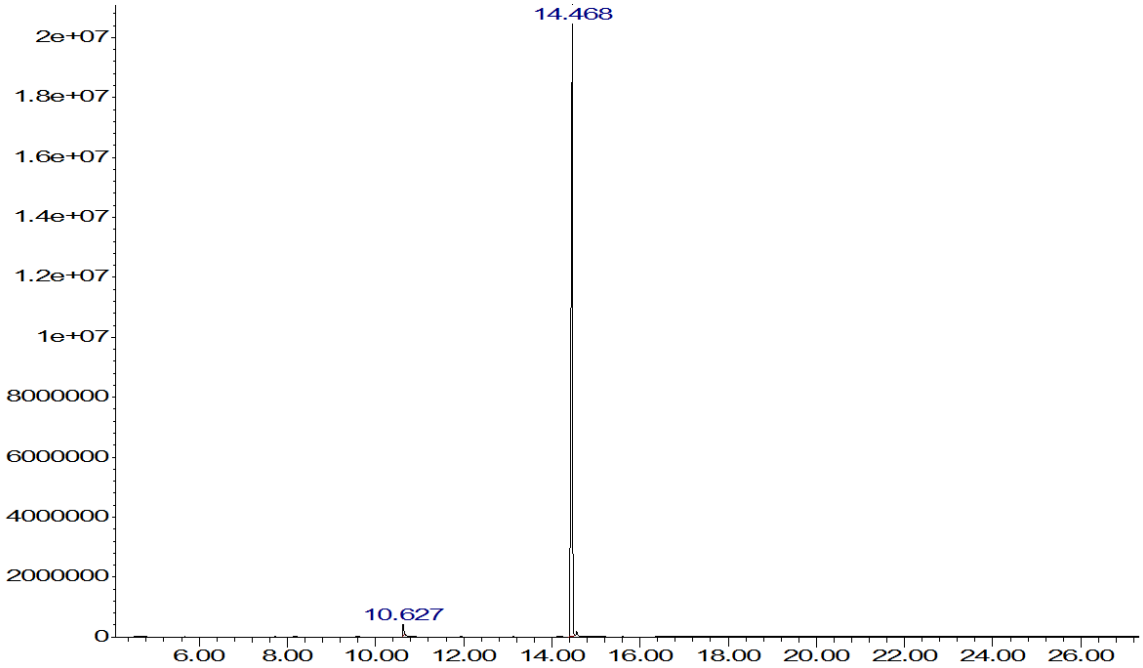

Figure 17. Compound **11g**. **Purity** was equal 98.9%.

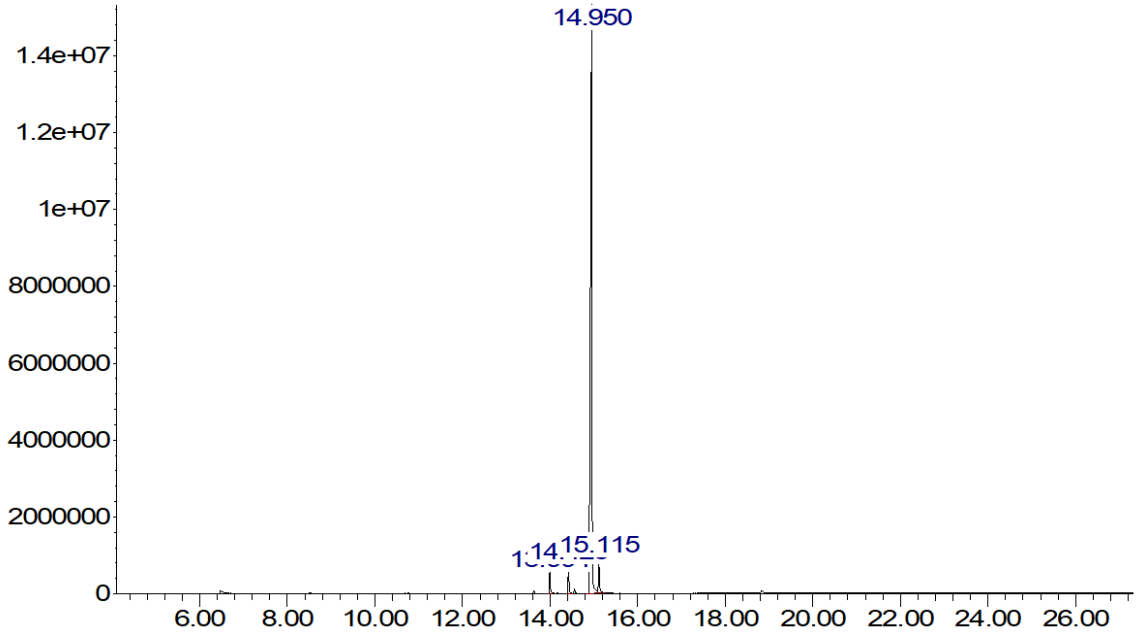

Figure 18. Compound **12g**. **Purity** was equal 95.1%.

