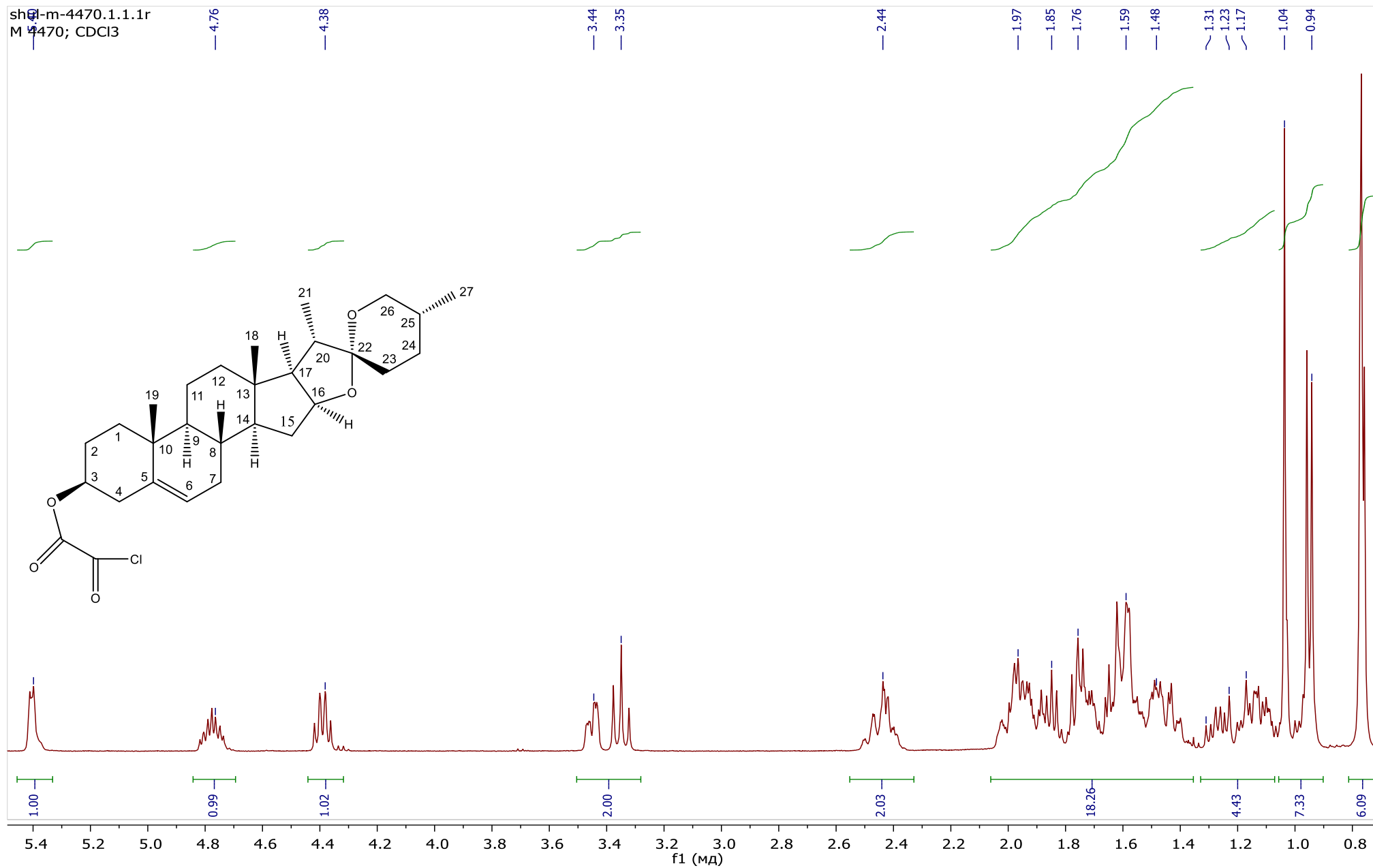


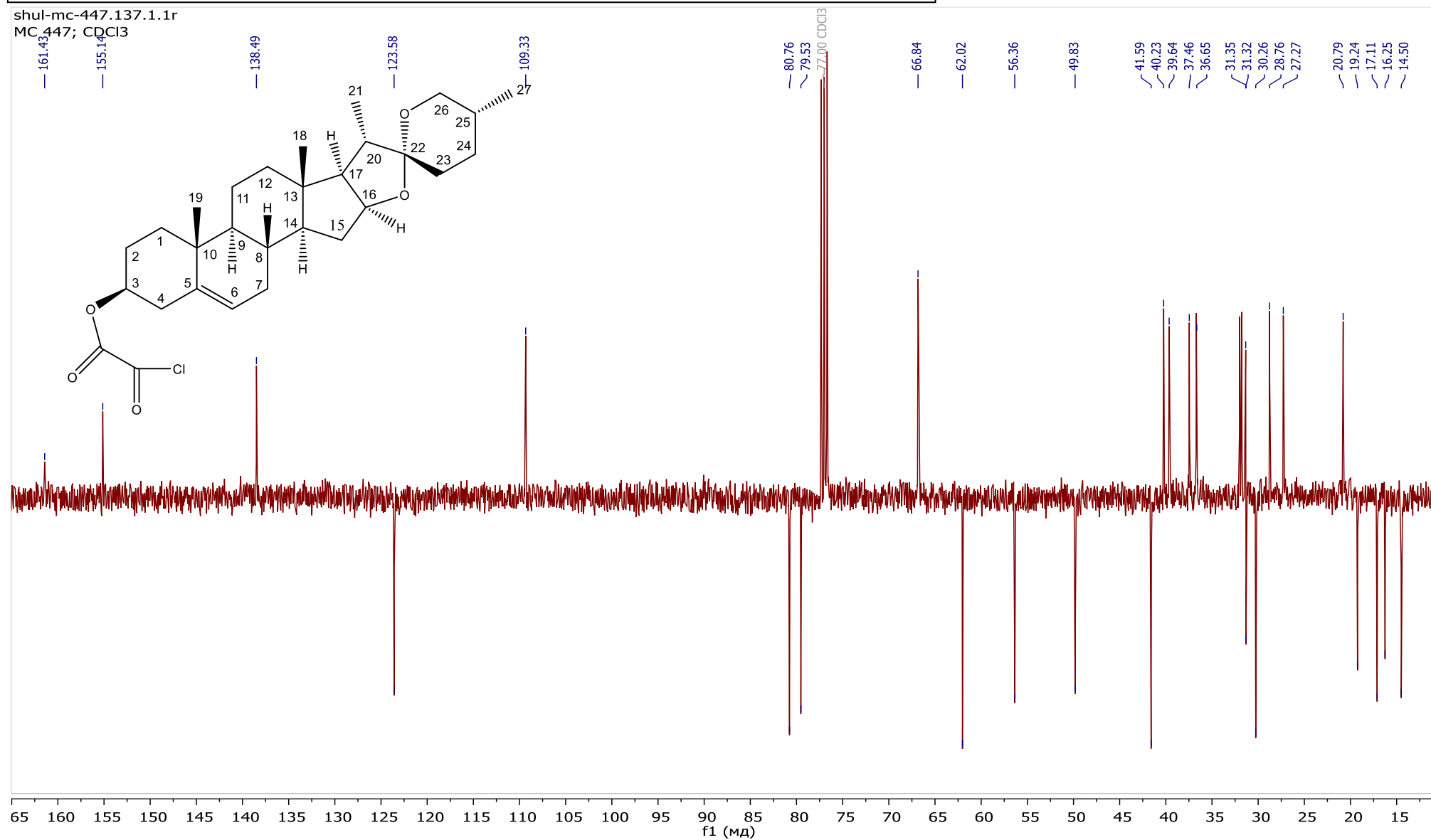
Compound 2 ((2*R*,25*R*)-spirost-5-en-3 β -yl 2-chloro-2-oxoacetate), ¹H NMR, 400 MHz, CDCl₃

shg-m-4470.1.1.1r
M 4470; CDCl₃



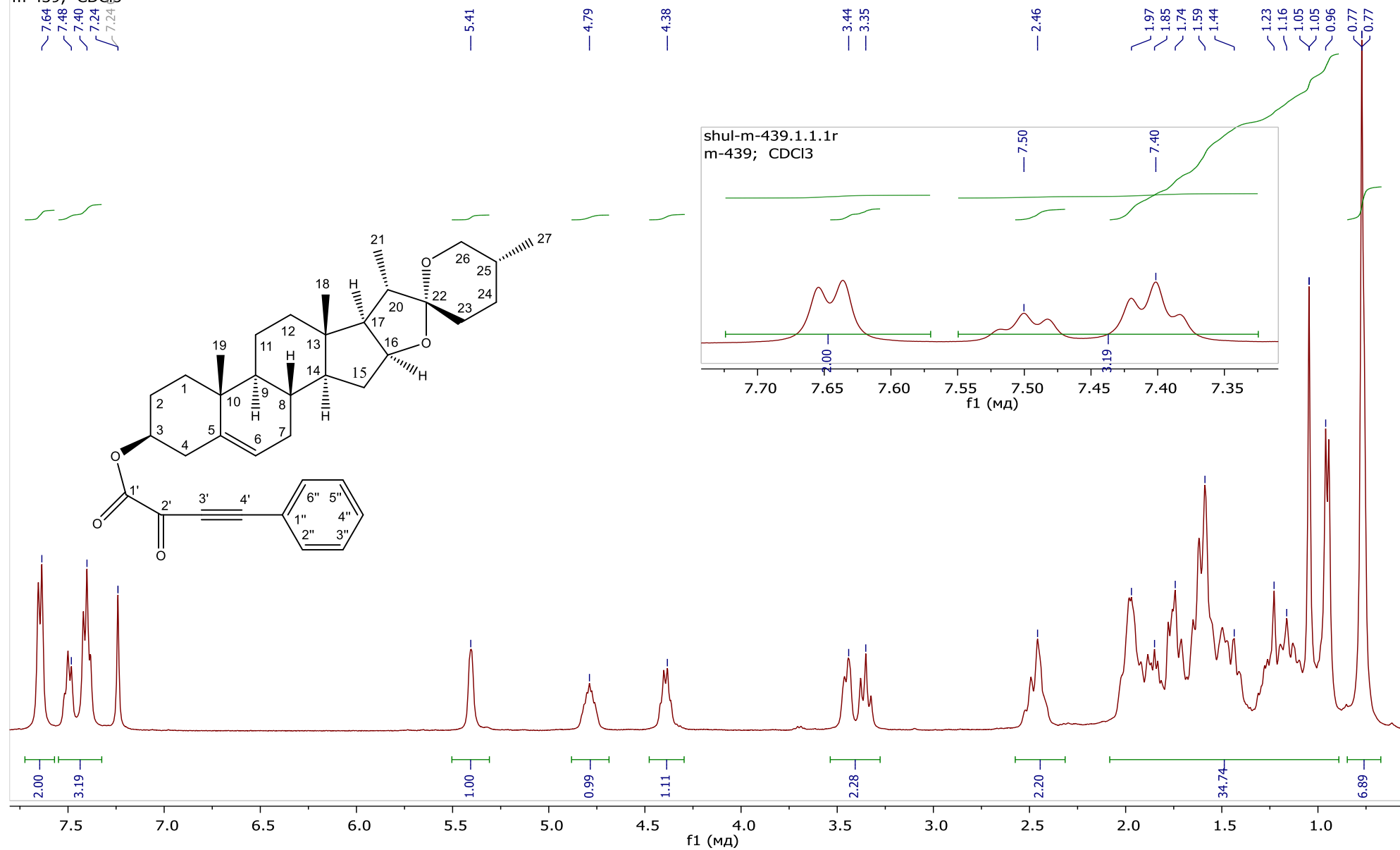
Compound 2 ((22*R*,25*R*)-spirost-5-en-3 β -yl 2-chloro-2-oxoacetate), ^{13}C NMR, 101 MHz, CDCl_3

shul-mc-447.137.1.1r
MC_447; CDCl_3



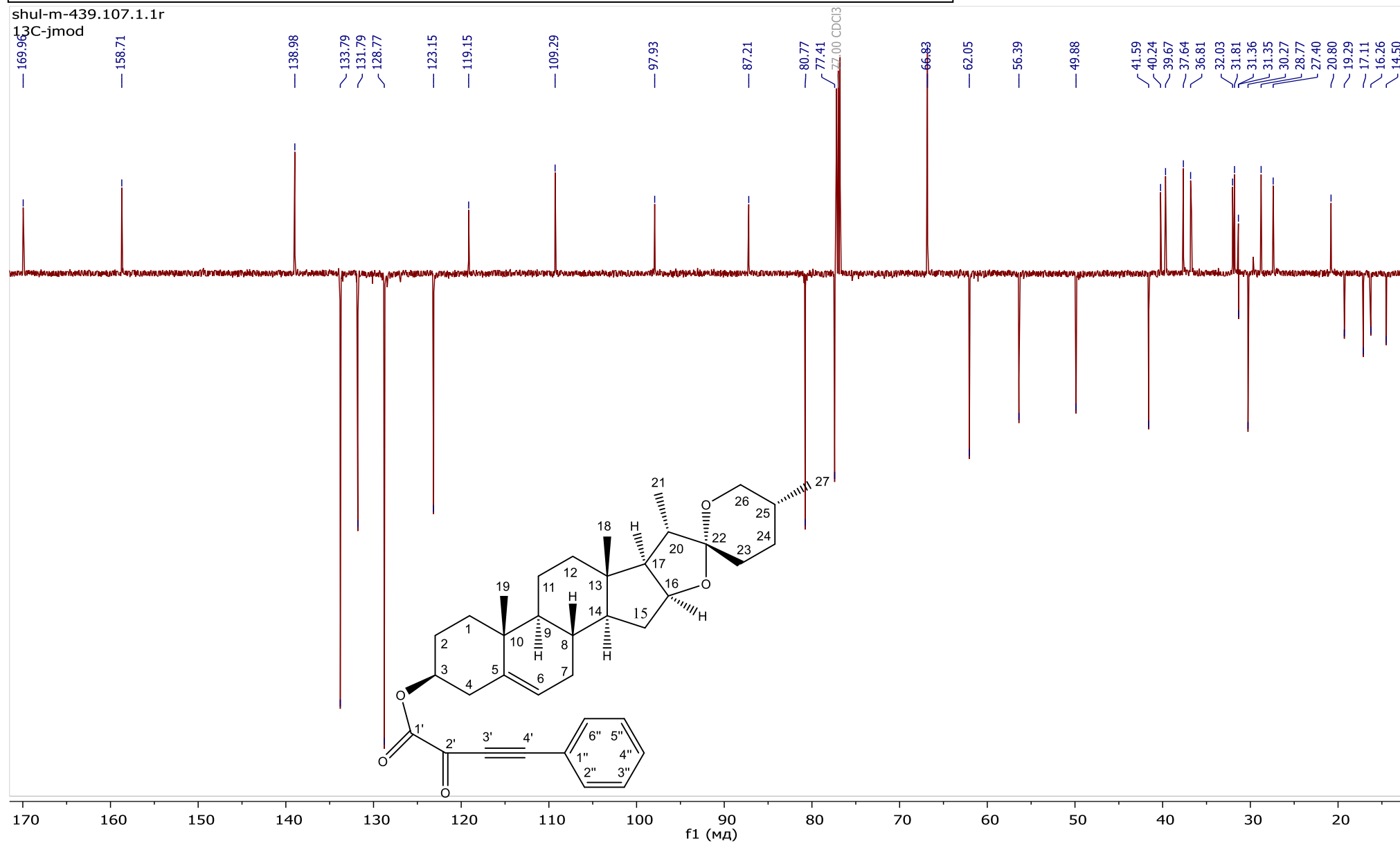
Compound 4 ((22*R*,25*R*)-spirost-5-en-3 β -yl 2-oxo-4-phenylbut-3-ynoat), ¹H NMR, 600 MHz, CDCl₃

shul-m-439.1.1.1r
m-439; CDCl₃



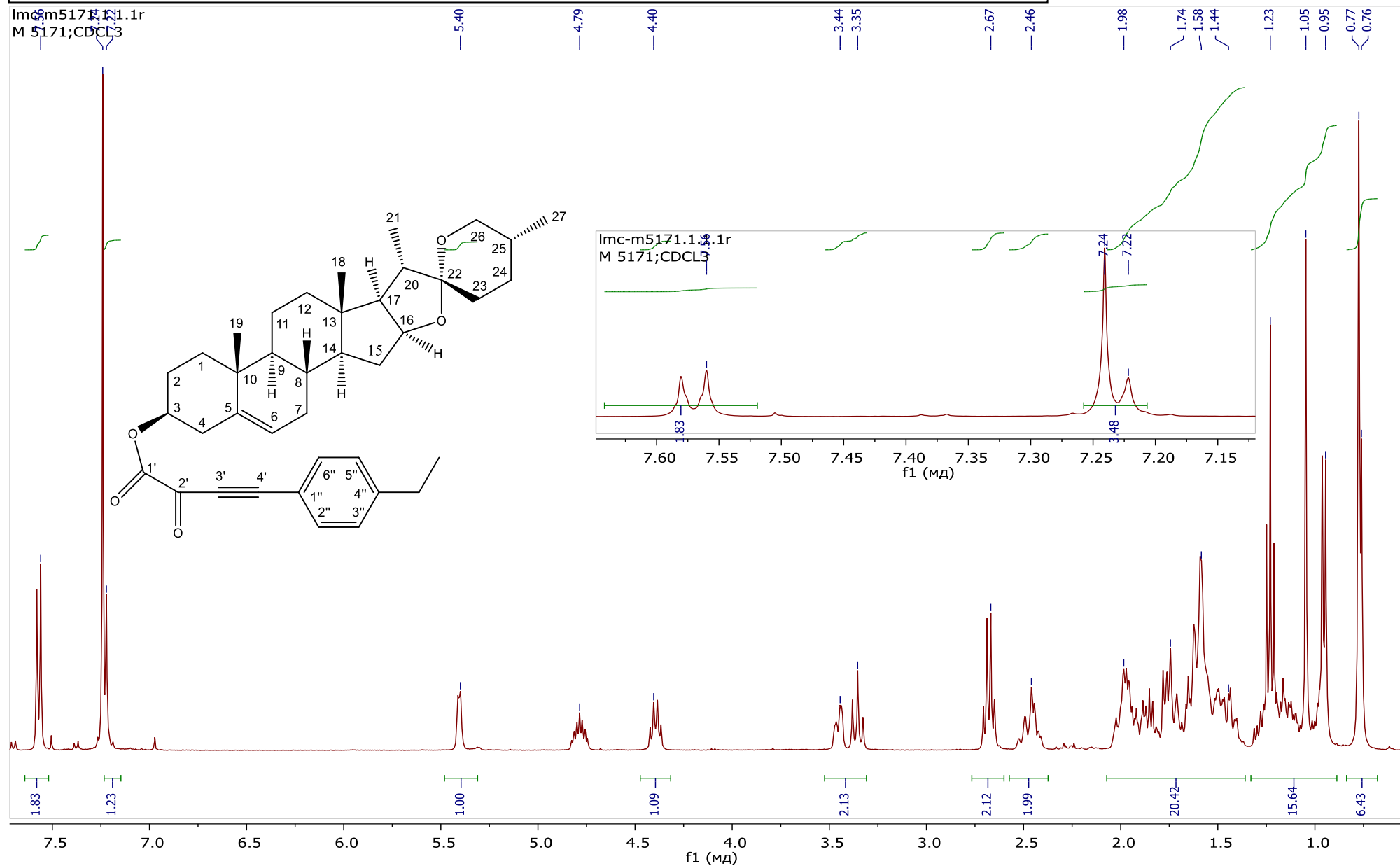
Compound 4 ((22*R*,25*R*)-spirost-5-en-3 β -yl 2-oxo-4-phenylbut-3-ynoat), ¹³C NMR, 151 MHz, CDCl₃

