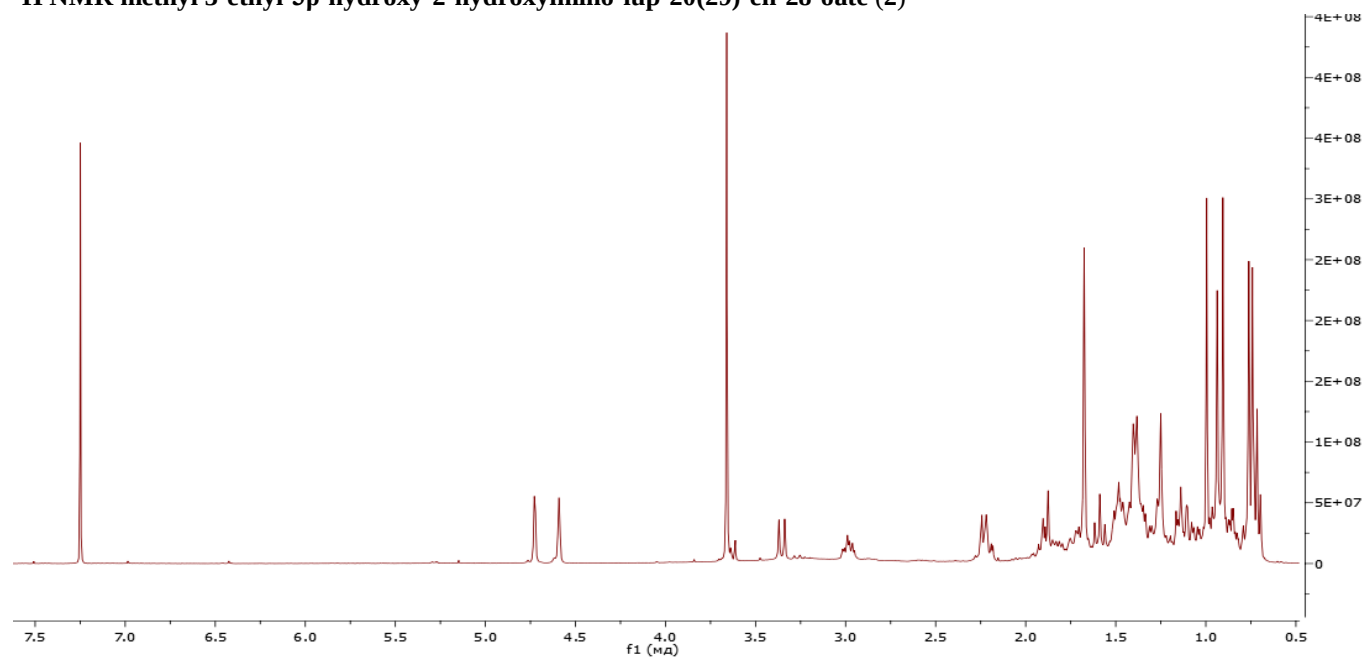
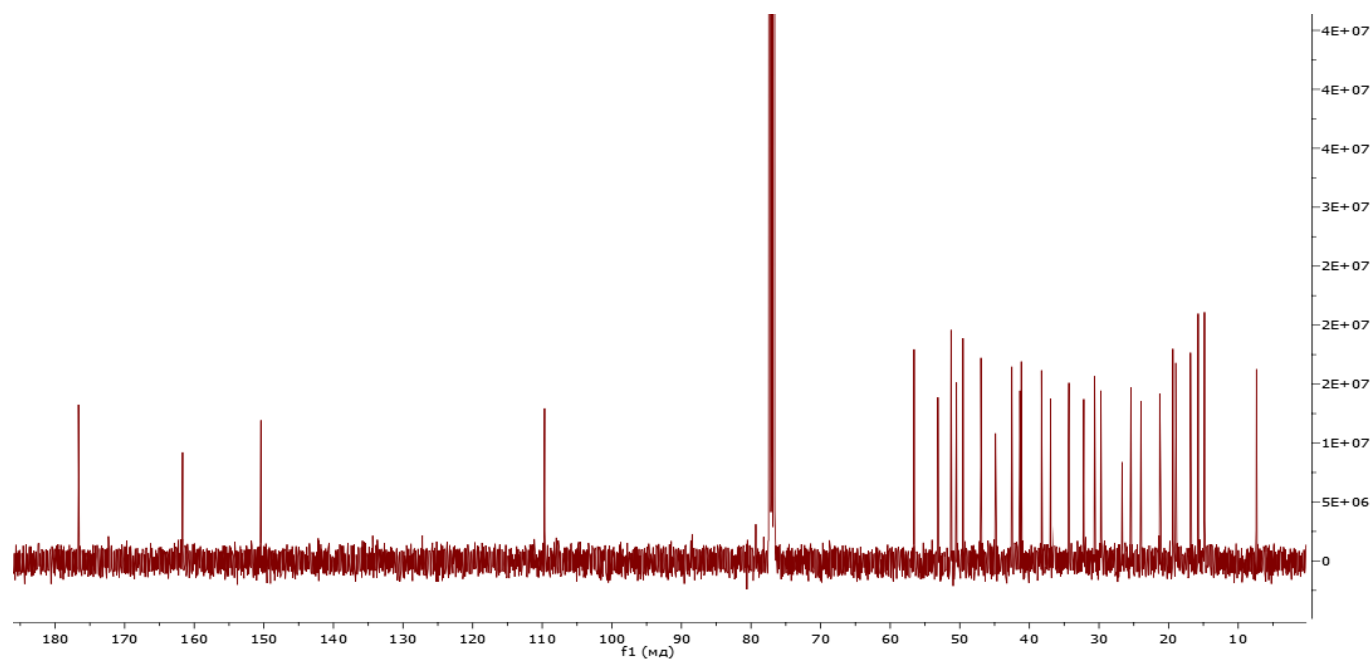


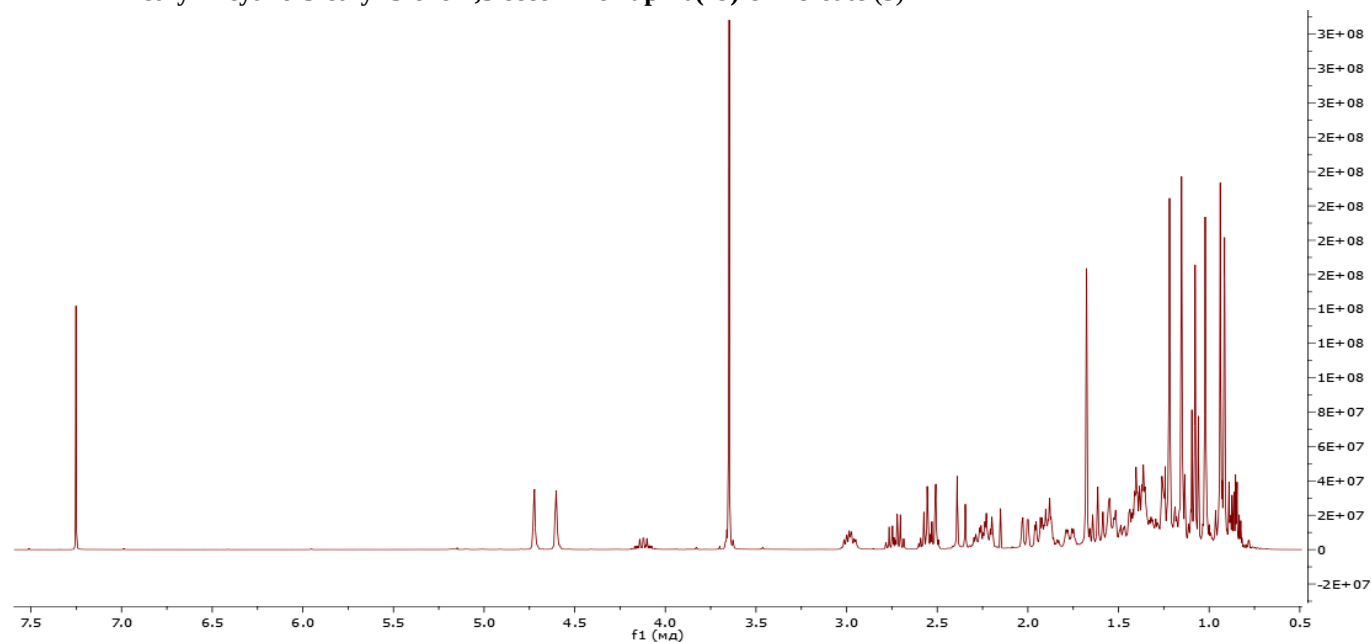
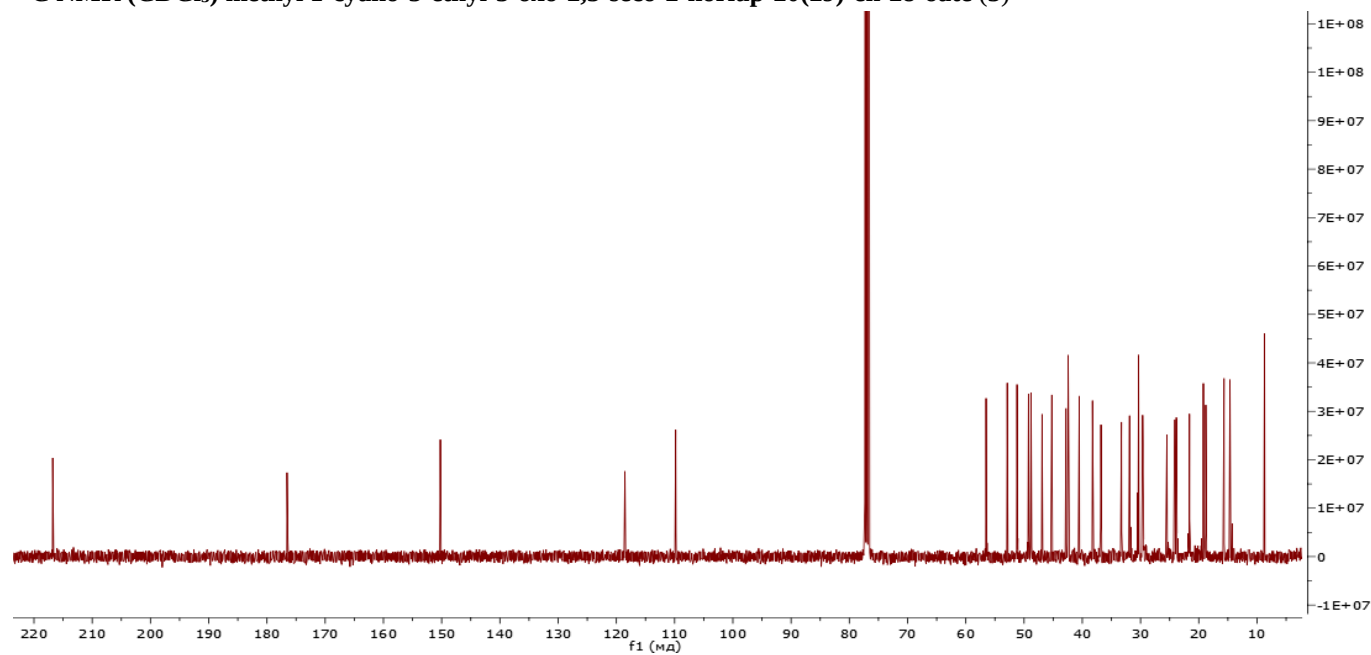
Supplementary data

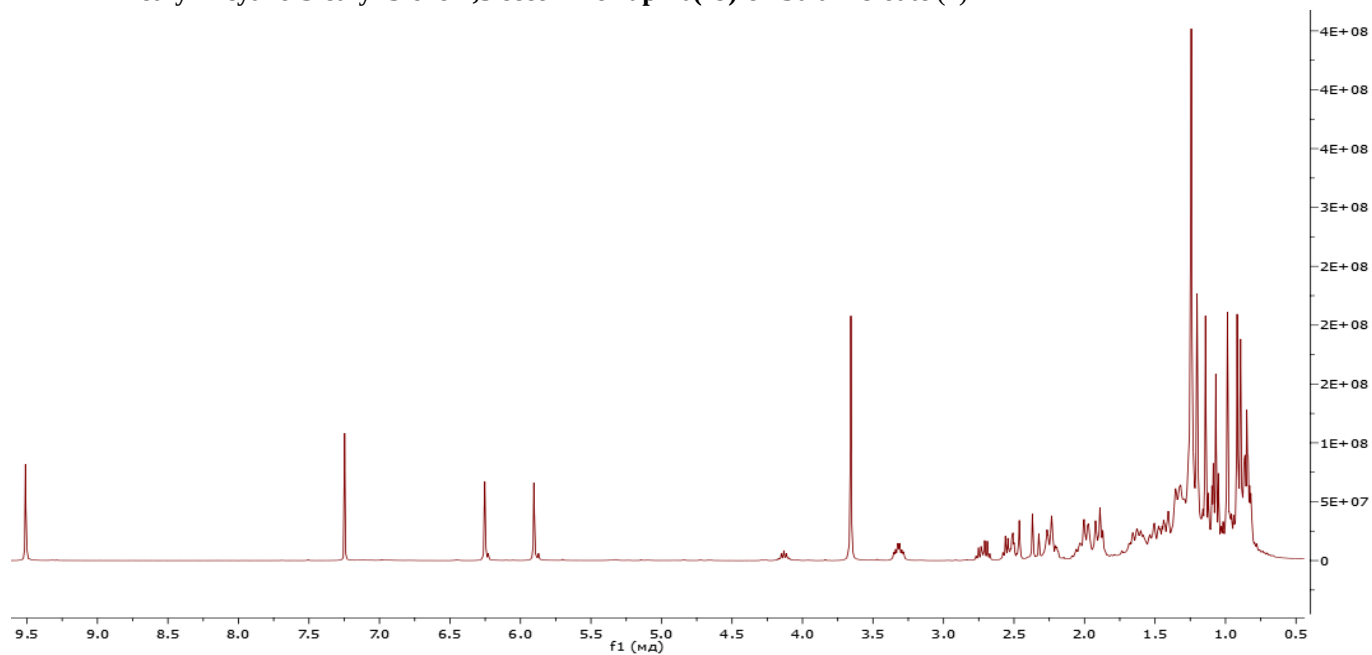