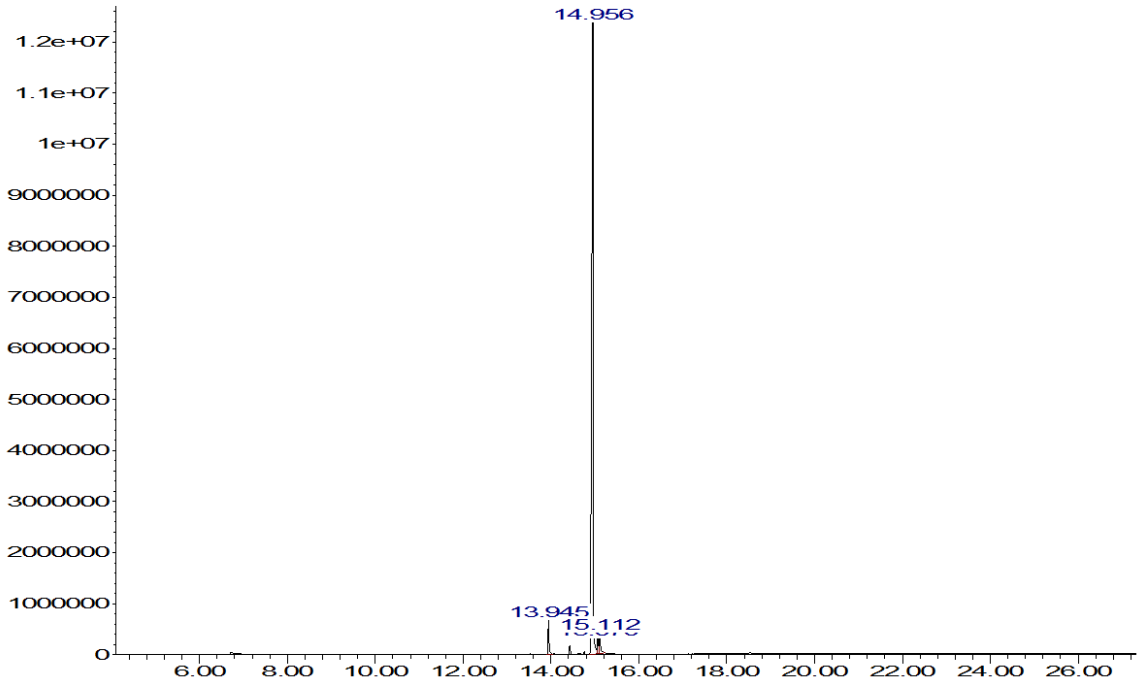

Figure 19. Compound **12h**. **Purity** was equal 96.8%.