shul-m-439.107.1.1r
13C-jmod

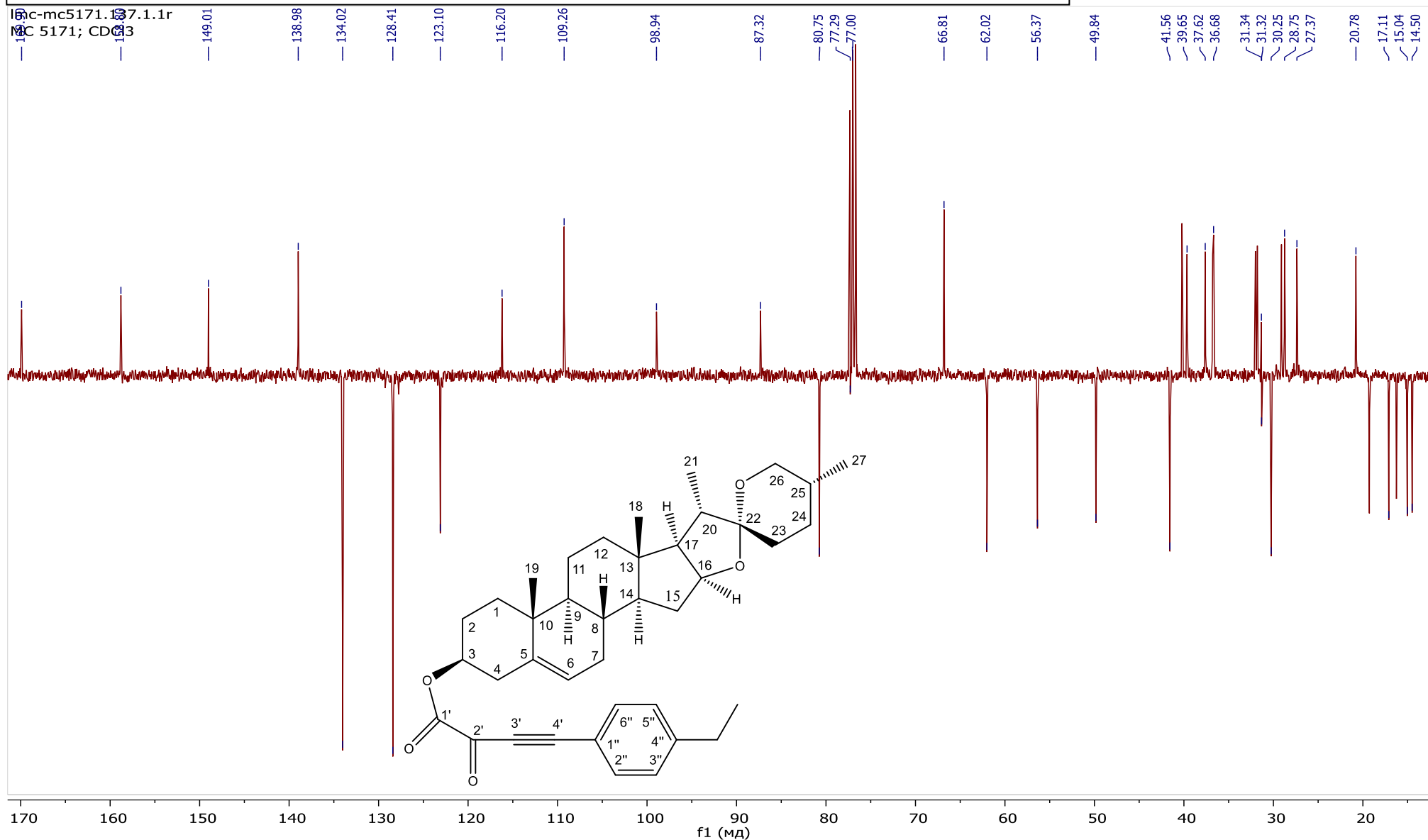


Compound 5 ((22*R*,25*R*)-spirost-5-en-3 β -yl 4-(4-ethylphenyl)-2-oxobut-3-ynoate), ¹H NMR, 400 MHz, CDCl₃

lmc-m5171.1.1r
M 5171;CDCl₃

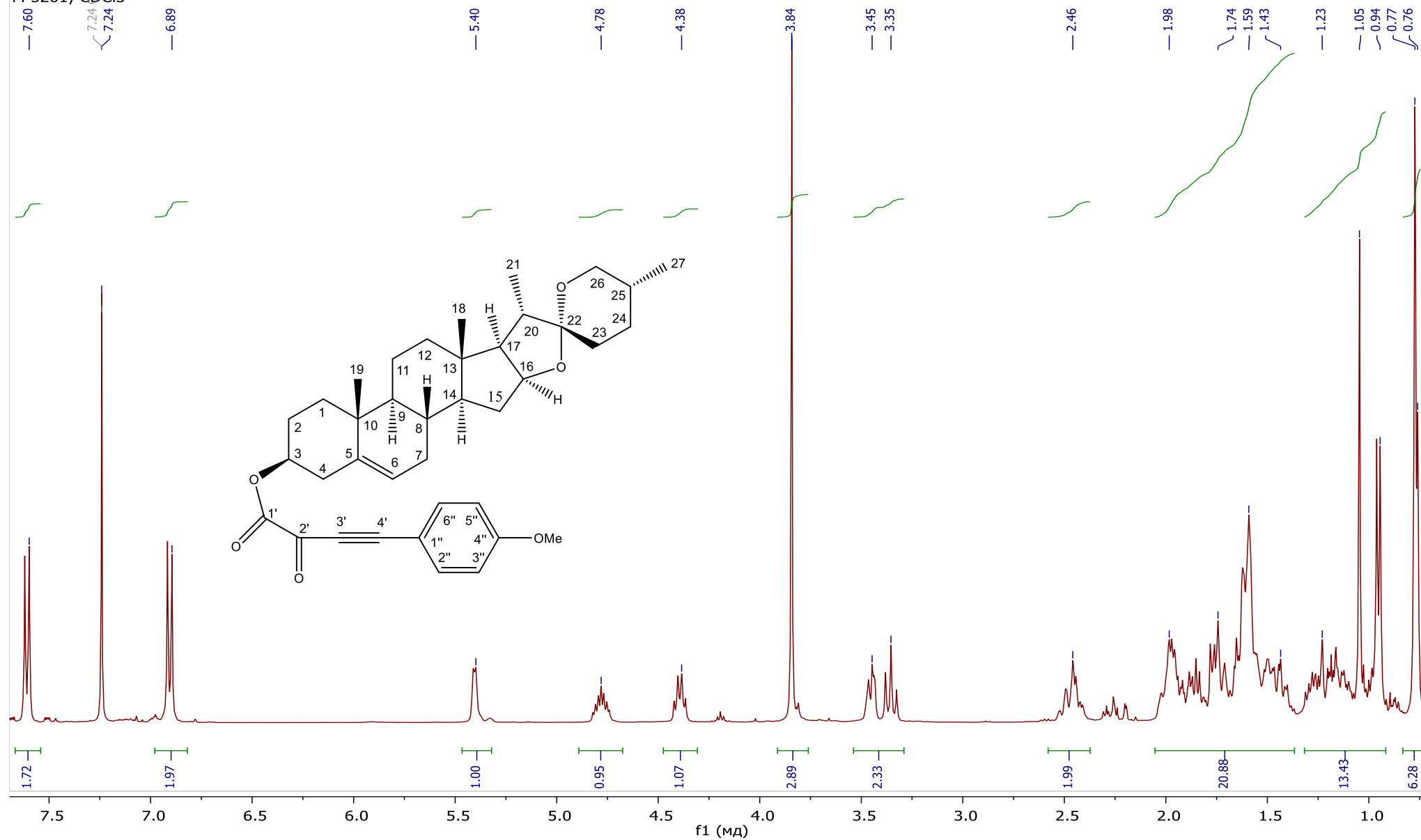


Compound 5 ((22*R*,25*R*)-spirost-5-en-3 β -yl 4-(4-ethylphenyl)-2-oxobut-3-ynoate), ^{13}C NMR, 101 MHz, CDCl_3

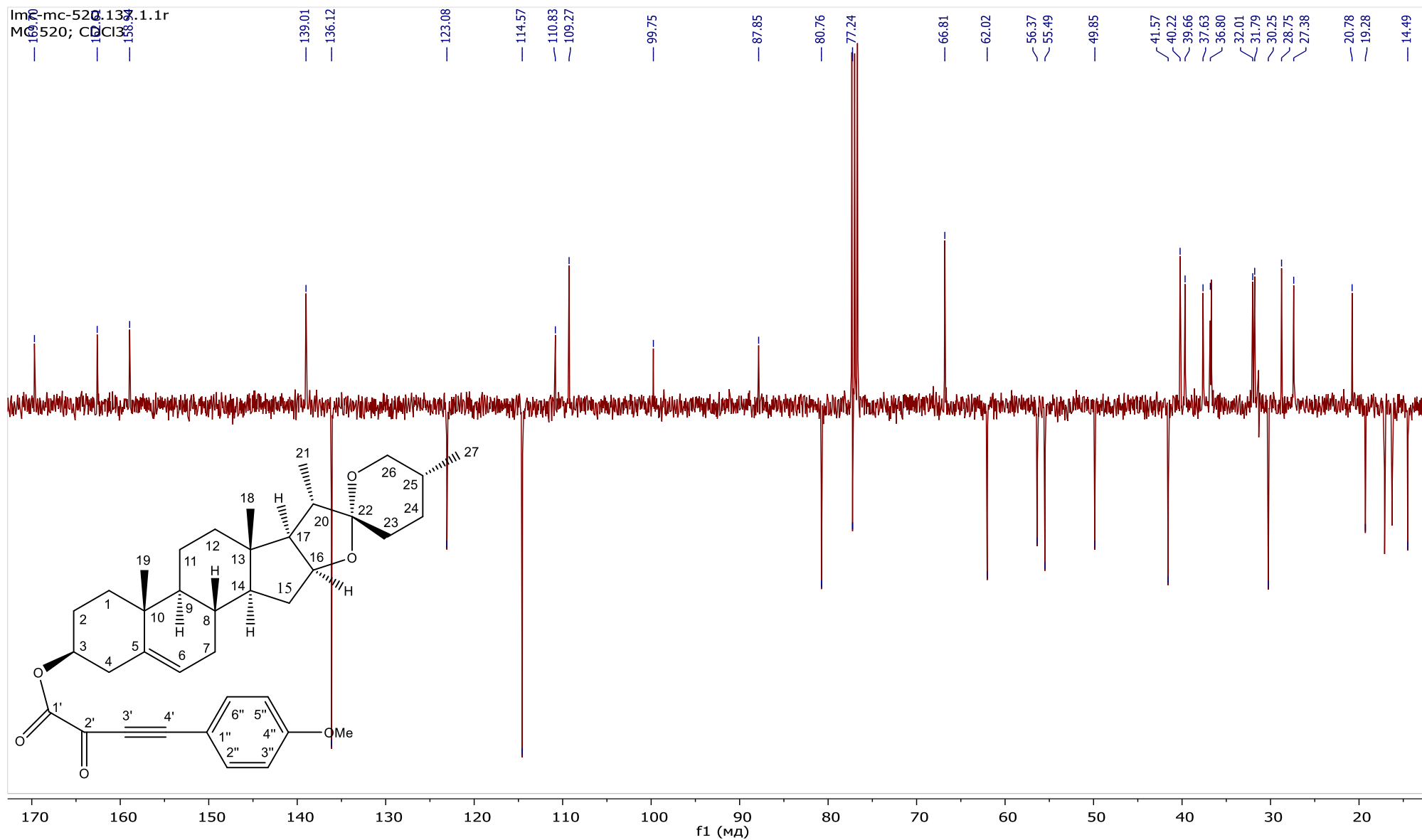


Compound 6 ((22*R*,25*R*)-spirost-5-en-3 β -yl 4-(4-methoxyphenyl)-2-oxobut-3-ynoate), ¹H NMR, 400 MHz, CDCl₃

lmc-m-5201.1.1.1r
M 5201; CDCl₃

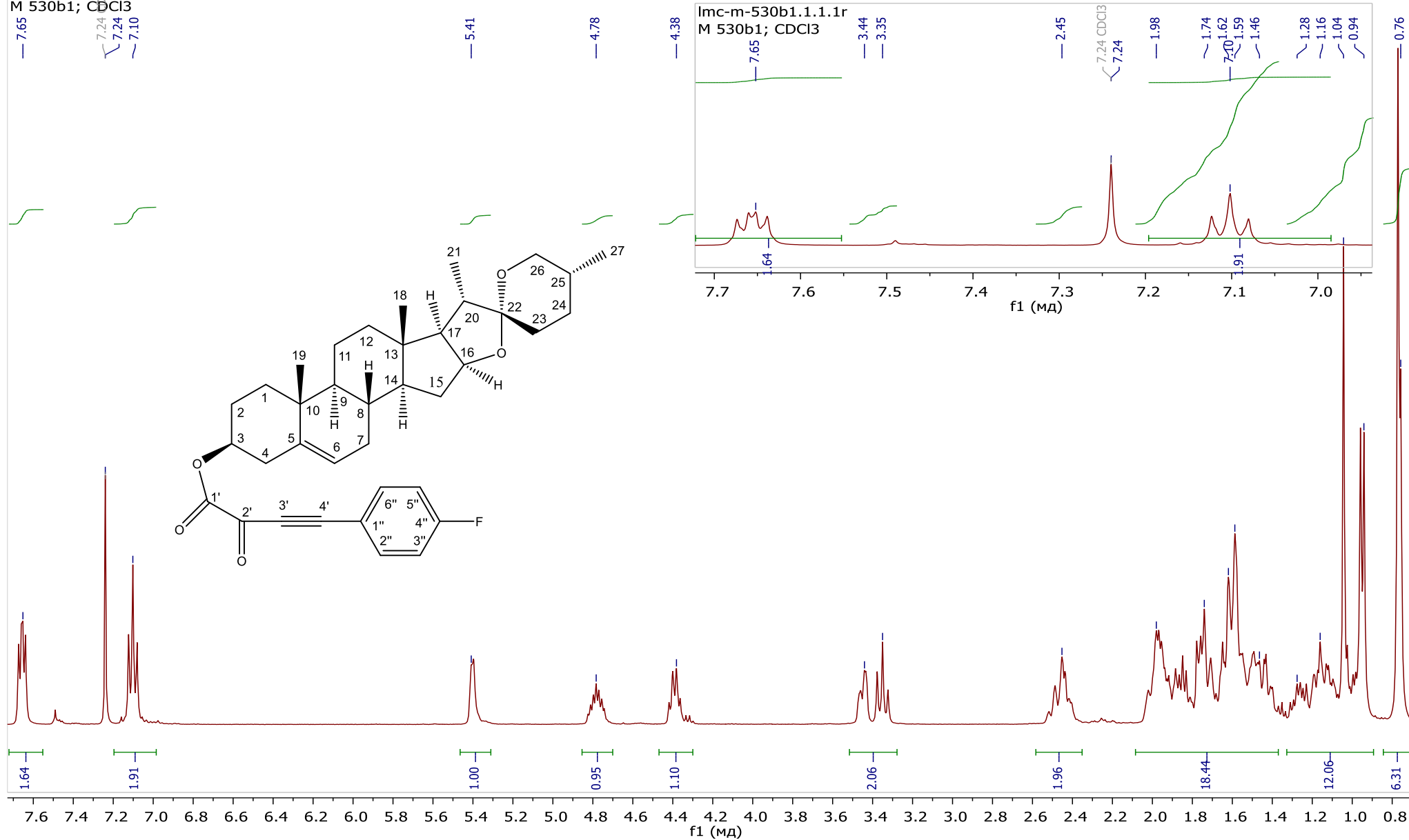


Compound 6 ((22*R*,25*R*)-spirost-5-en-3 β -yl 4-(4-methoxyphenyl)-2-oxobut-3-ynoate), ^{13}C NMR, 101 MHz, CDCl_3

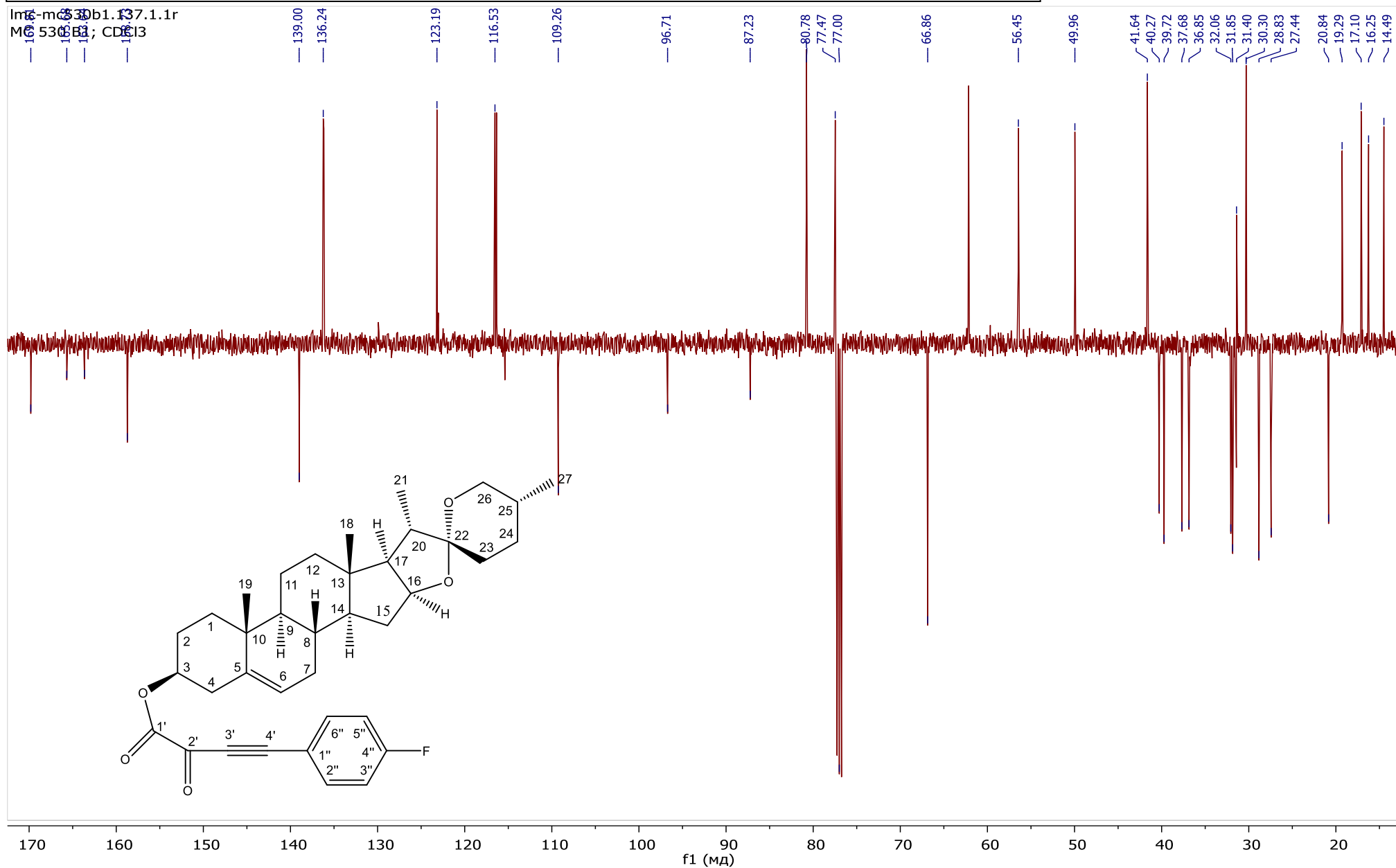


Compound 7 (2*R*,25*R*)-spirost-5-en-3 β -yl 4-(4-fluorophenyl)-2-oxobut-3-ynoate, ¹H NMR, 400 MHz, CDCl₃