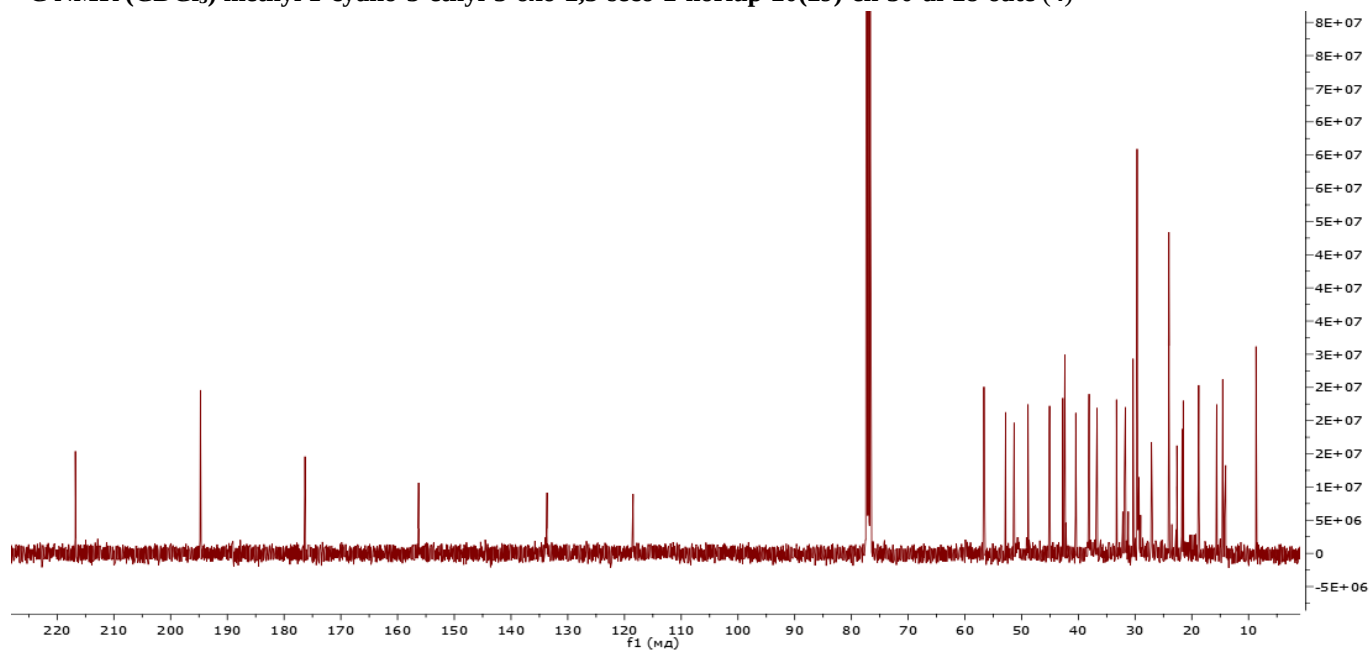
^1H NMR methyl 3-ethyl-3 β -hydroxy-2-hydroxyimino-lup-20(29)-en-28-oate (2)

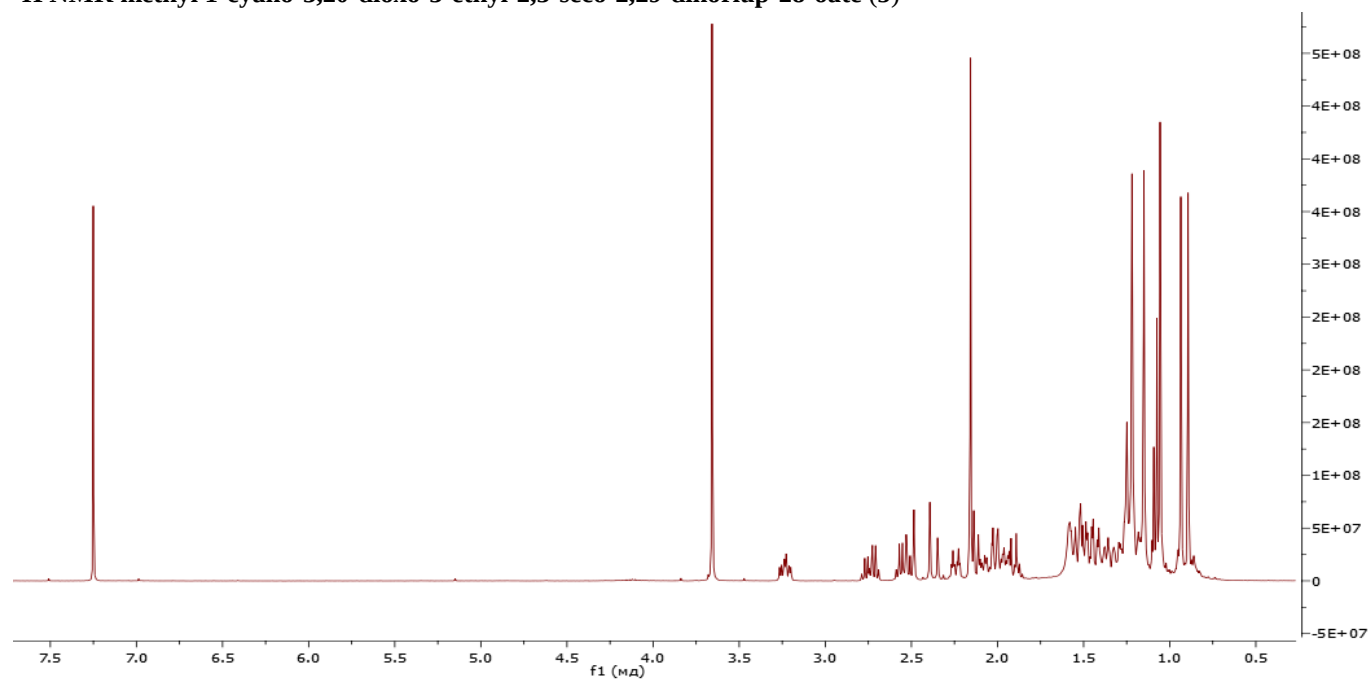
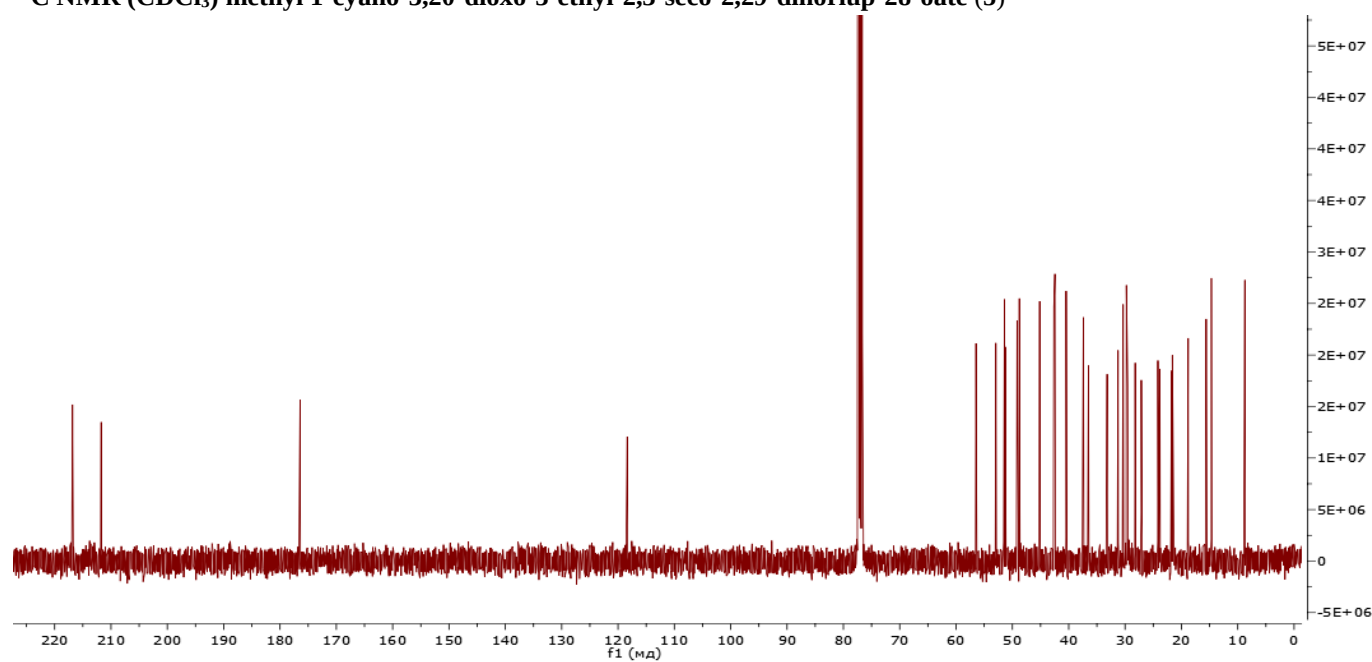


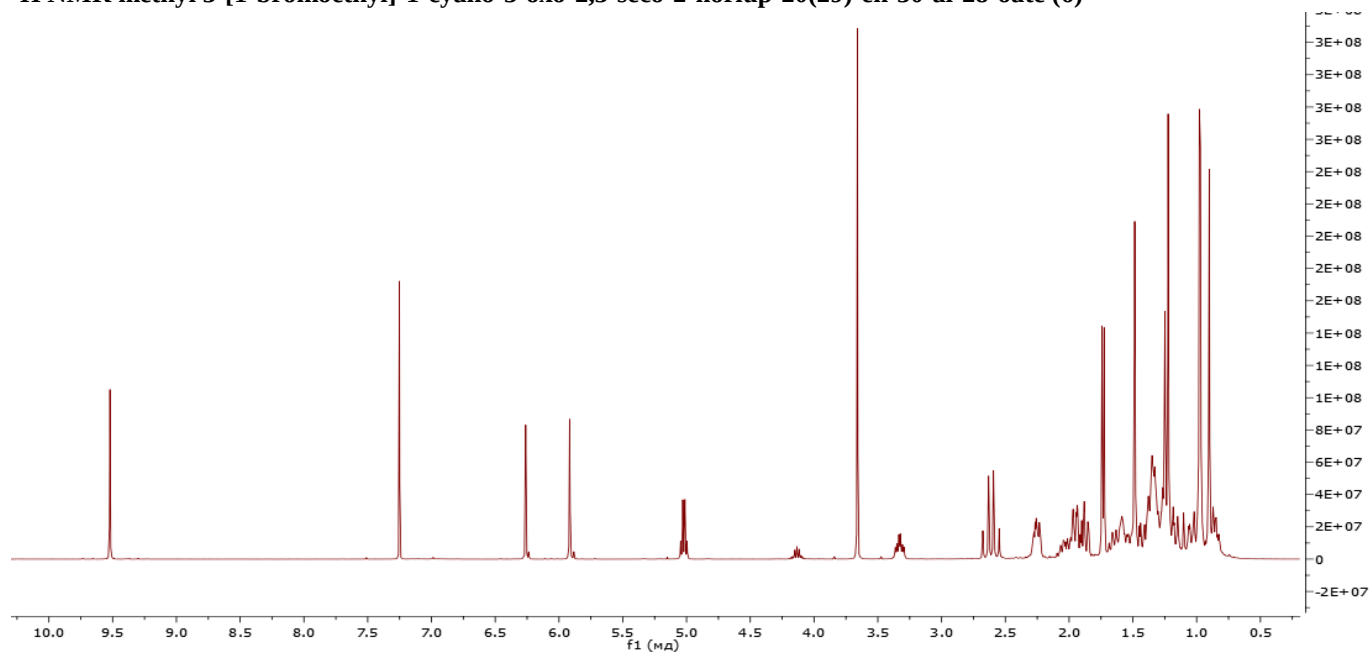
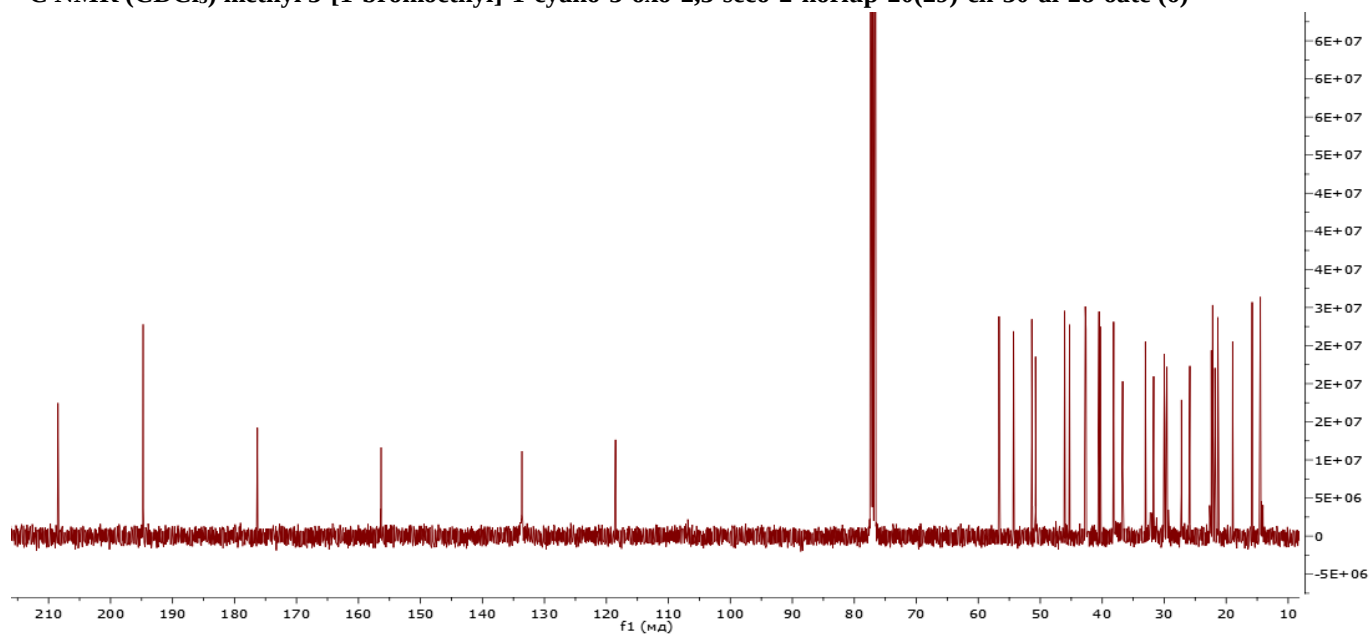