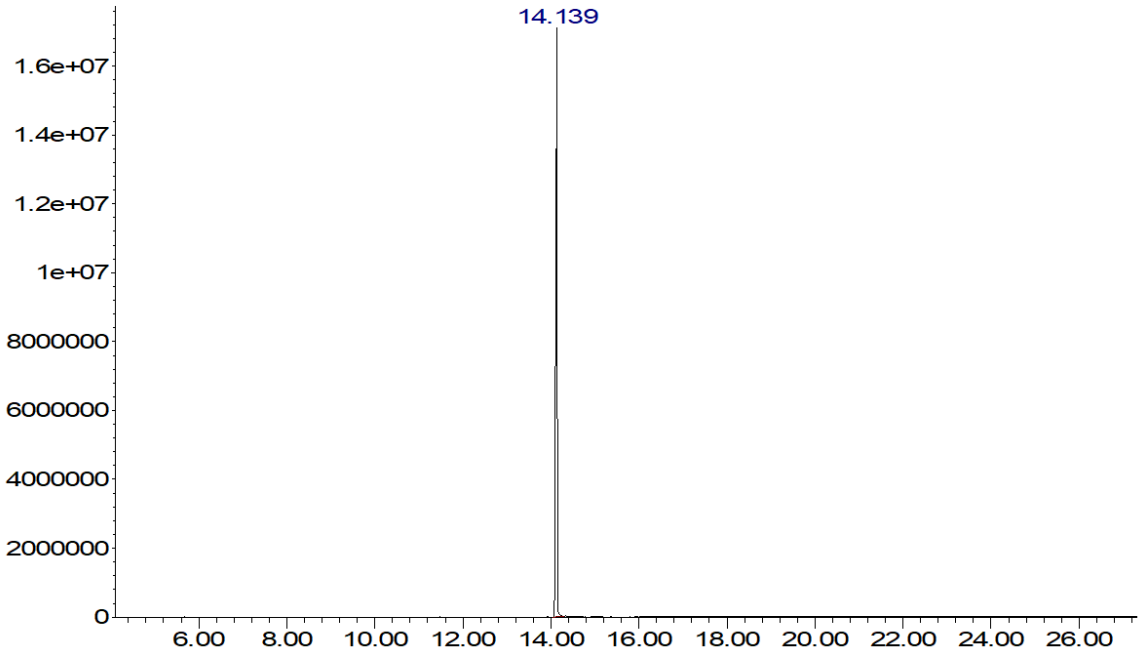

Figure 20. Compound **13g**. **Purity** was equal 100.0%.

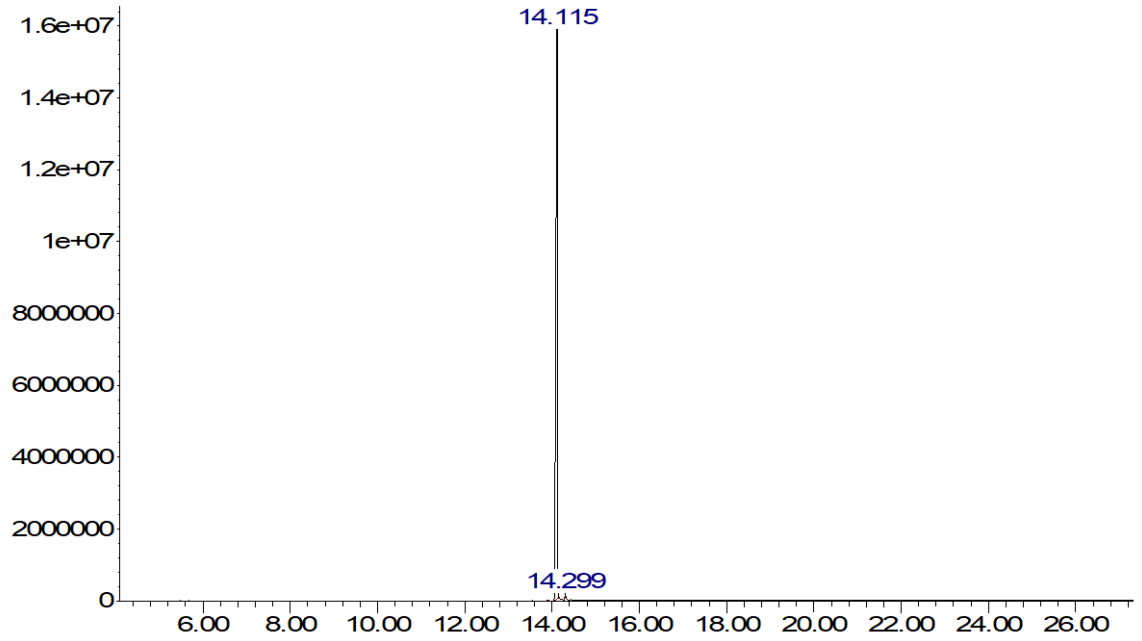

Figure 21. Compound **13h**. **Purity** was equal 99.7%.