Imc-m-530b1.1.1.1r
M 530b1; CDCl₃

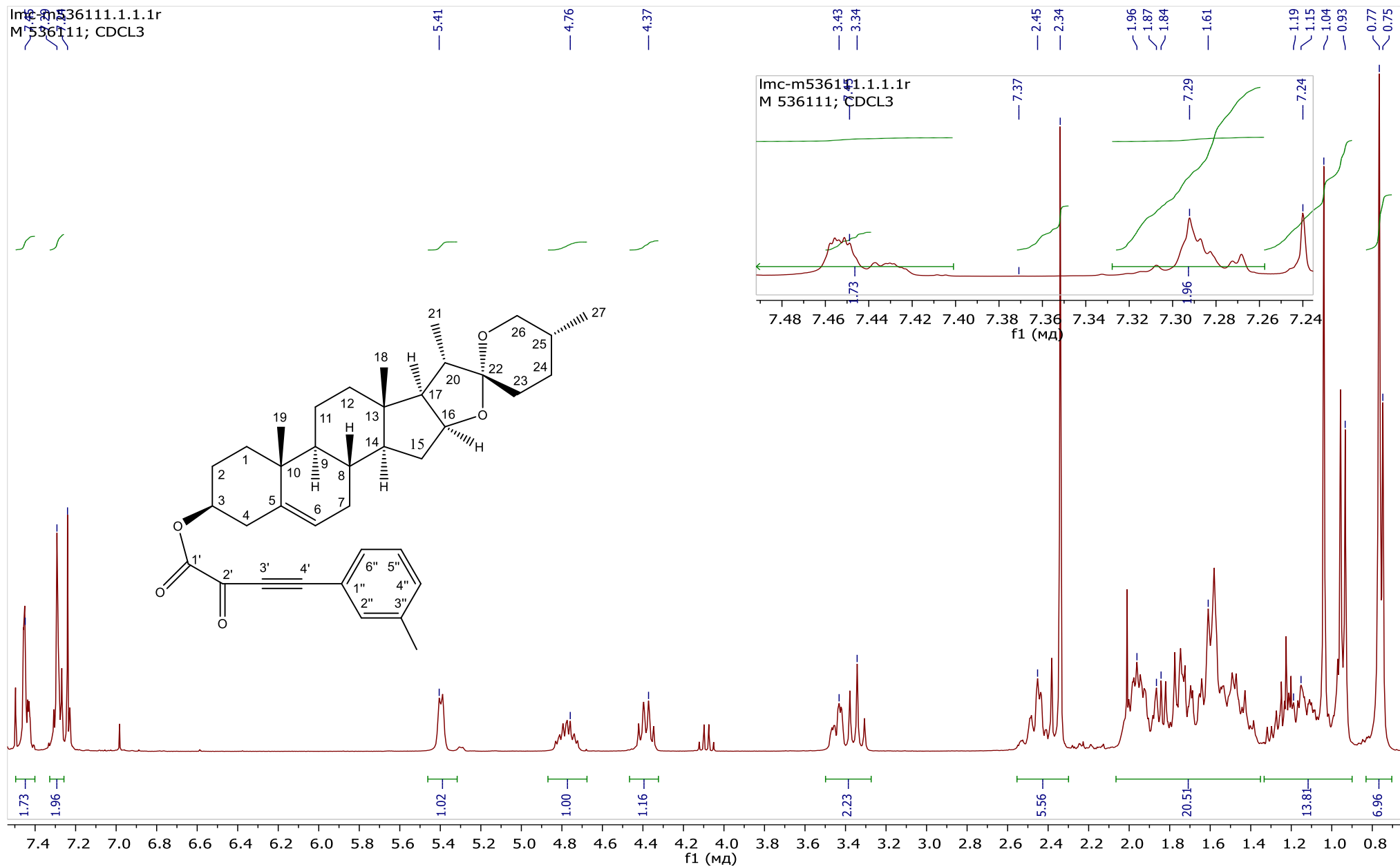


Compound 7 (2*R*,25*R*)-spirost-5-en-3 β -yl 4-(4-fluorophenyl)-2-oxobut-3-ynoate, ^{13}C NMR, 126 MHz, CDCl_3



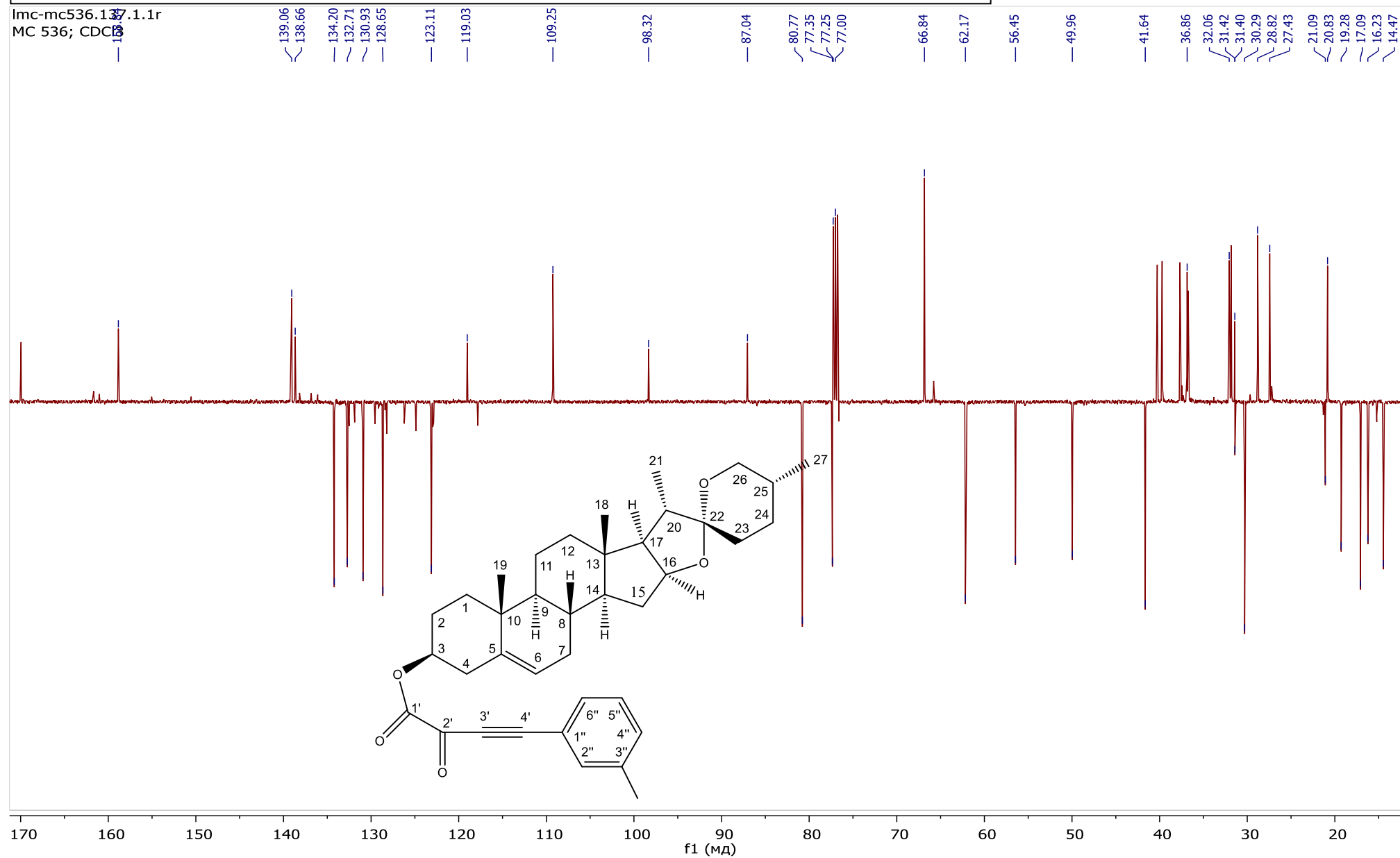
Compound 8 ((22*R*,25*R*)-spirost-5-en-3 β -yl 2-oxo-4-(*m*-tolyl)but-3-ynoate), ¹H NMR, 300 MHz, CDCl₃

Imc-m536111.1.1.1r
M 536111; CDCl₃



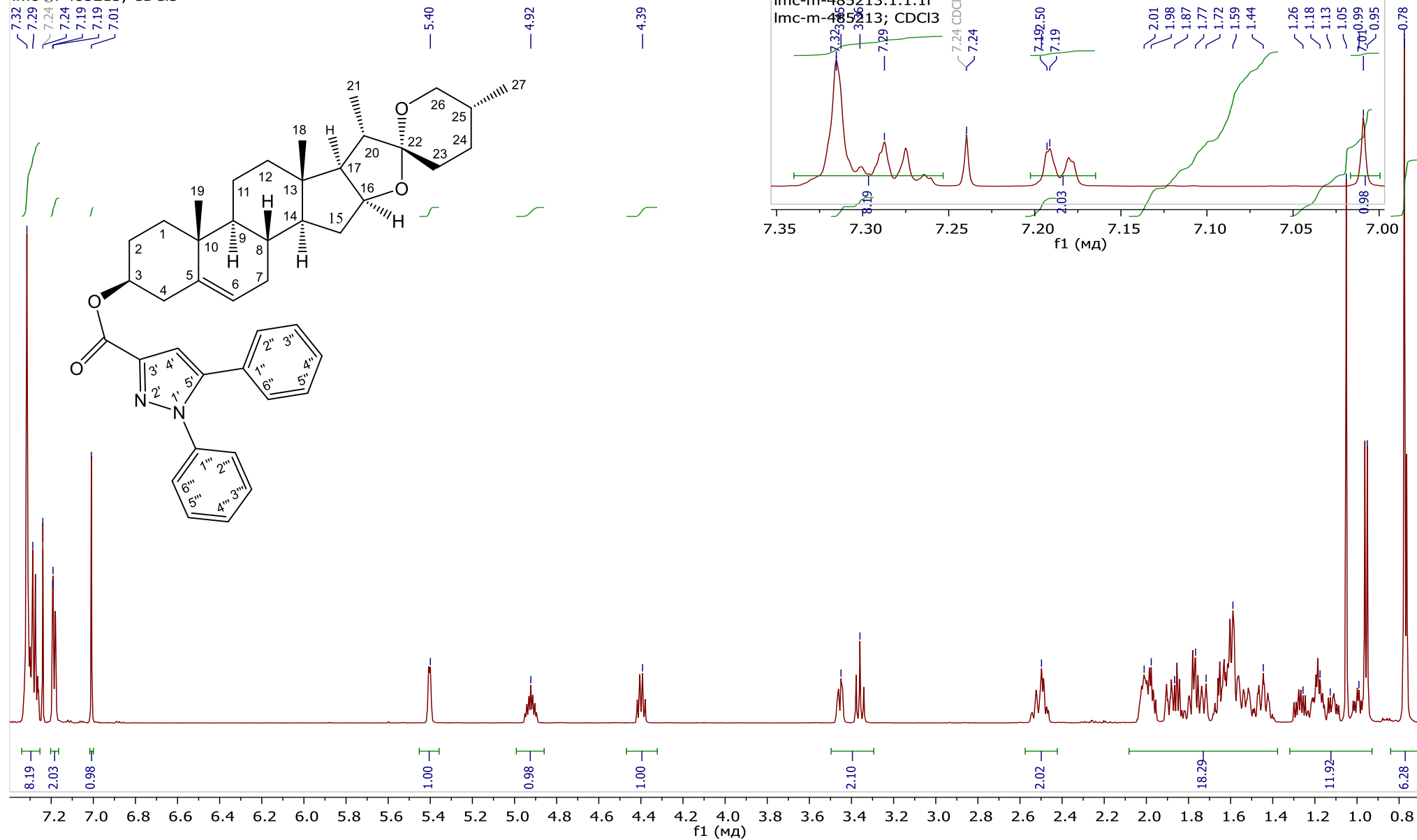
Compound 8 ((22*R*,25*R*)-spirost-5-en-3 β -yl 2-oxo-4-(*m*-tolyl)but-3-ynoate), ¹³C NMR, 126 MHz, CDCl₃

lmc-mc536.137.1.1r
MC 536; CDCl₃



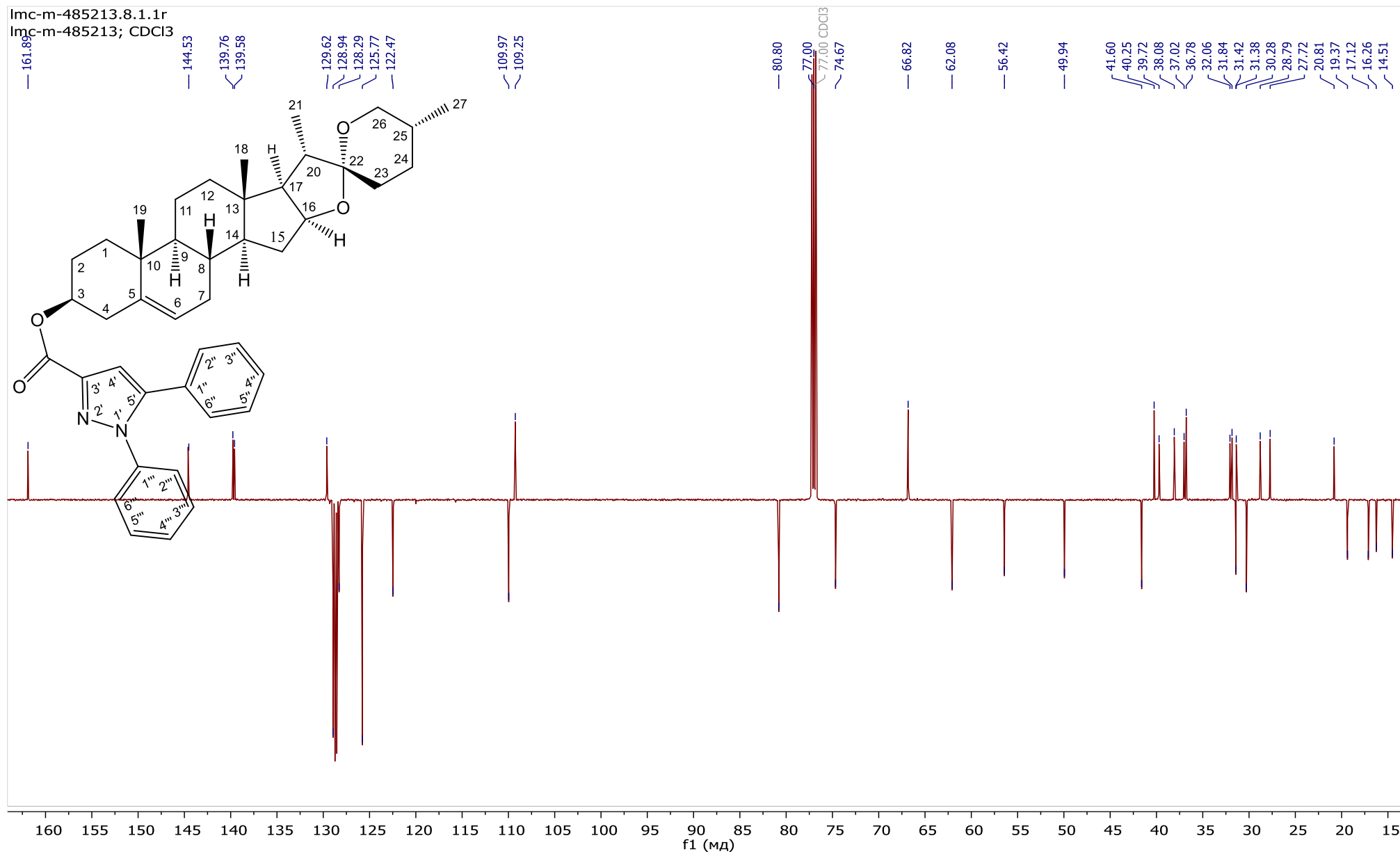
Compound 10 ((22*R*,25*R*)-spirost-5-en-3 β -yl 1,5-diphenyl-1*H*-pyrazole-3-carboxylate), ¹H NMR, 600 MHz, CDCl₃

lmc-m-485213.1.1.1r
lmc-m-485213; CDCl₃



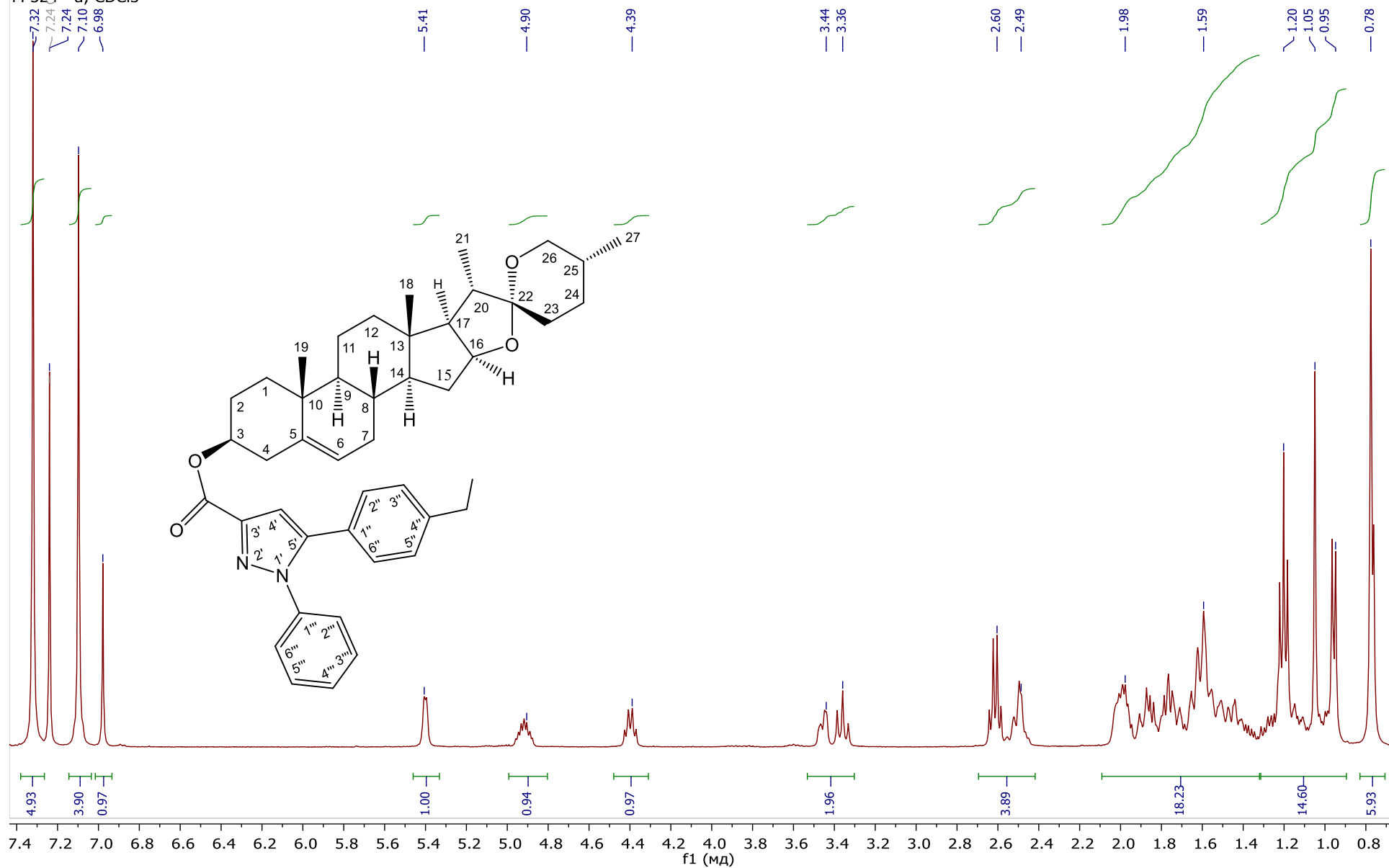
Compound 10 ((2*R*,25*R*)-spirost-5-en-3 β -yl 1,5-diphenyl-1*H*-pyrazole-3-carboxylate), ^{13}C NMR, 151 MHz, CDCl_3

lmc-m-485213.8.1.1r
lmc-m-485213; CDCl_3



Compound 11 ((2*R*,25*R*)-spirost-5-en-3 β -yl 5-(4-ethylphenyl)-1-phenyl-1*H*-pyrazole-3-carboxylate), ¹H NMR, 400 MHz, CDCl₃