^{13}C NMR (CDCl₃) methyl 3-ethyl-3 β -hydroxy-2-hydroxyimino-lup-20(29)-en-28-oate (2)

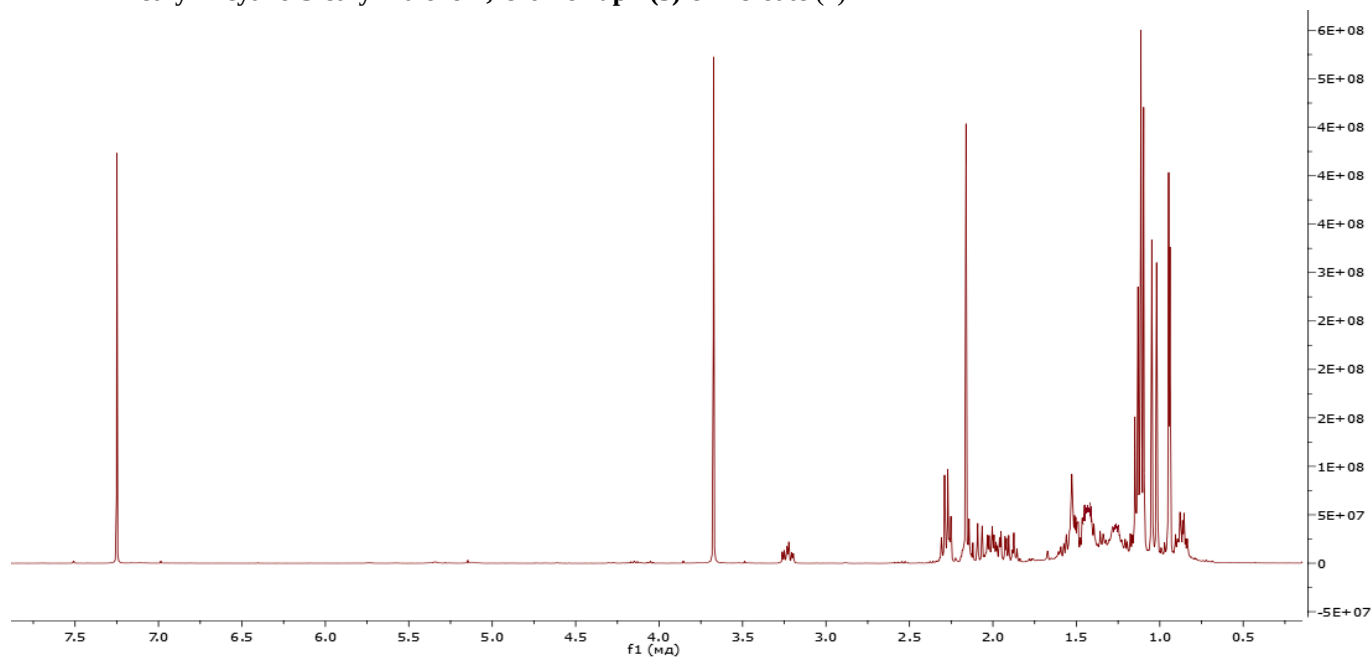
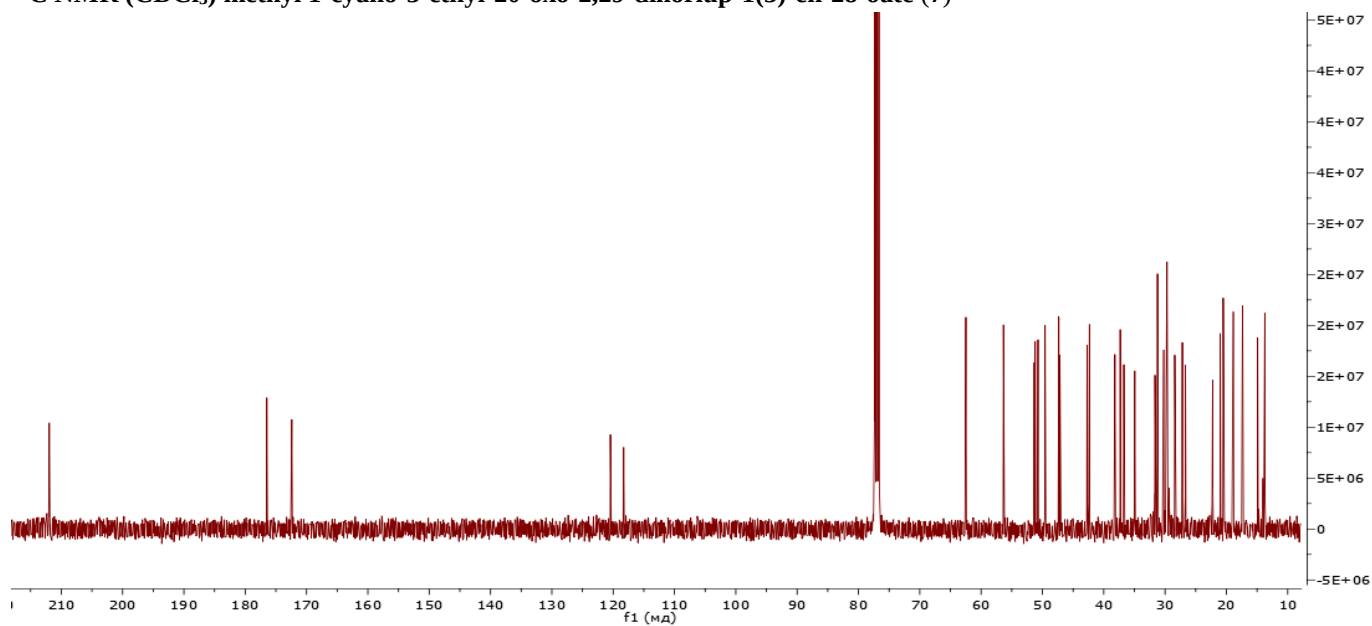


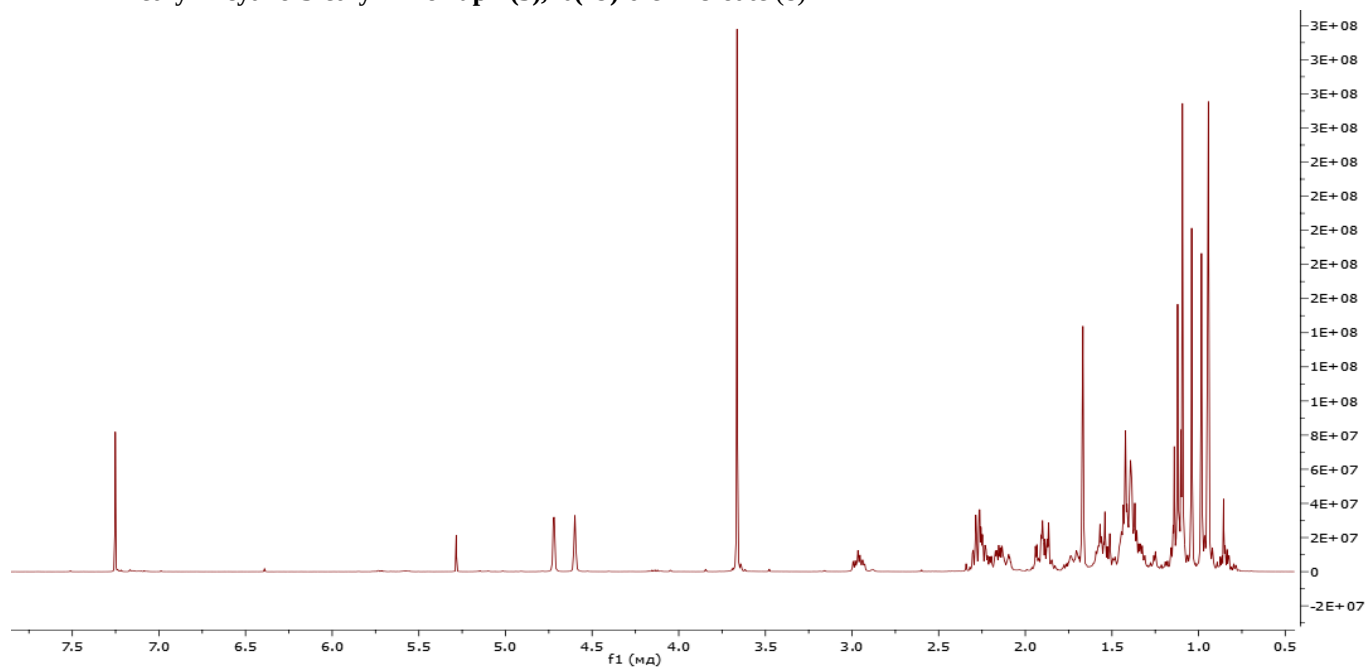