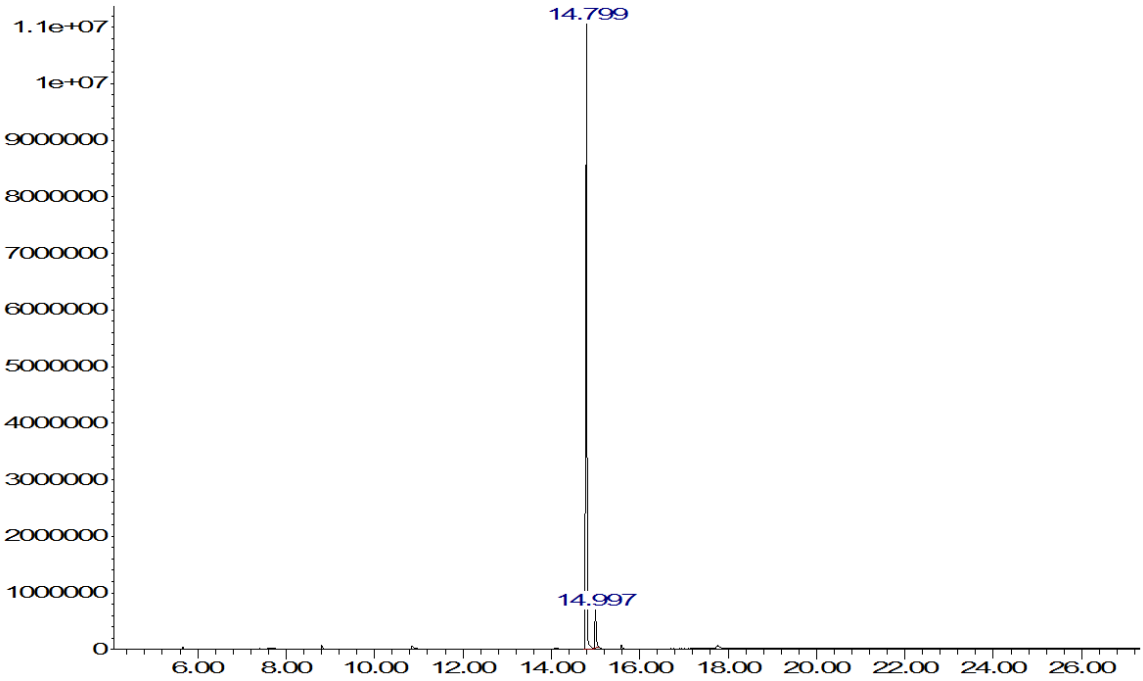

Figure 22. Compound **15f**. **Purity** was equal 95.9%.

^{1}H and ^{13}C NMR spectra of compounds **11d**, **12c**, **13b**.

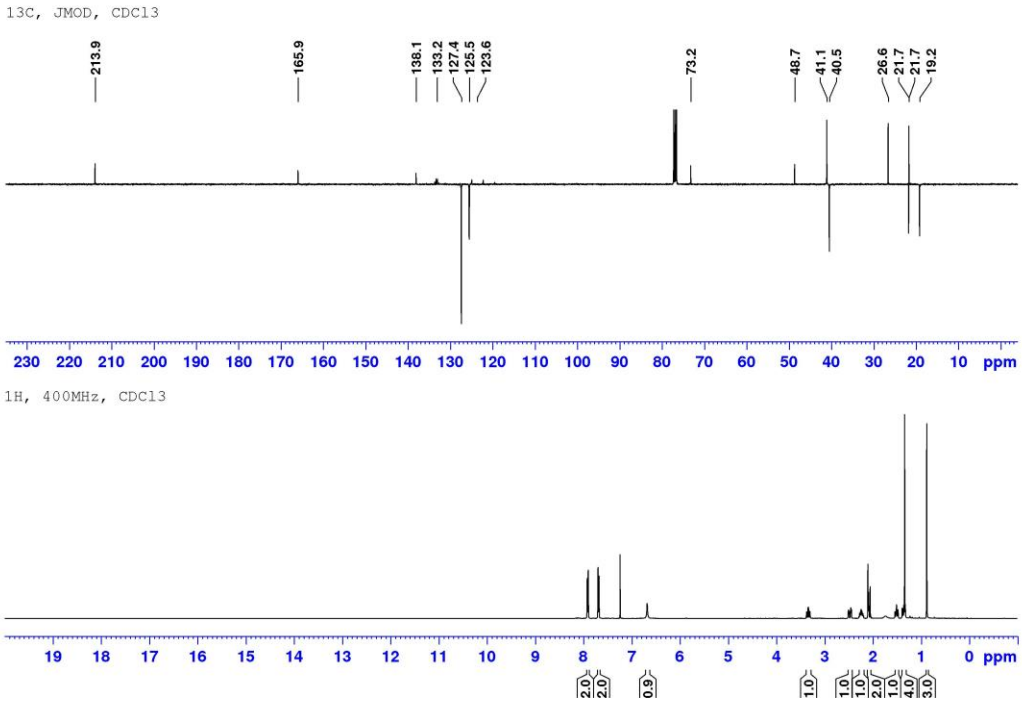

Figure 23. ^{1}H and ^{13}C NMR spectra of compound **11d**.