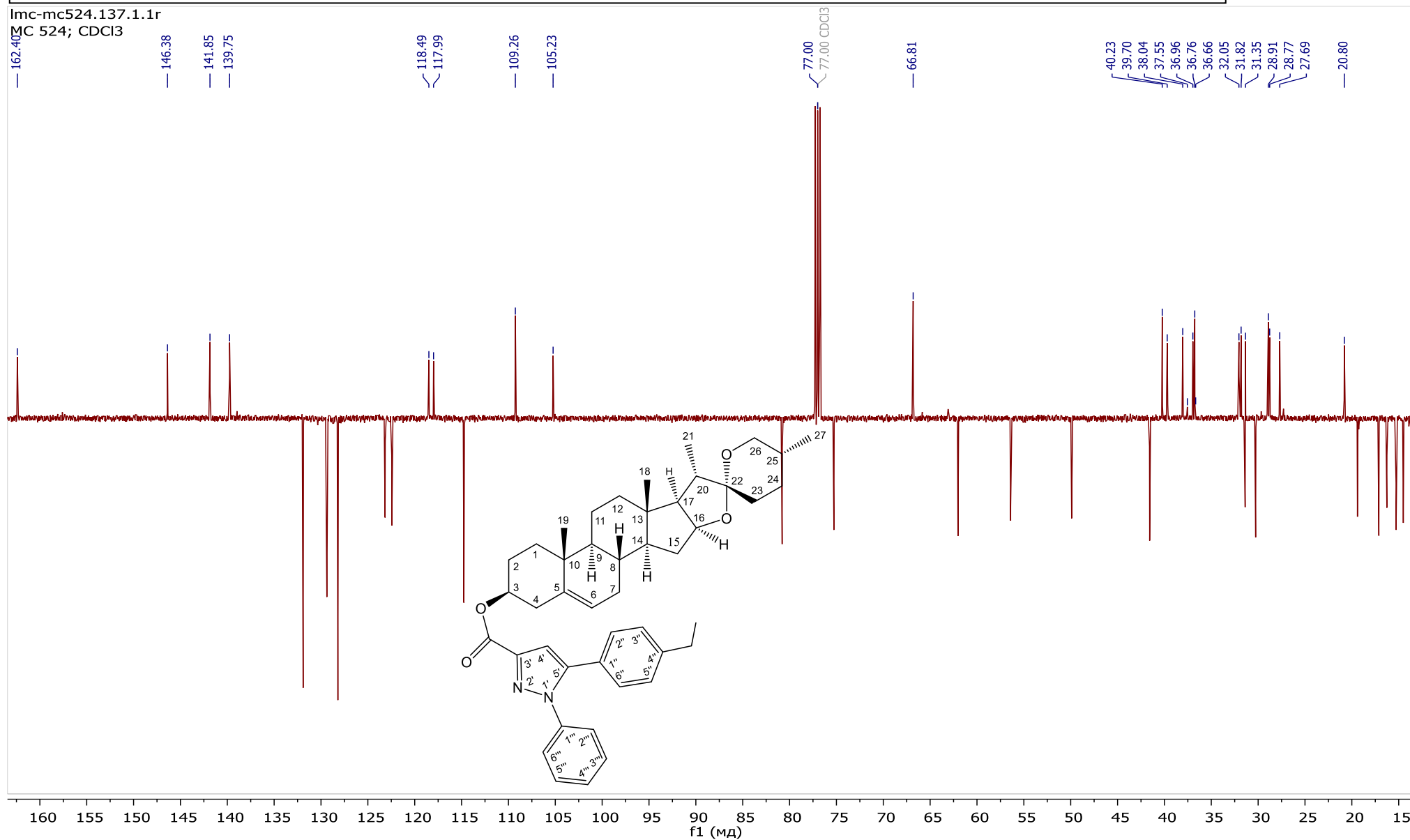
Imc-m-524-a.1.1.1r
M 524 - a; CDCl₃



Compound 11 ((2*R*,25*R*)-spirost-5-en-3 β -yl 5-(4-ethylphenyl)-1-phenyl-1*H*-pyrazole-3-carboxylate), ¹³C NMR, 126 MHz, CDCl₃

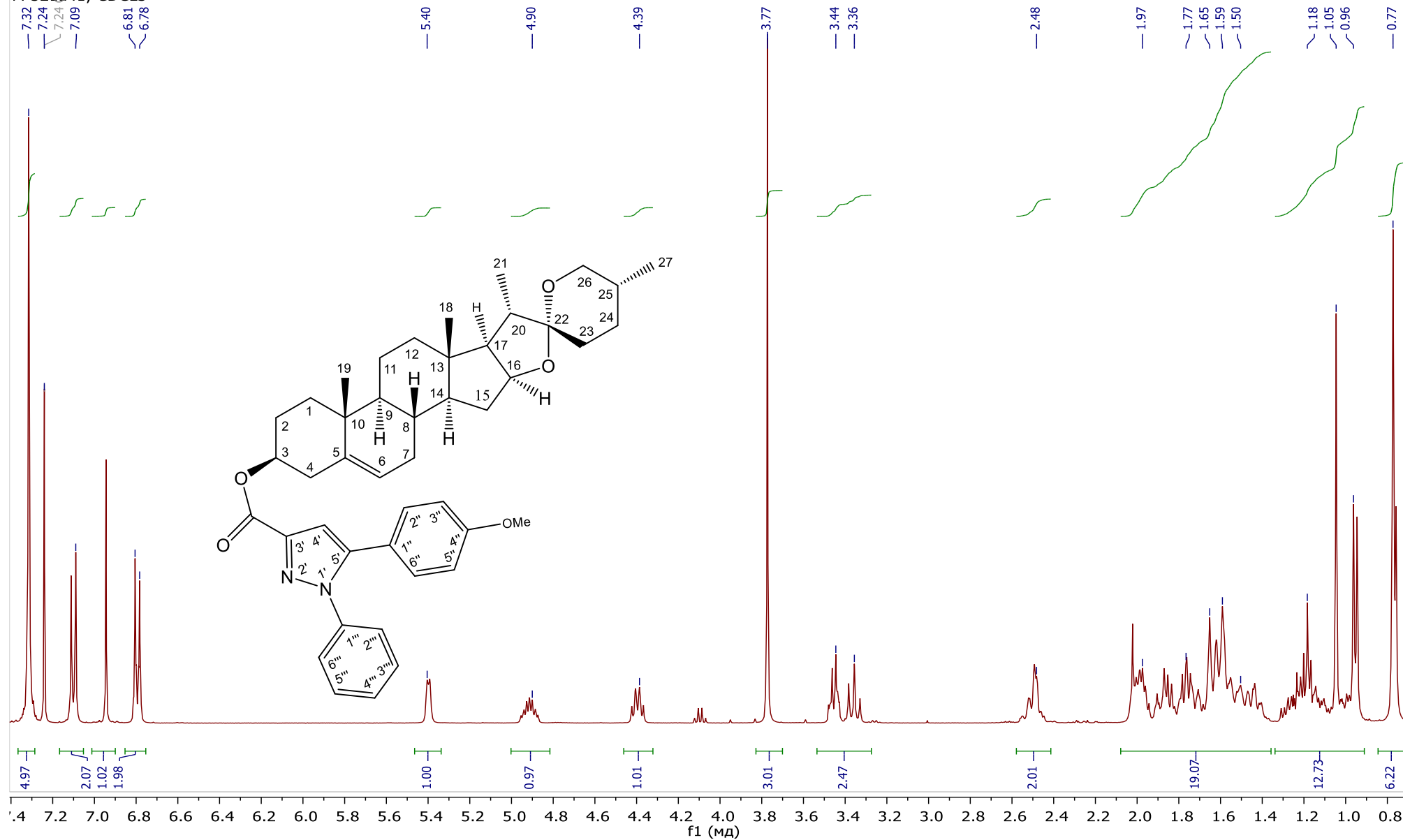
lmc-mc524.137.1.1r

¹³C 524; CDCl₃



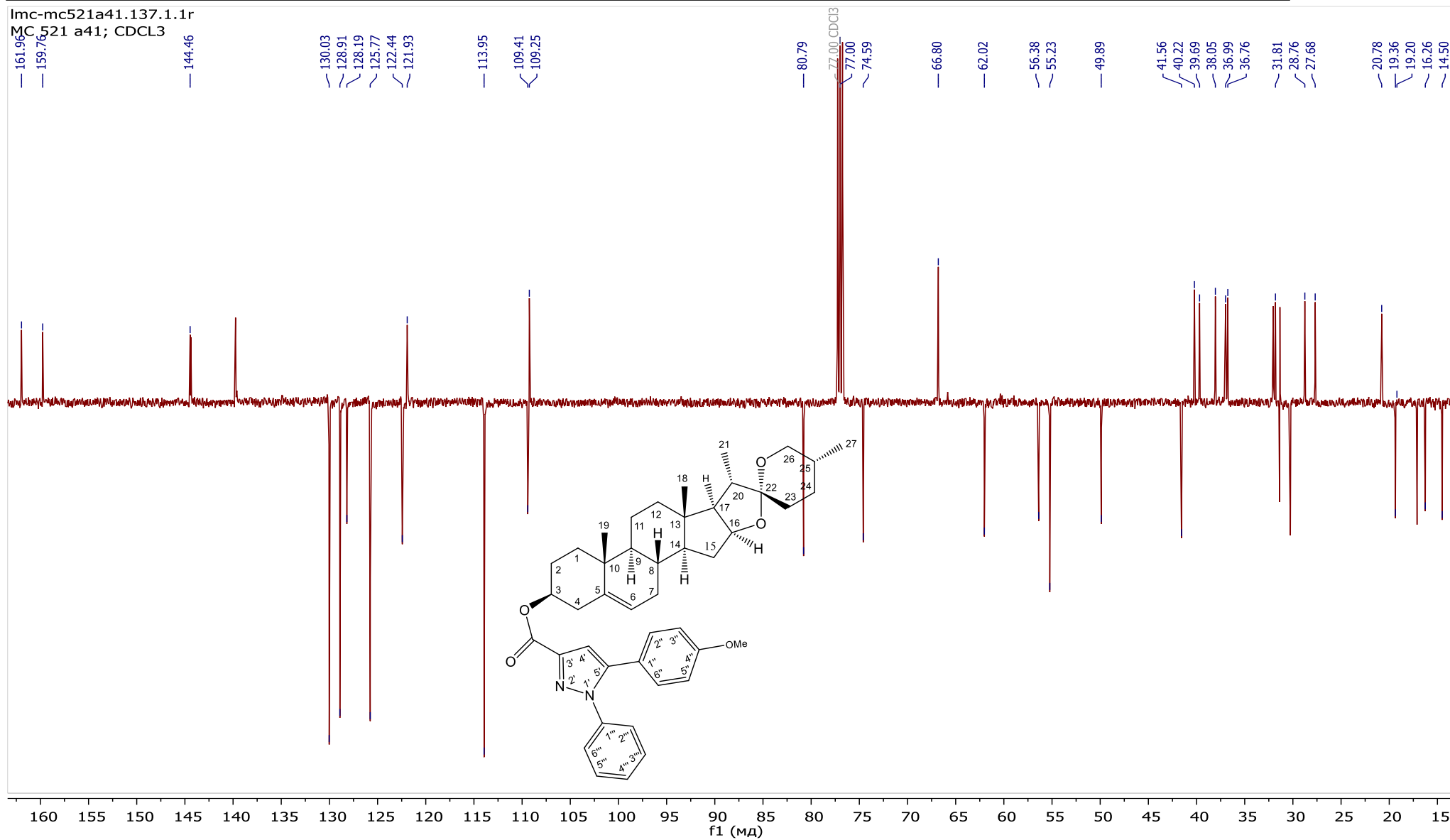
Compound 12 ((2*R*,25*R*)-spirost-5-en-3 β -yl 5-(4-methoxyphenyl)-1-phenyl-1*H*-pyrazole-3-carboxylate), ¹H NMR, 400 MHz, CDCl₃

lmc-m521a41.1.1.1r
M 521a41; CDCL3



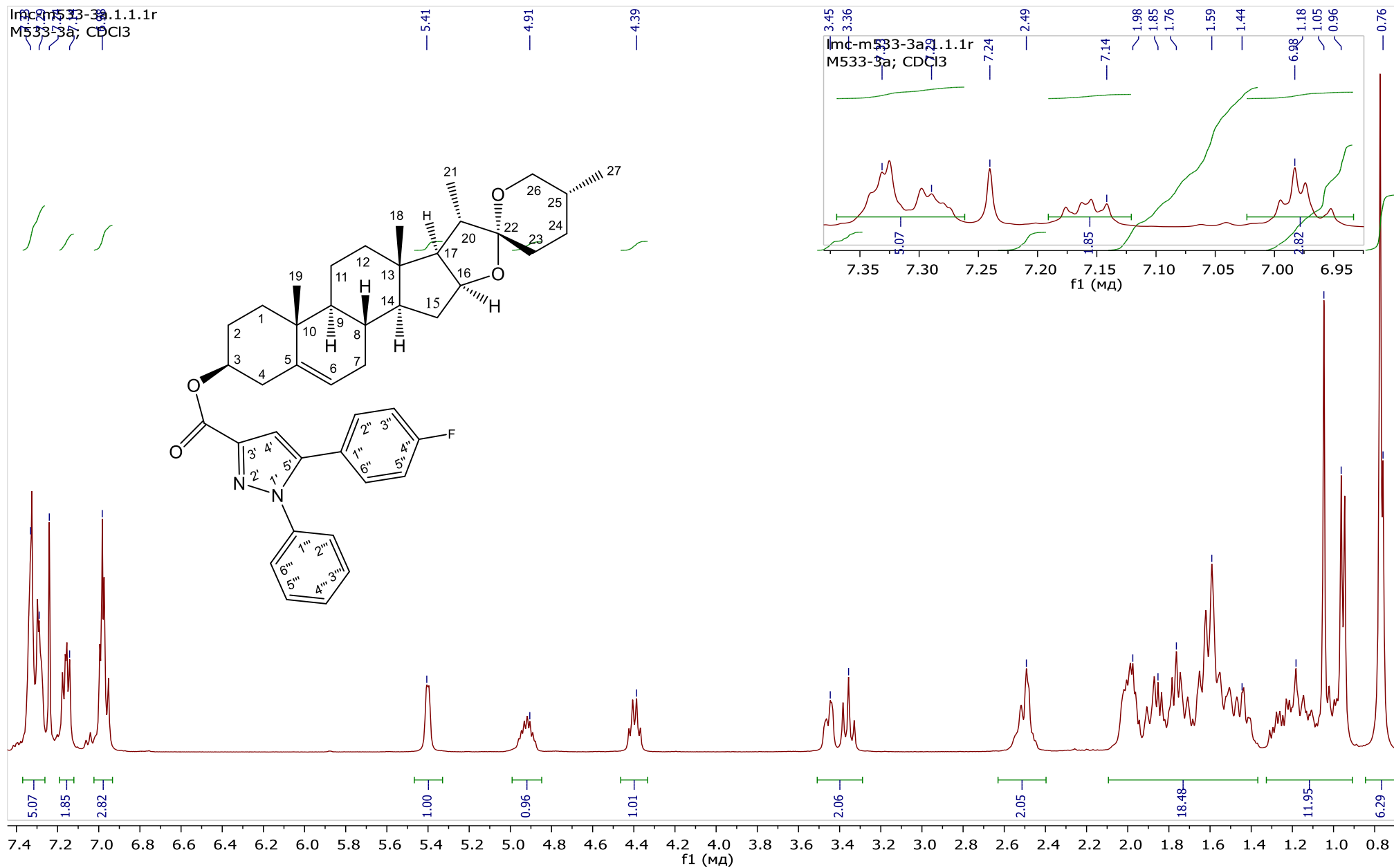
Compound 12 ((22*R*,25*R*)-spirost-5-en-3 β -yl 5-(4-methoxyphenyl)-1-phenyl-1*H*-pyrazole-3-carboxylate), ^{13}C NMR, 126 MHz, CDCl_3

lmc-mc521a41.137.1.1r
MC 521 a41; CDCl_3



Compound 13 ((2*R*,25*R*)-spirost-5-en-3 β -yl 5-(4-fluorophenyl)-1-phenyl-1*H*-pyrazole-3-carboxylate), ¹H NMR, 400 MHz, CDCl₃