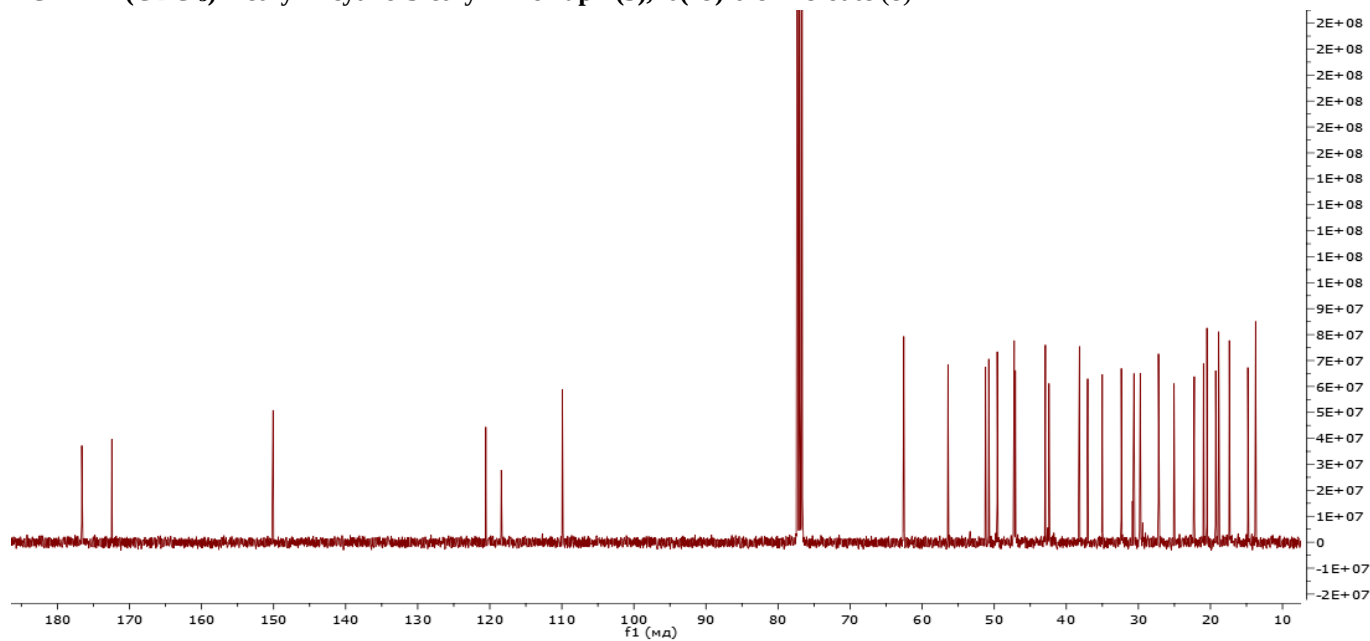
¹H NMR methyl 1-cyano-3-ethyl-3-oxo-2,3-seco-2-norlup-20(29)-en-28-oate (3)**¹³C NMR (CDCl₃) methyl 1-cyano-3-ethyl-3-oxo-2,3-seco-2-norlup-20(29)-en-28-oate (3)**

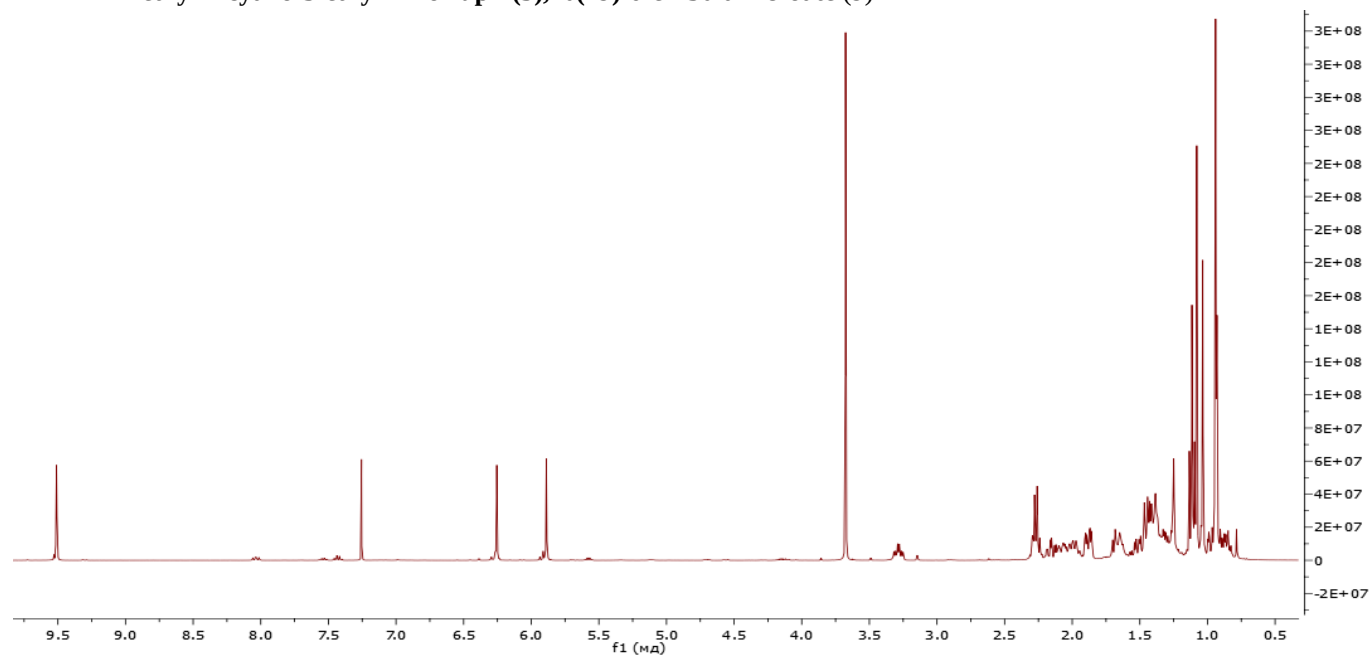