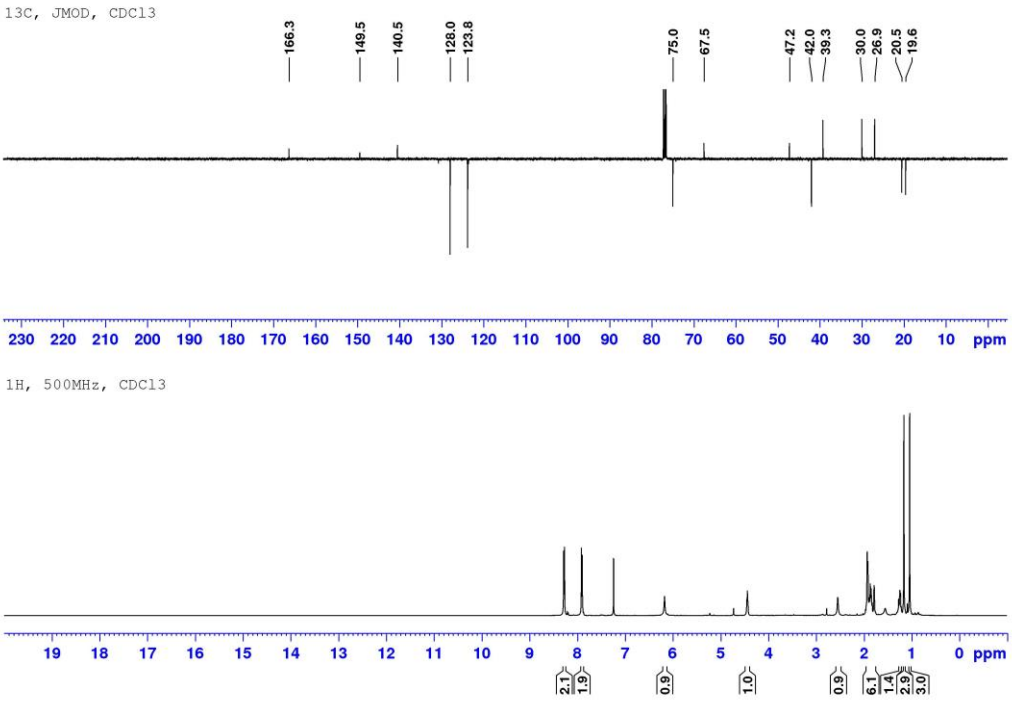

Figure 24. ^{1}H and ^{13}C NMR spectra of compound **12c**.

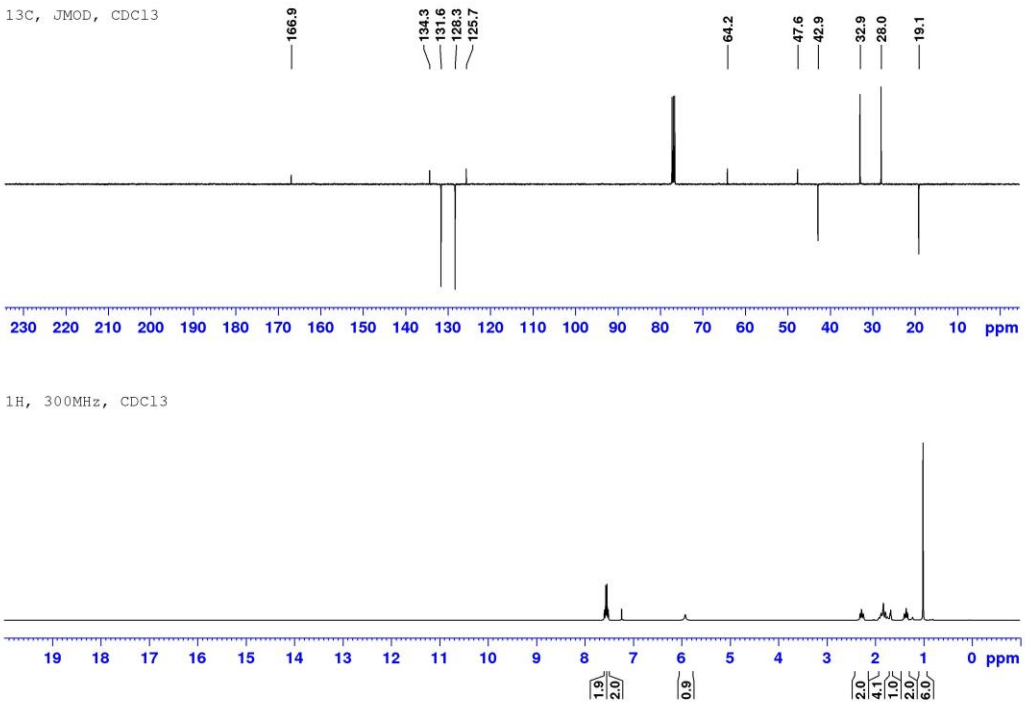

Figure 25. ^{1}H and ^{13}C NMR spectra of compound **13b**.