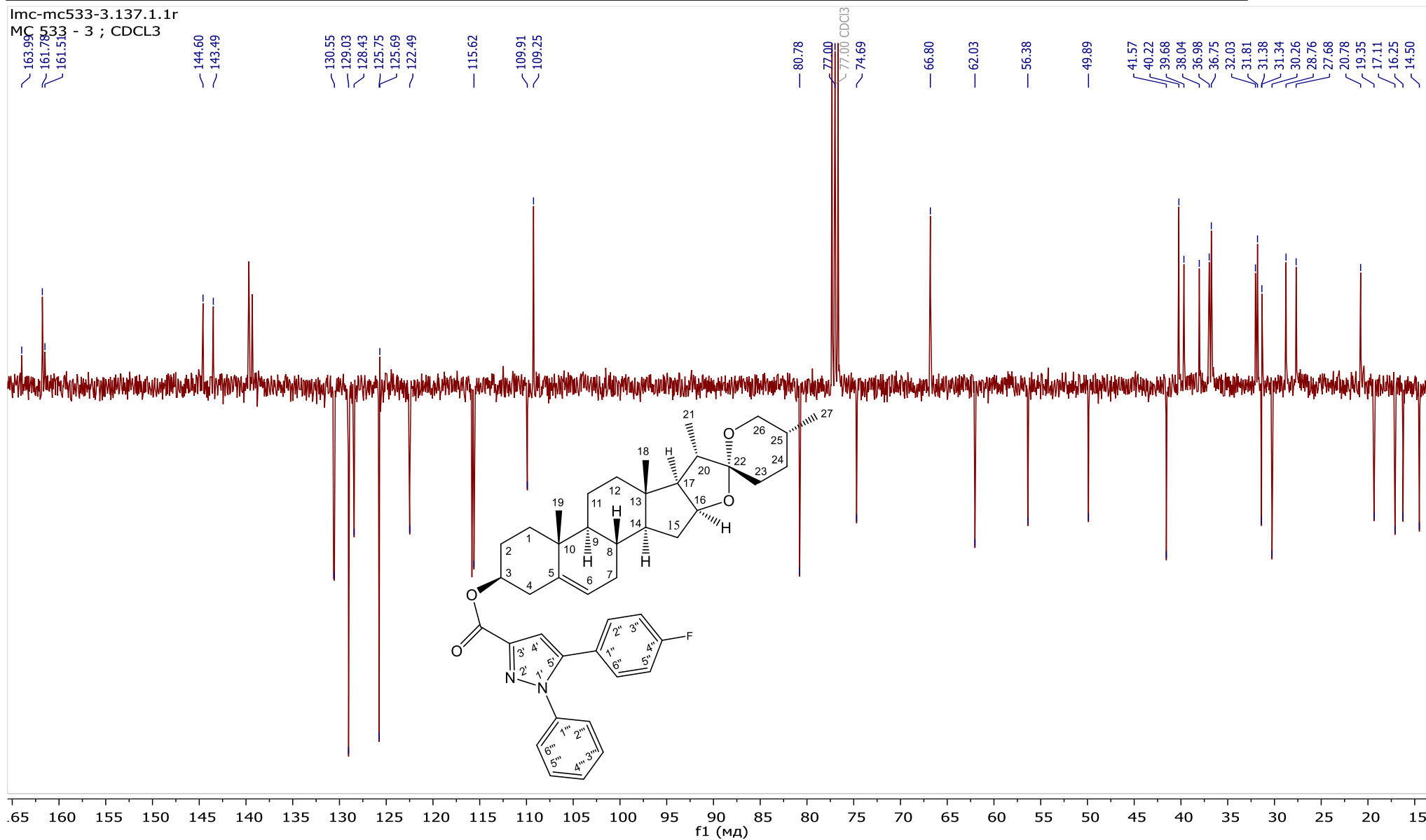
mp: 111.1-111.2 °C
M533-3a; CDCl₃



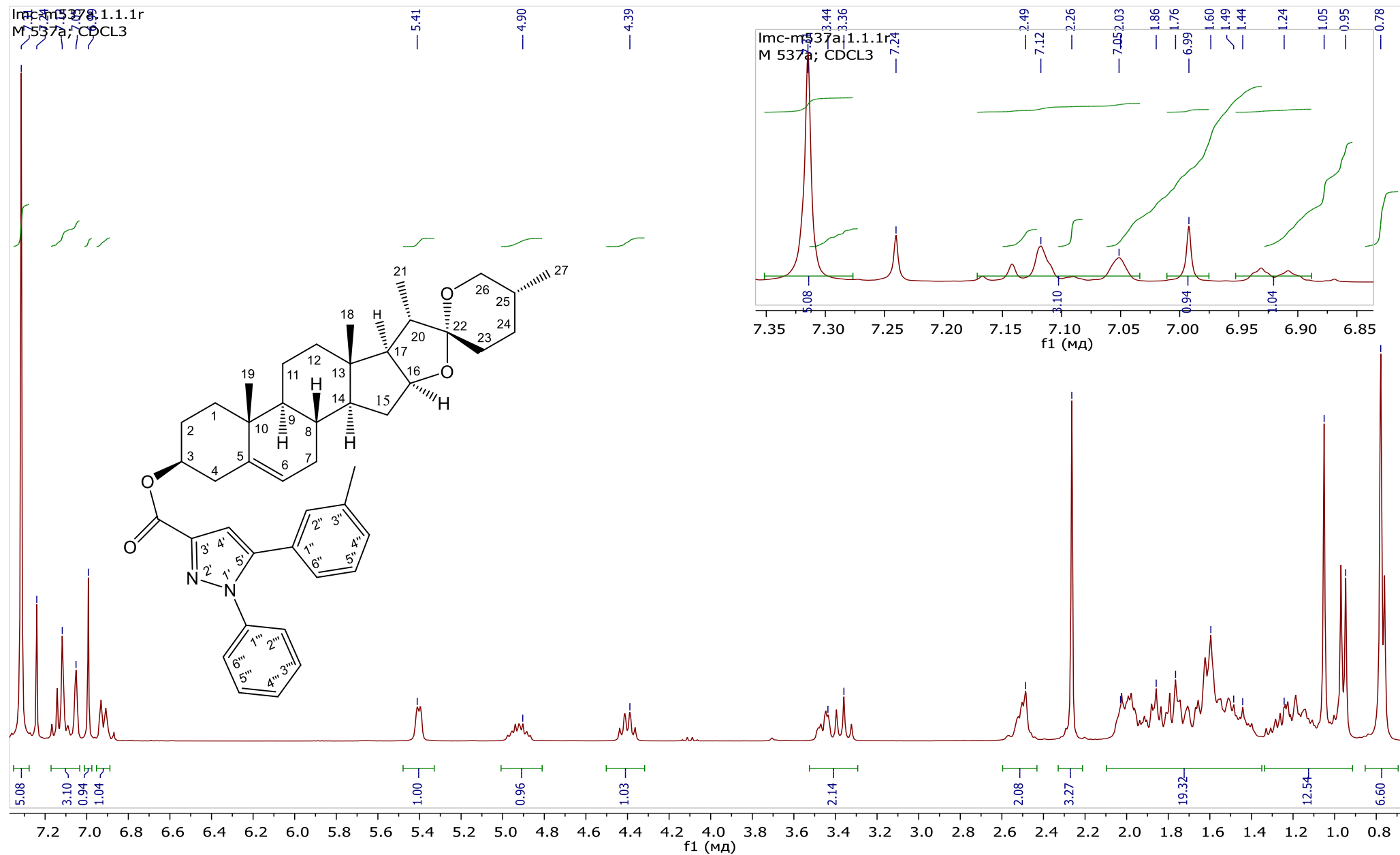
Compound 13 ((2*R*,25*R*)-spirost-5-en-3 β -yl 5-(4-fluorophenyl)-1-phenyl-1*H*-pyrazole-3-carboxylate), ¹³C NMR, 101 MHz, CDCl₃

lmc-mc533-3.137.1.1r

MC 533 - 3 ; CDCL₃

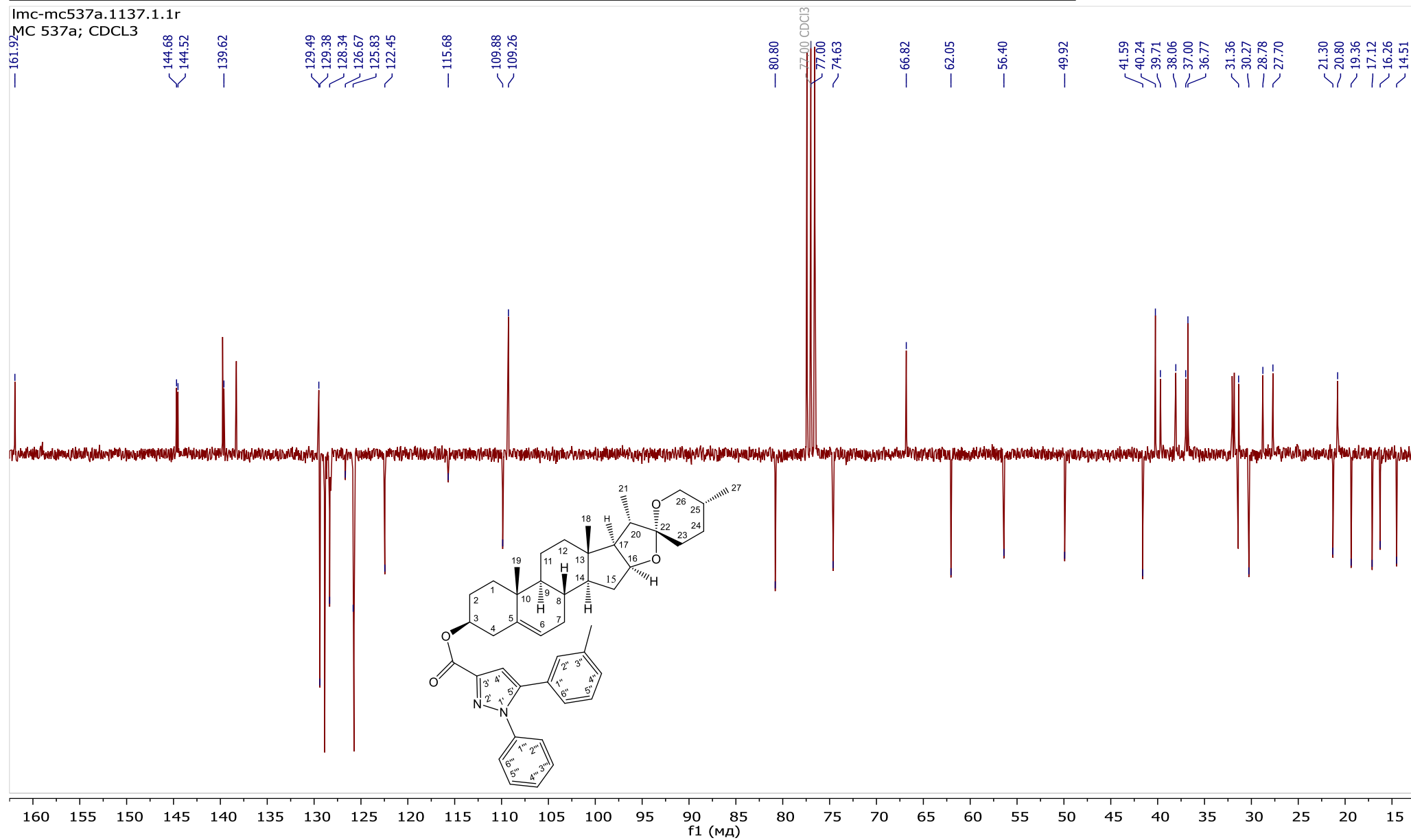


Compound 14 ((2*R*,25*R*)-spirost-5-en-3 β -yl 1-phenyl-5-(*m*-tolyl)-1*H*-pyrazole-3-carboxylate), ¹H NMR, 300 MHz, CDCl₃



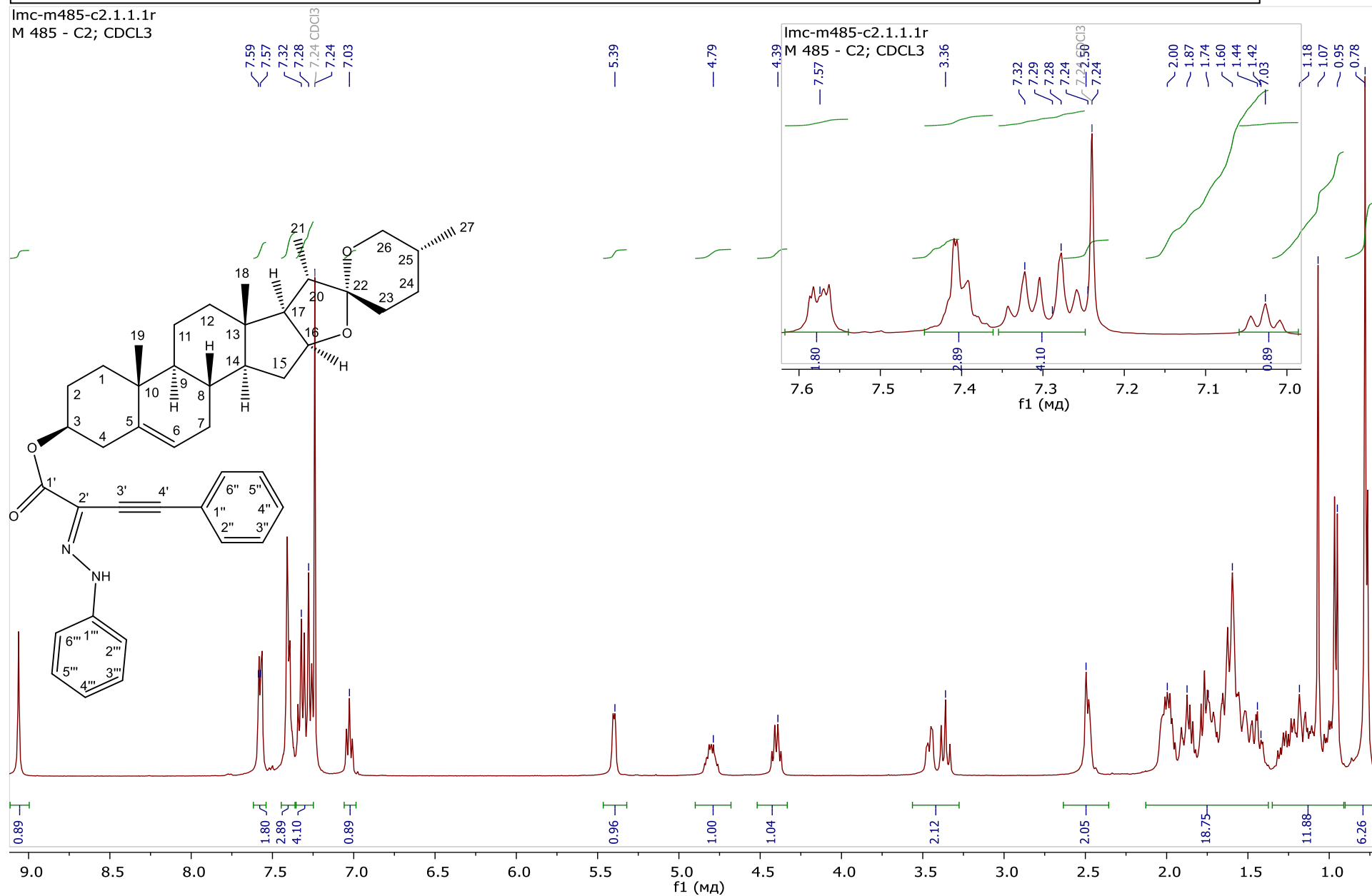
Compound 14 ((2*R*,25*R*)-spirost-5-en-3 β -yl 1-phenyl-5-(*m*-tolyl)-1*H*-pyrazole-3-carboxylate), ¹³C NMR, 75 MHz,

lmc-mc537a.1137.1.1r
MC 537a; CDCL₃



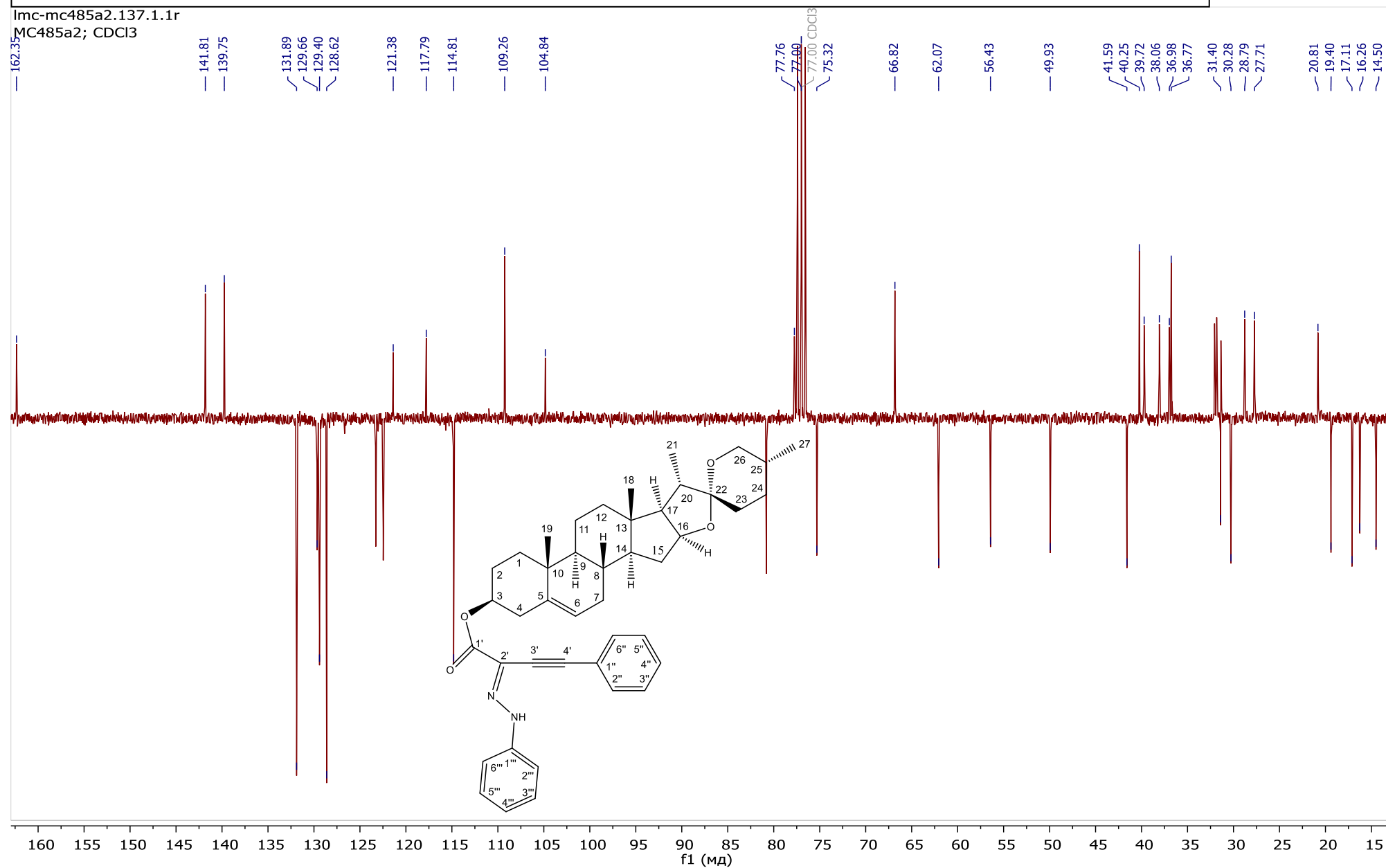
Compound 15 ((2*R*,2*R*)-spirost-5-en-3 β -yl (*E*)-4-phenyl-2-(2-phenylhydrazineylidene)but-3-ynoate), ¹H NMR, 300 MHz, CDCl₃

lmc-m485-c2.1.1.1r
M 485 - C2; CDCl₃



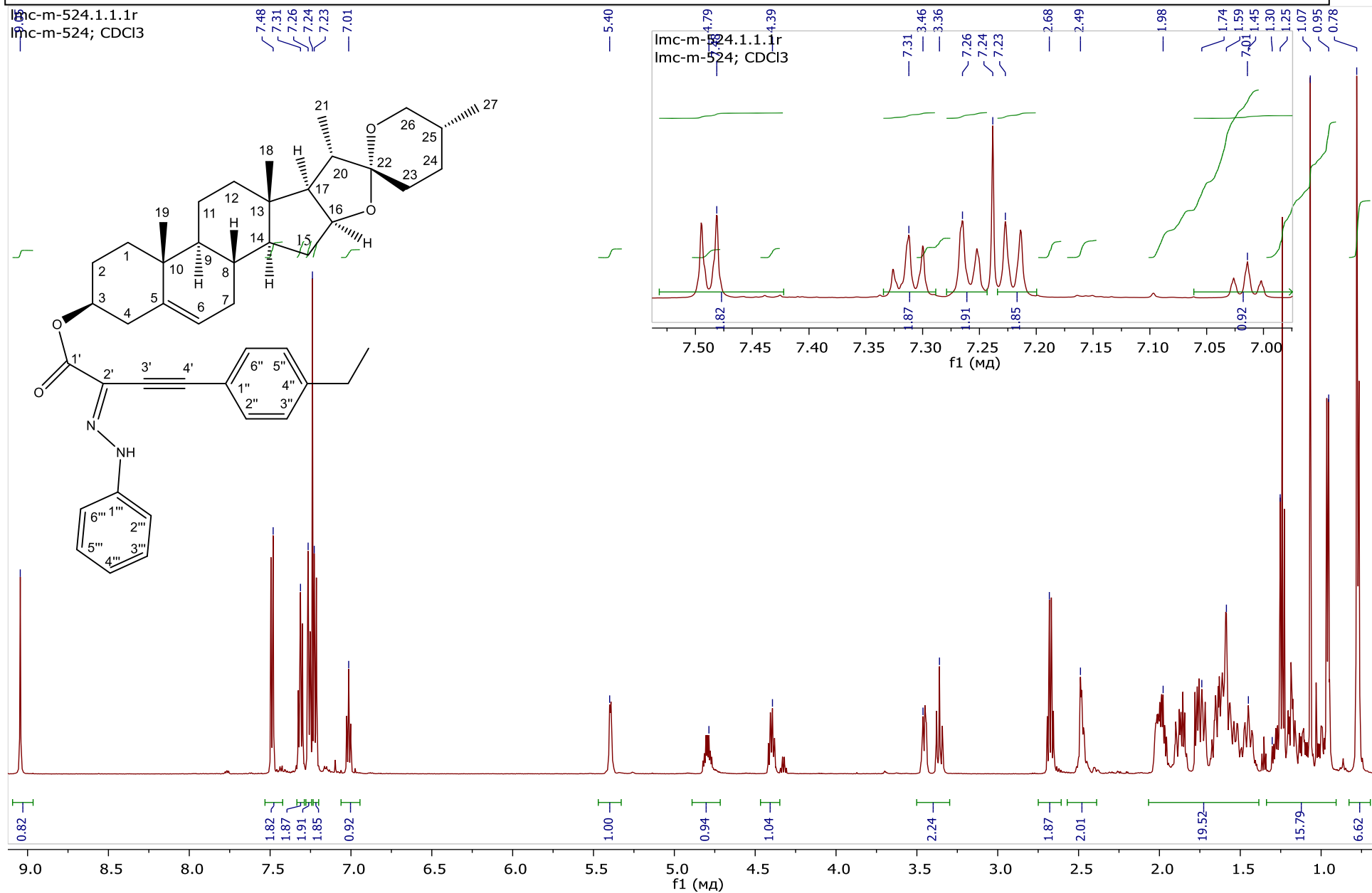
Compound 15 ((2*R*,25*R*)-spirost-5-en-3 β -yl (*E*)-4-phenyl-2-(2-phenylhydrazineylidene)but-3-ynoate), ¹³C NMR, 75 MHz, CDCl₃

lmc-mc485a2.137.1.1r
MC485a2; CDCl₃



Compound 16 ((2*R*,25*R*)-spirost-5-en-3 β -yl (*E*)-4-(4-ethylphenyl)-2-(2-phenylhydrazineylidene)but-3-ynoate), ¹H NMR, 600 MHz, CDCl₃