¹H NMR methyl 1-cyano-3-ethyl-3-oxo-2,3-seco-2-norlup-20(29)-en-30-al-28-oate (4)**¹³C NMR (CDCl₃) methyl 1-cyano-3-ethyl-3-oxo-2,3-seco-2-norlup-20(29)-en-30-al-28-oate (4)**

¹H NMR methyl 1-cyano-3,20-dioxo-3-ethyl-2,3-seco-2,29-dinorlup-28-oate (5)**¹³C NMR (CDCl₃) methyl 1-cyano-3,20-dioxo-3-ethyl-2,3-seco-2,29-dinorlup-28-oate (5)**

^1H NMR methyl 3-[1-bromoethyl]-1-cyano-3-oxo-2,3-seco-2-norlup-20(29)-en-30-al-28-oate (6) **^{13}C NMR (CDCl_3) methyl 3-[1-bromoethyl]-1-cyano-3-oxo-2,3-seco-2-norlup-20(29)-en-30-al-28-oate (6)**

¹H NMR methyl 1-cyano-3-ethyl-20-oxo-2,29-dinorlup-1(3)-en-28-oate (7)**¹³C NMR (CDCl₃) methyl 1-cyano-3-ethyl-20-oxo-2,29-dinorlup-1(3)-en-28-oate (7)**

¹H NMR methyl 1-cyano-3-ethyl-2-norlup-1(3),20(29)-dien-28-oate (8)**¹³C NMR (CDCl₃) methyl 1-cyano-3-ethyl-2-norlup-1(3),20(29)-dien-28-oate (8)**

¹H NMR methyl 1-cyano-3-ethyl-2-norlup-1(3),20(29)-dien-30-al-28-oate (9)**¹³C NMR (CDCl₃) methyl 1-cyano-3-ethyl-2-norlup-1(3),20(29)-dien-30-al-28-oate (9)**