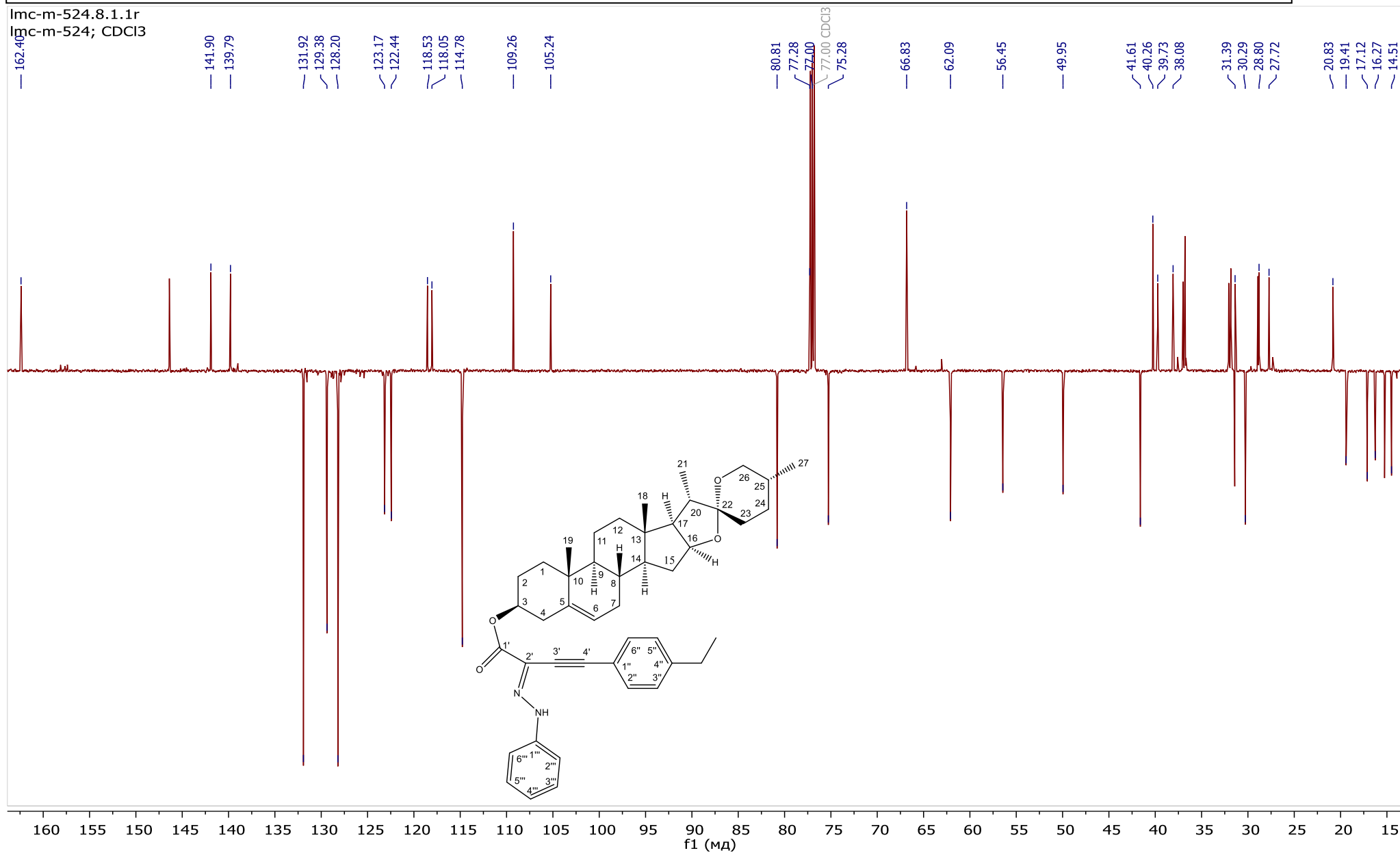
lmc-m-524.1.1.1r
lmc-m-524; CDCl₃



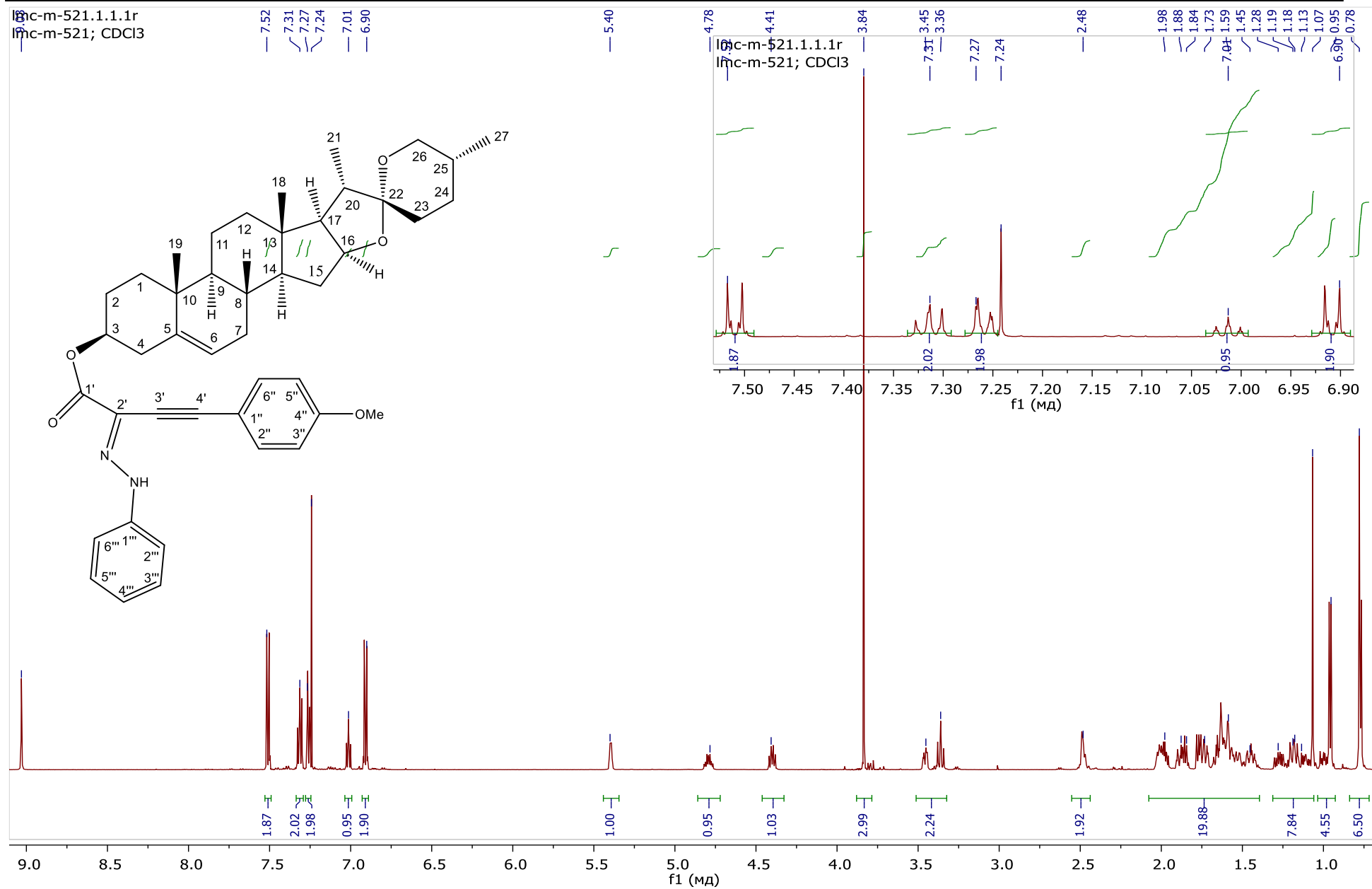
Compound 16 ((2*R*,25*R*)-spirost-5-en-3 β -yl (*E*)-4-(4-ethylphenyl)-2-(2-phenylhydrazineylidene)but-3-ynoate), ^{13}C NMR, 151 MHz, CDCl_3

lmc-m-524.8.1.1r

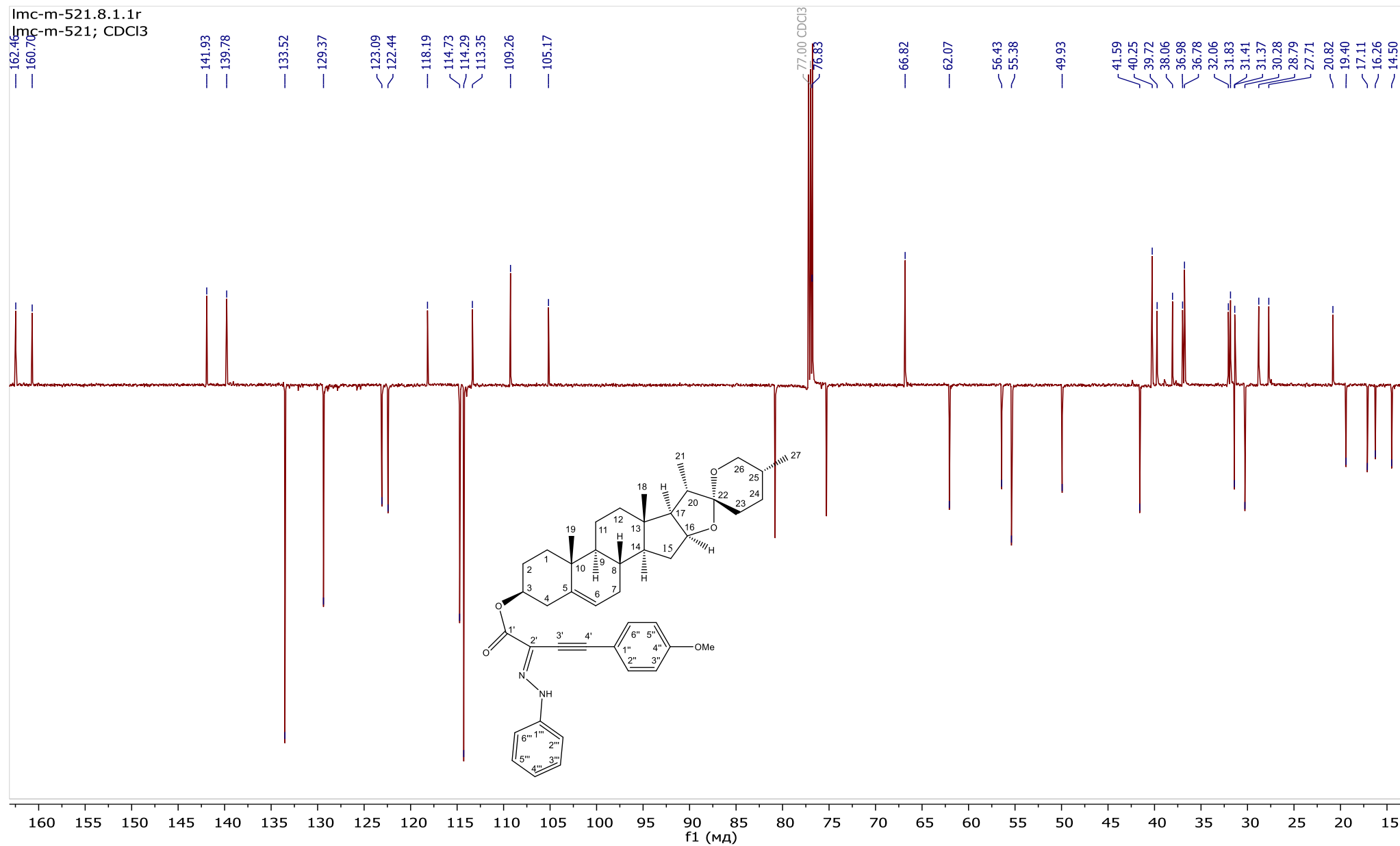
lmc-m-524; CDCl_3



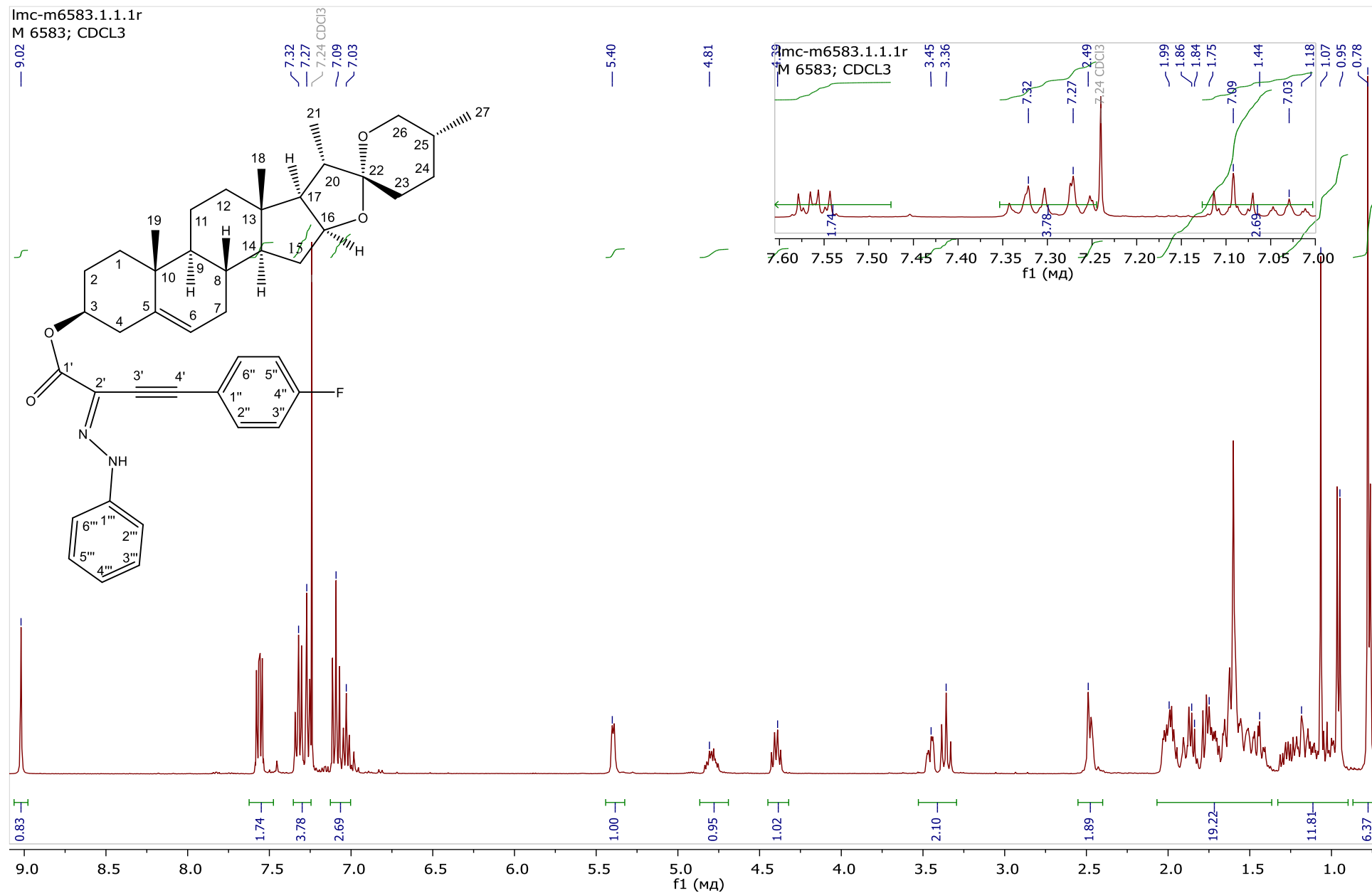
Compound 17 ((2*R*,25*R*)-spirost-5-en-3 β -yl (*E*)-4-(4-methoxyphenyl)-2-(2-phenylhydrazineylidene)but-3-ynoate), ¹H NMR, 600 MHz, CDCl₃



Compound 17 ((2*R*,25*R*)-spirost-5-en-3 β -yl (*E*)-4-(4-methoxyphenyl)-2-(2-phenylhydrazineylidene)but-3-ynoate), ¹³C NMR, 151 MHz, CDCl₃



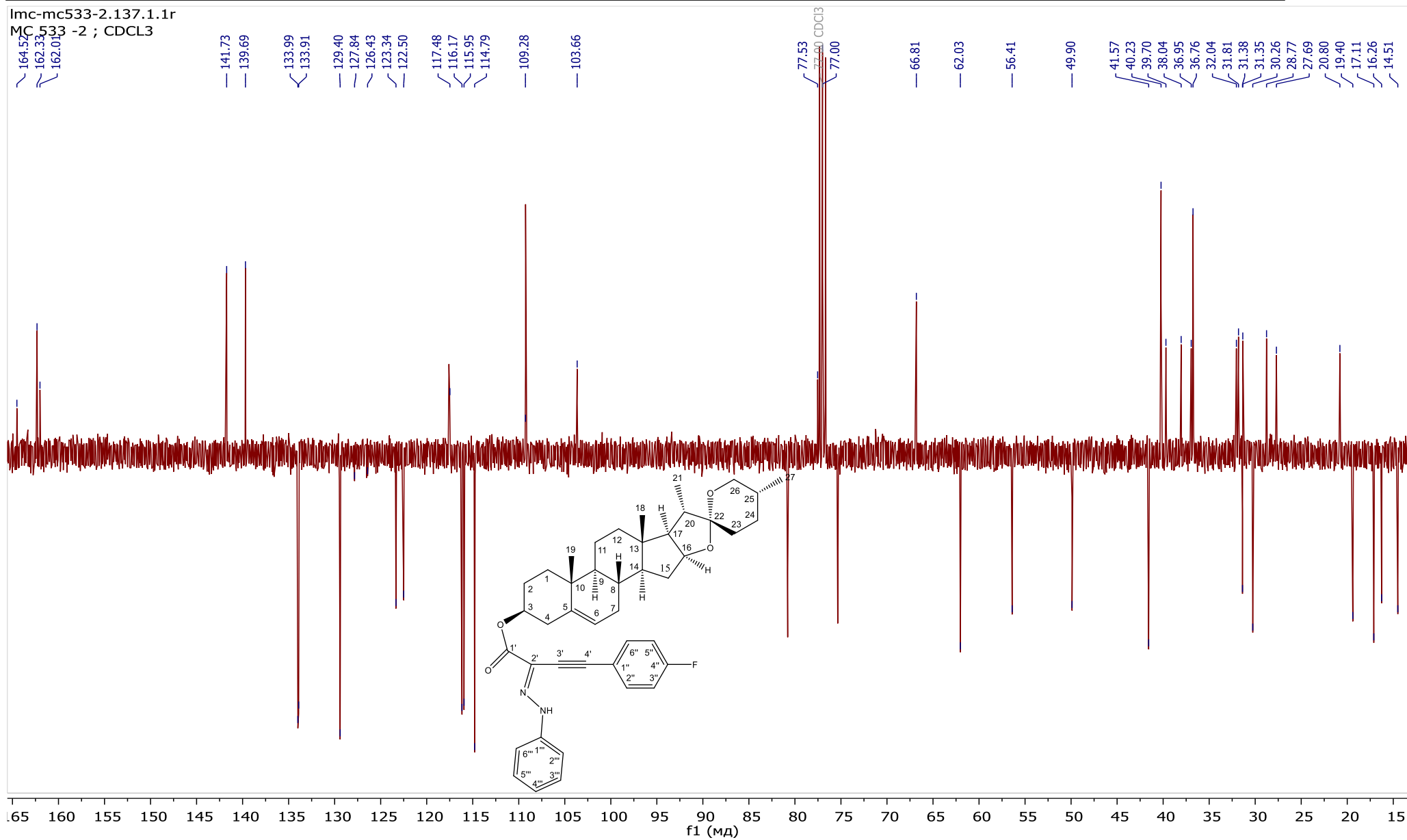
Compound 18 (22*R*,25*R*)-spirost-5-en-3 β -yl (*E*)-4-(4-fluorophenyl)-2-(2-phenylhydrazineylidene)but-3-ynoate, ¹H NMR, 400 MHz, CDCl₃



Compound 18 (22*R*,25*R*)-spirost-5-en-3 β -yl (*E*)-4-(4-fluorophenyl)-2-(2-phenylhydrazineylidene)but-3-ynoate, ^{13}C NMR, 101 MHz, CDCl_3

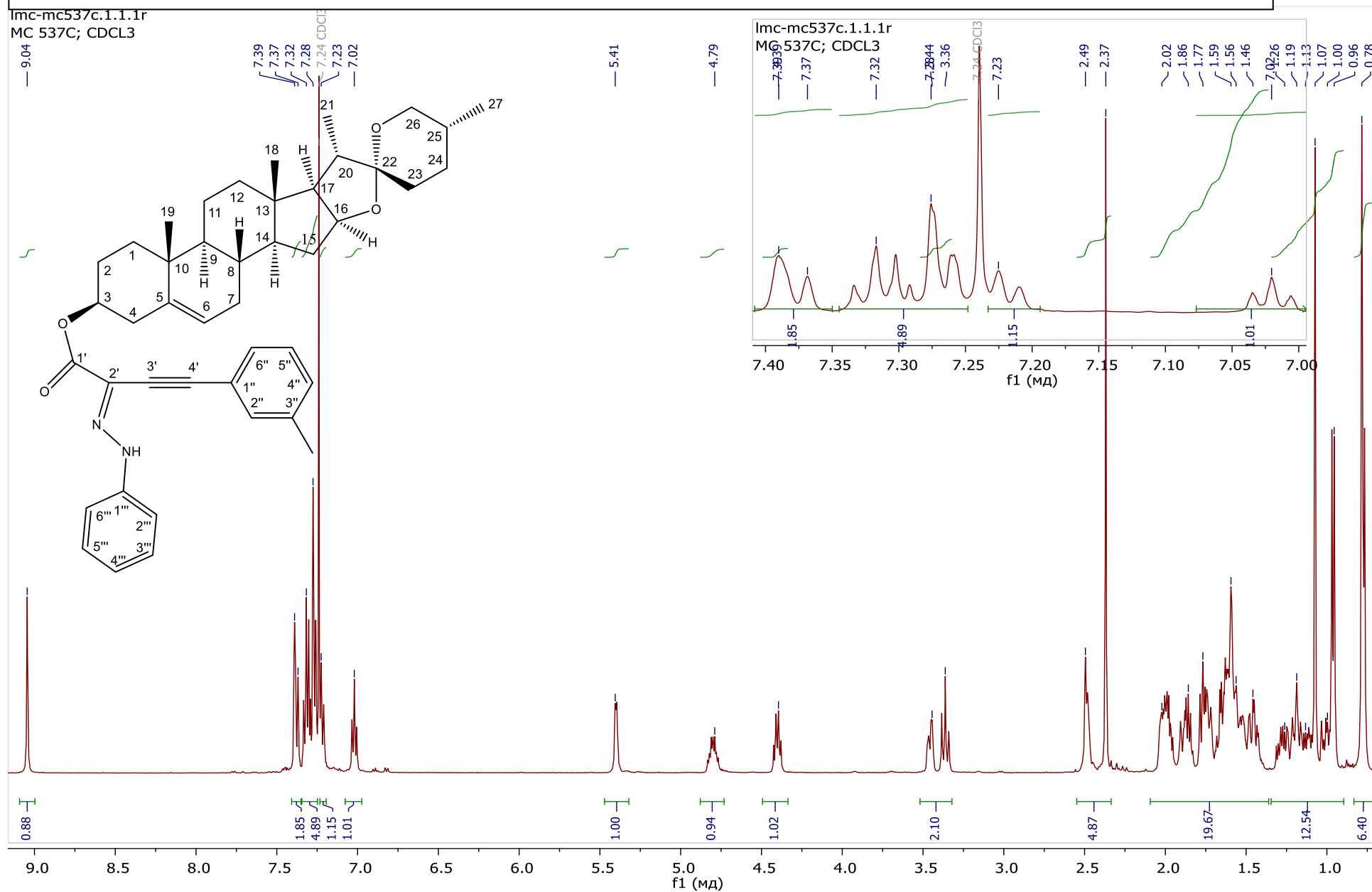
lmc-mc533-2.137.1.1r

MC 533 -2 ; CDCl_3



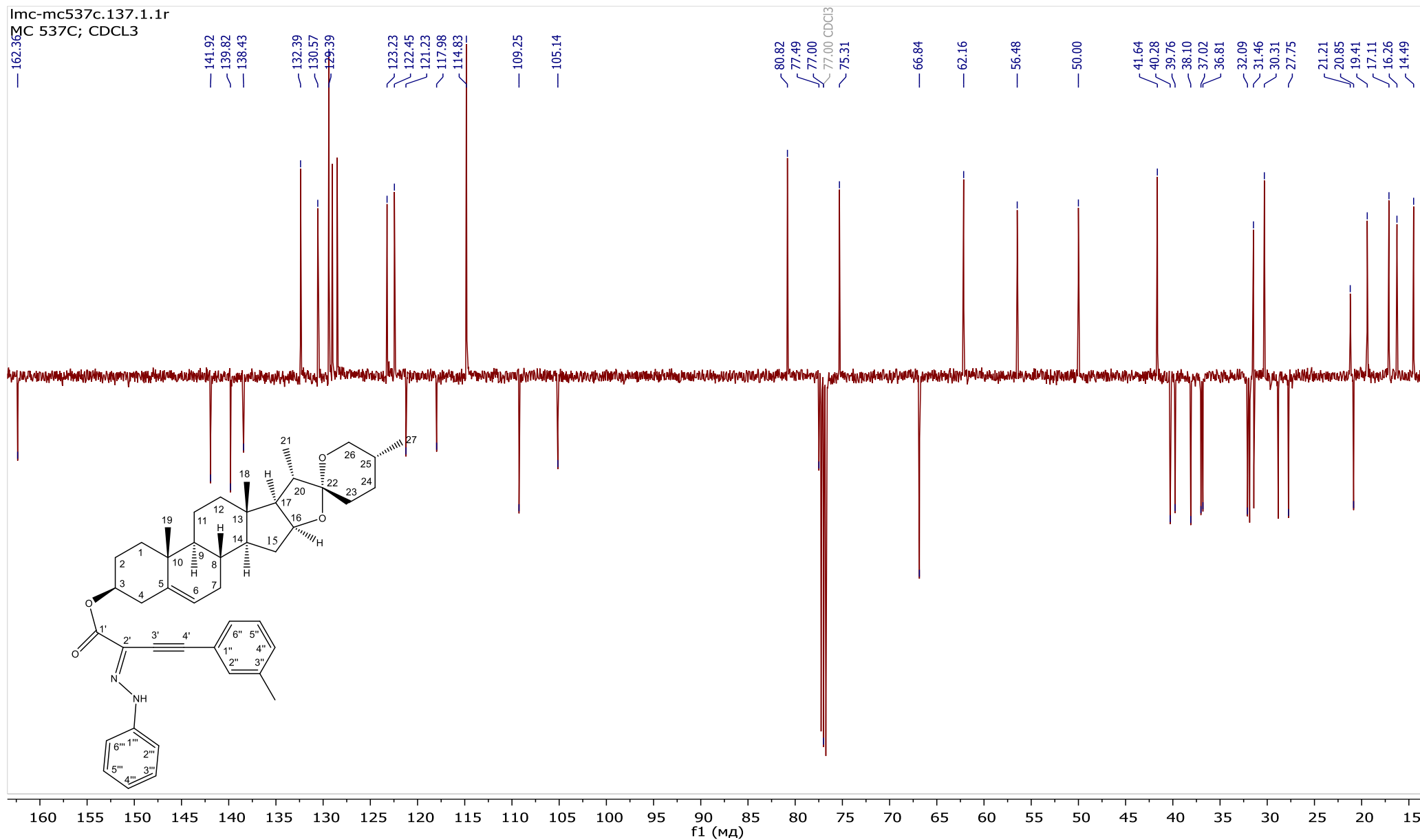
Compound 19 ((22*R*,25*R*)-spirost-5-en-3 β -yl (*E*)-2-(2-phenylhydrazineylidene)-4-(*m*-tolyl)but-3-ynoate), ¹H NMR, 500 MHz, CDCl₃

lmc-mc537c.1.1.1r
MC 537C; CDCl₃



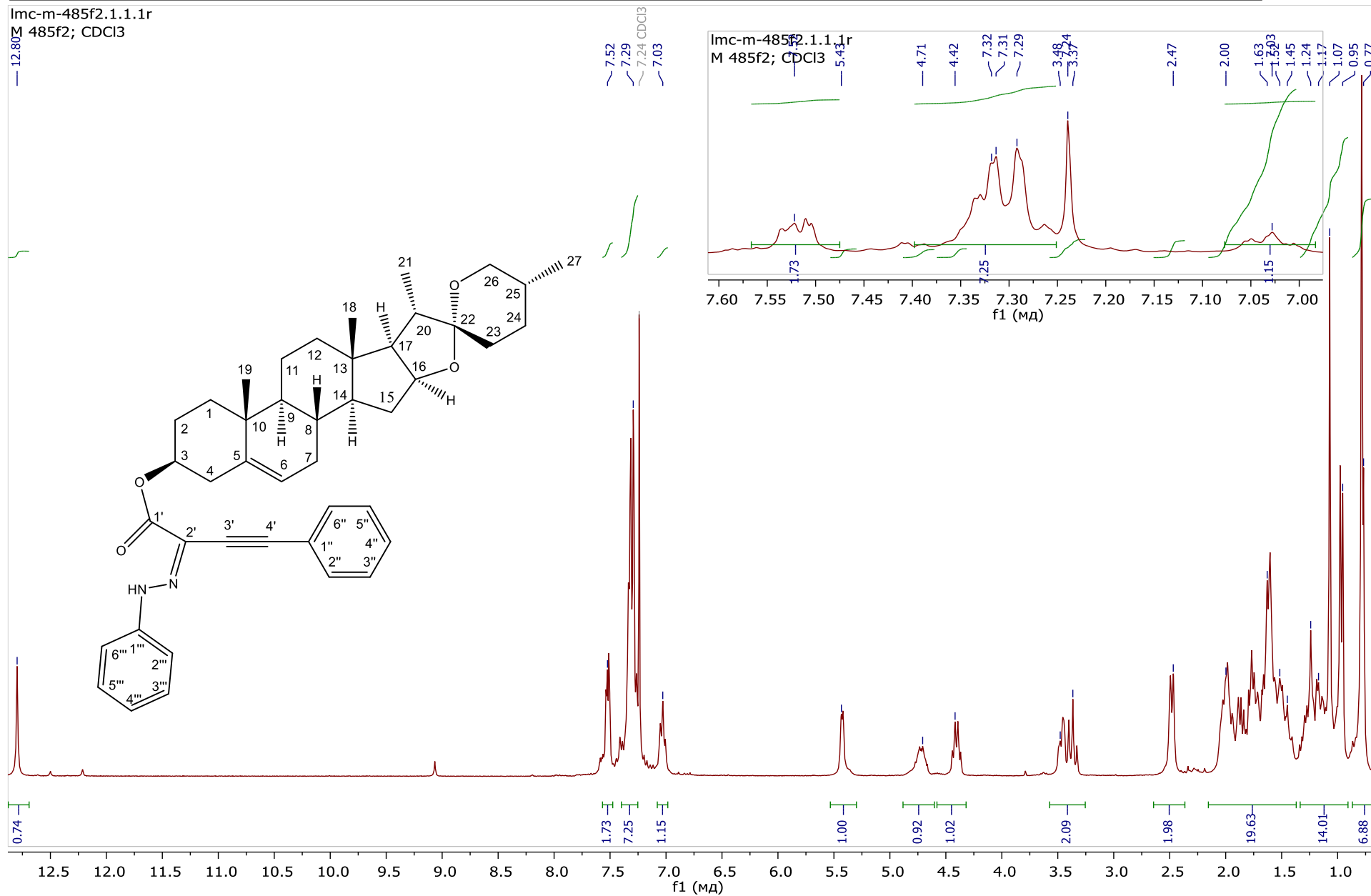
Compound 19 ((2*R*,25*R*)-spirost-5-en-3 β -yl (*E*)-2-(2-phenylhydrazineylidene)-4-(*m*-tolyl)but-3-ynoate), ^{13}C NMR, 126 MHz, CDCl_3

lmc-mc537c.137.1.1r
 ^{13}C 537C; CDCl_3



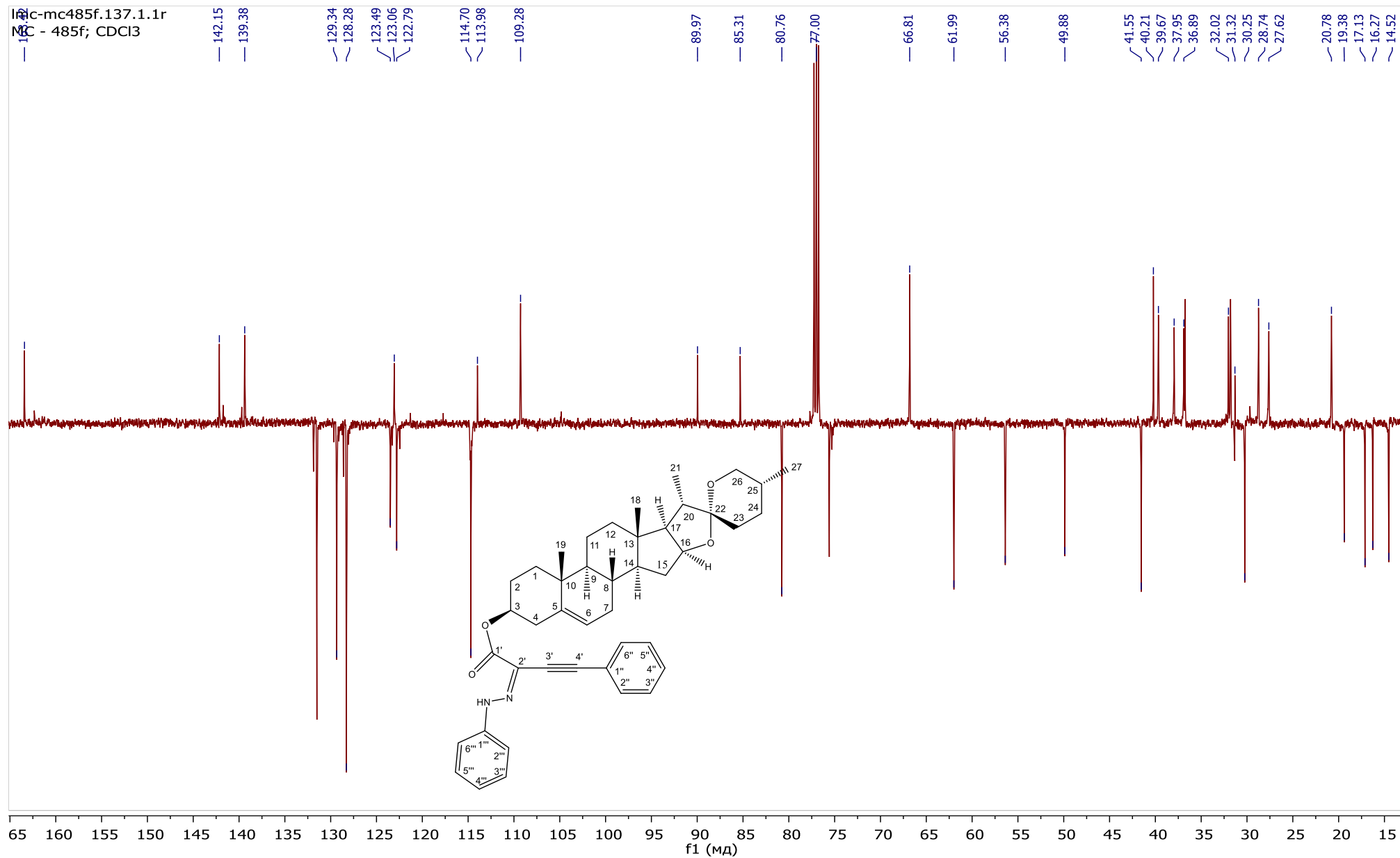
Compound 20 ((22*R*,25*R*)-spirost-5-en-3 β -yl (Z)-4-phenyl-2-(2-phenylhydrazineylidene)but-3-ynoate), ¹H NMR, 300 MHz, CDCl₃

Imc-m-485f2.1.1.1r
M 485f2; CDCl₃



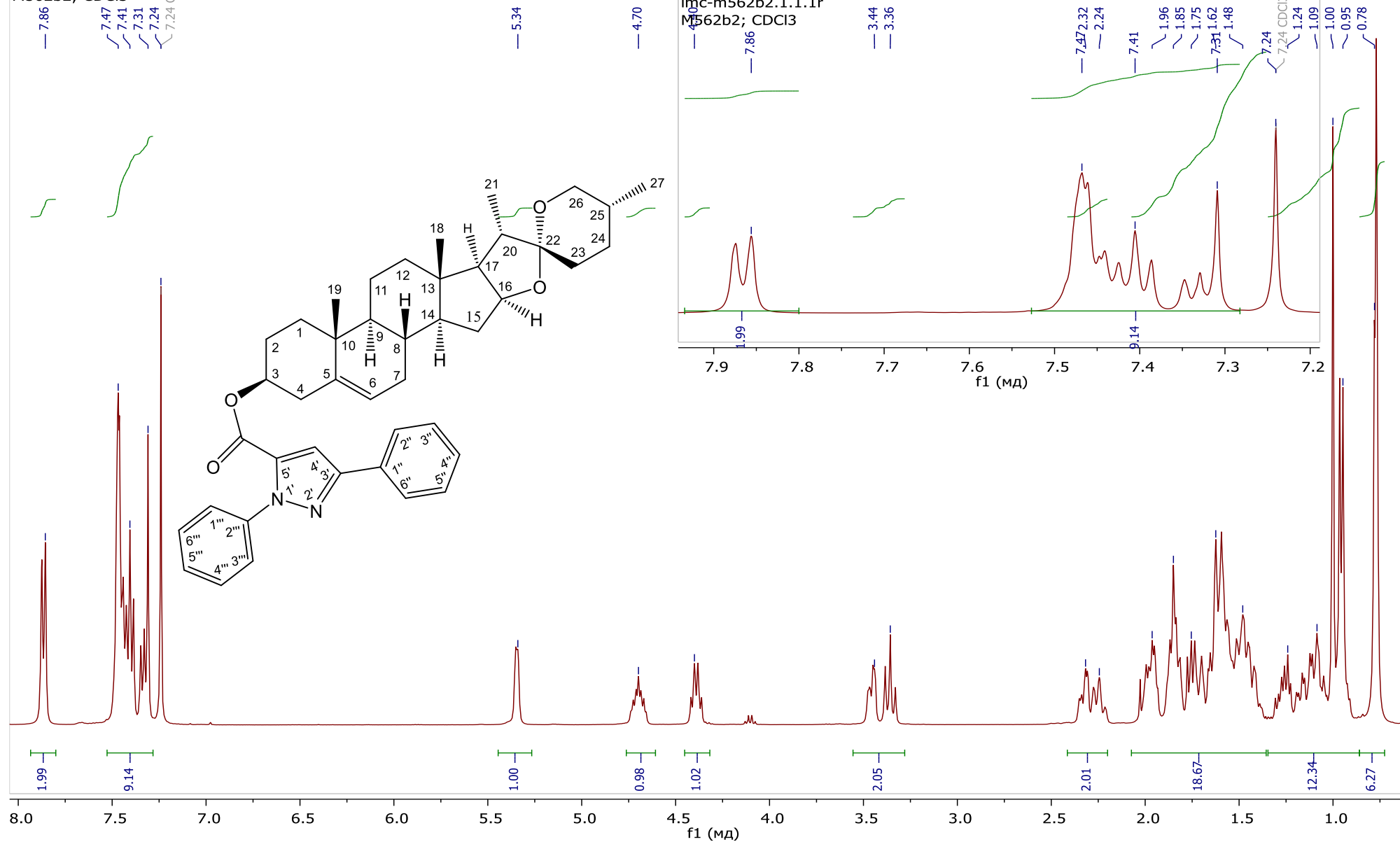
Compound 20 ((2*R*,25*R*)-spirost-5-en-3 β -yl (Z)-4-phenyl-2-(2-phenylhydrazineylidene)but-3-ynoate), ¹³C NMR, 126 MHz, CDCl₃

13C-mc485f.137.1.1r
 13C - 485f; CDCl₃

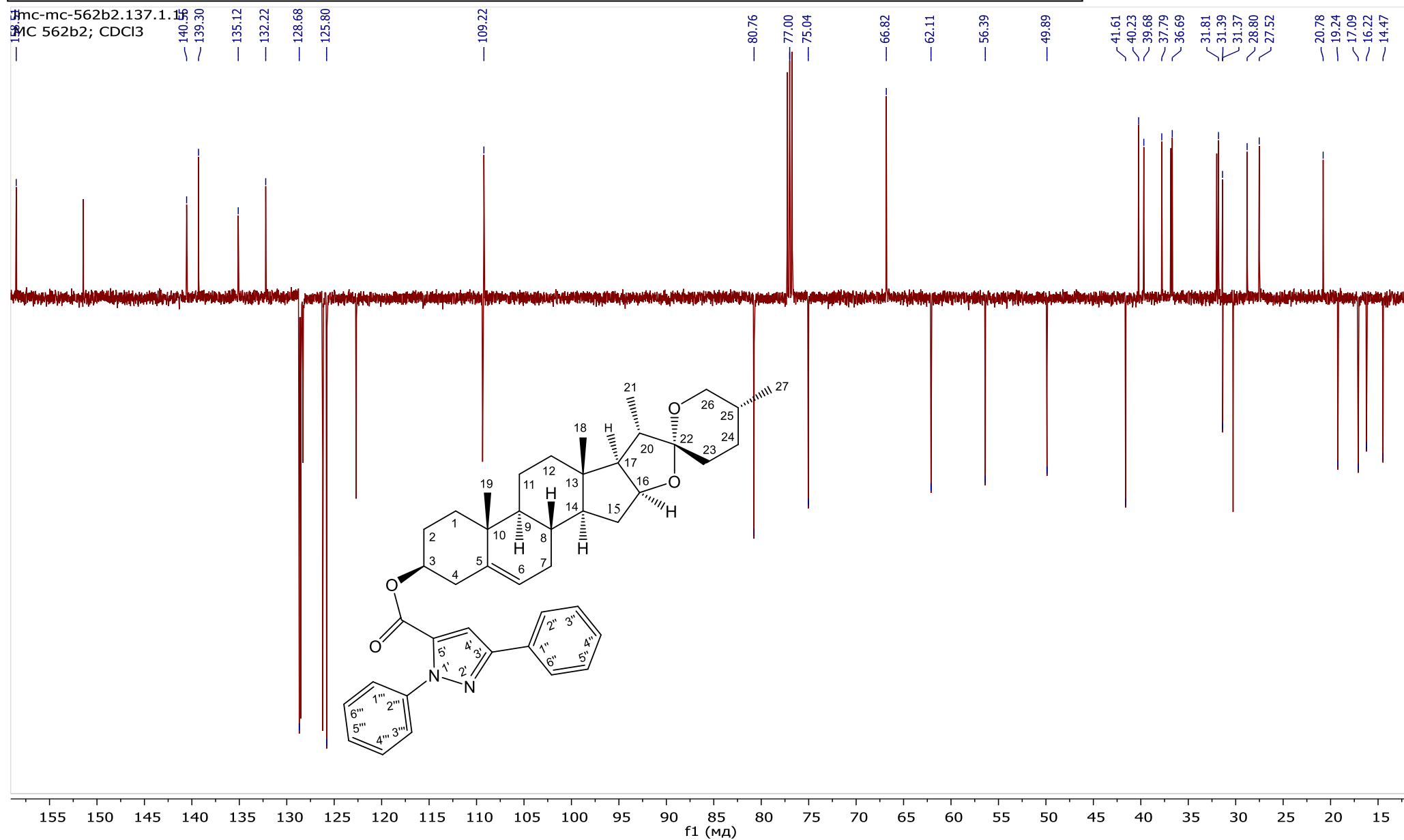


Compound 21 ((2*R*,25*R*)-spirost-5-en-3 β -yl 1,3-diphenyl-1*H*-pyrazole-5-carboxylate), ¹H NMR, 600 MHz, CDCl₃

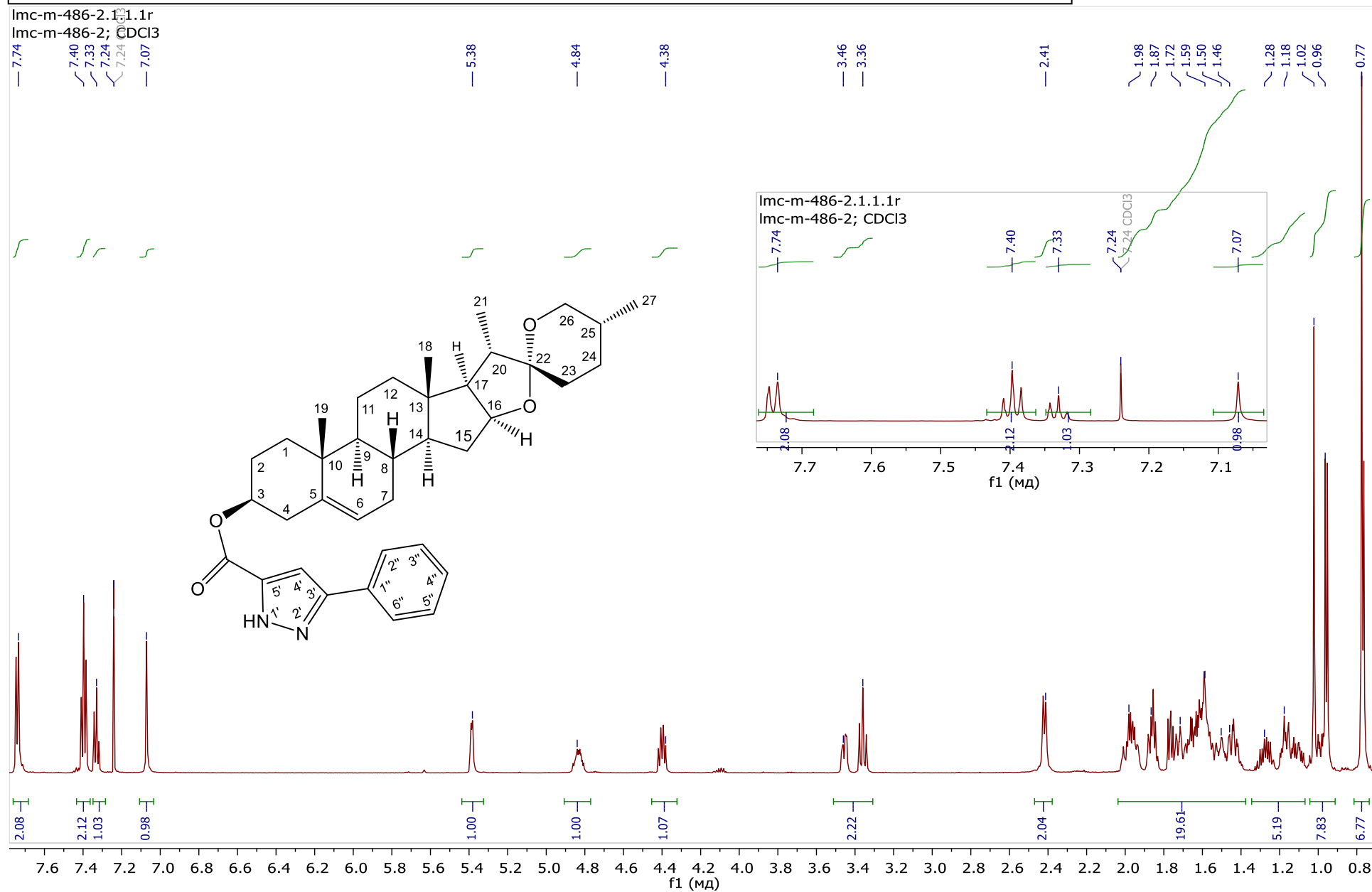
lmc-m562b2.1.1.1r
M562b2; CDCl₃



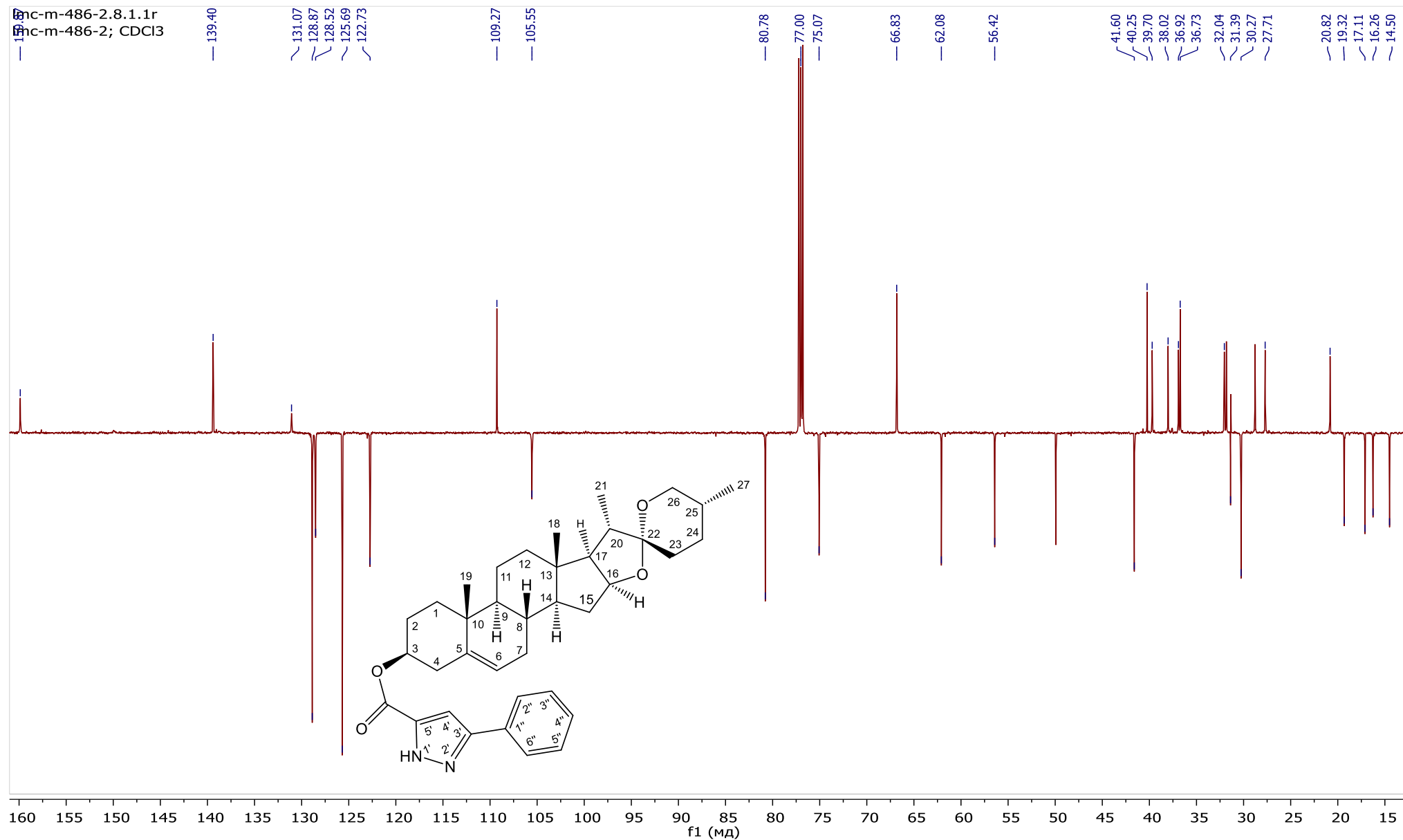
Compound 21 ((22*R*,25*R*)-spirost-5-en-3 β -yl 1,3-diphenyl-1*H*-pyrazole-5-carboxylate), ^{13}C NMR, 126 MHz, CDCl_3



Compound 23 ((2*R*,25*R*)-spirost-5-en-3 β -yl 3-phenyl-1*H*-pyrazole-5-carboxylate), ¹H NMR, 600 MHz, CDCl₃

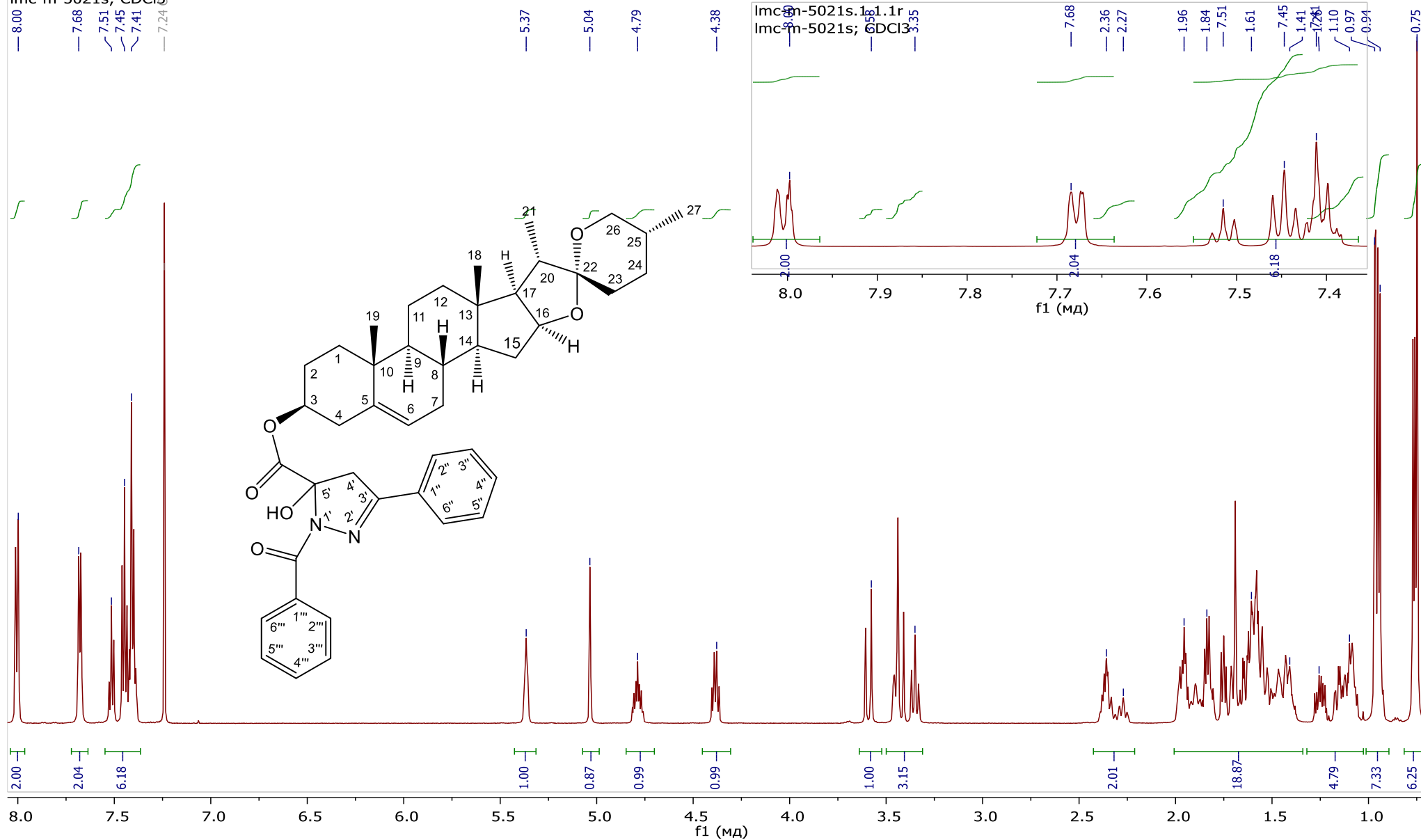


Compound 23 ((2*R*,25*R*)-spirost-5-en-3 β -yl 3-phenyl-1*H*-pyrazole-5-carboxylate), ¹³C NMR, 151 MHz, CDCl₃

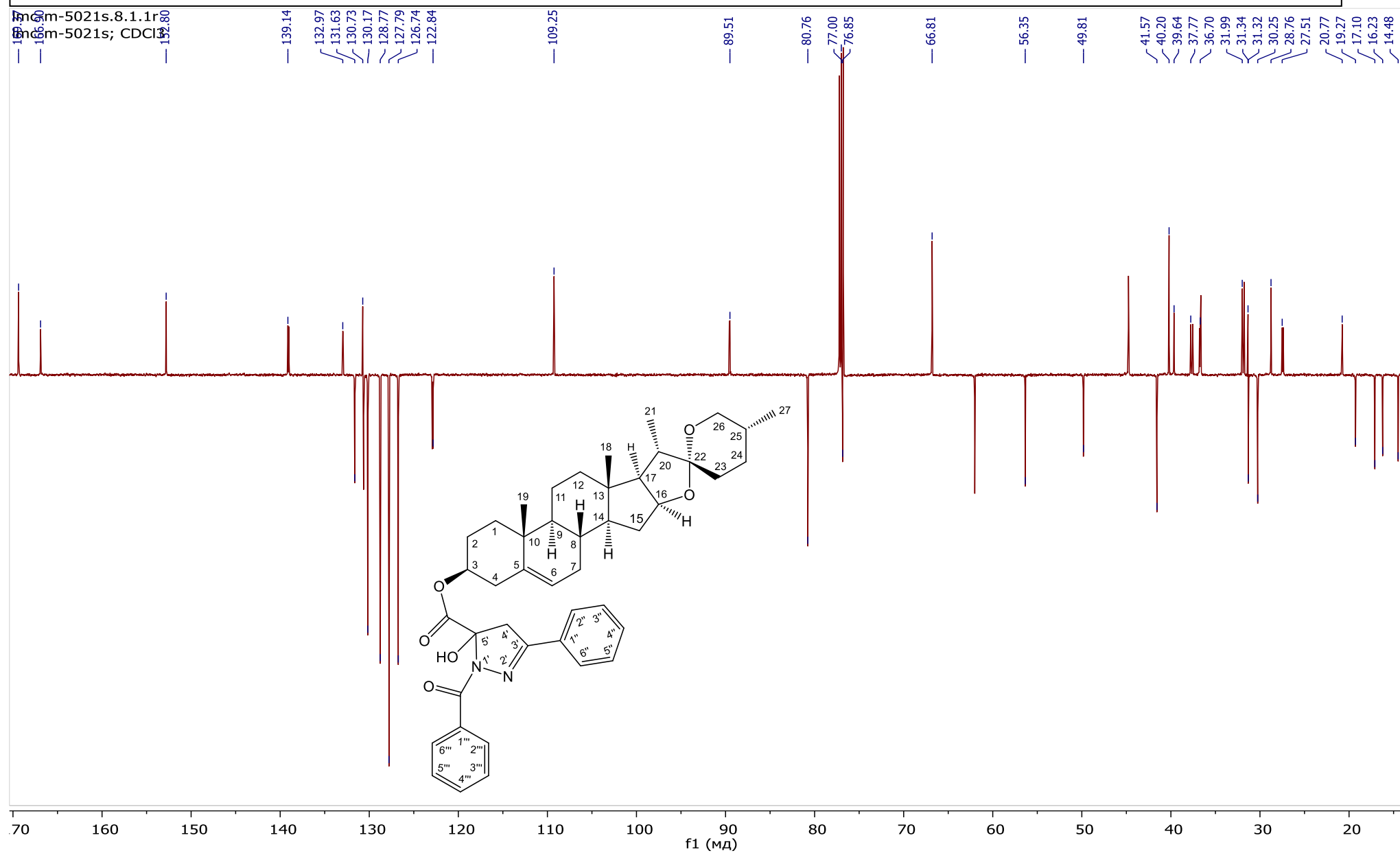


Compound 25 ((2*R*,25*R*)-spirost-5-en-3 β -yl 2-benzoyl-3-hydroxy-5-phenyl-2,3-dihydro-1*H*-pyrazole-3-carboxylate), ¹H NMR, 600 MHz, CDCl₃

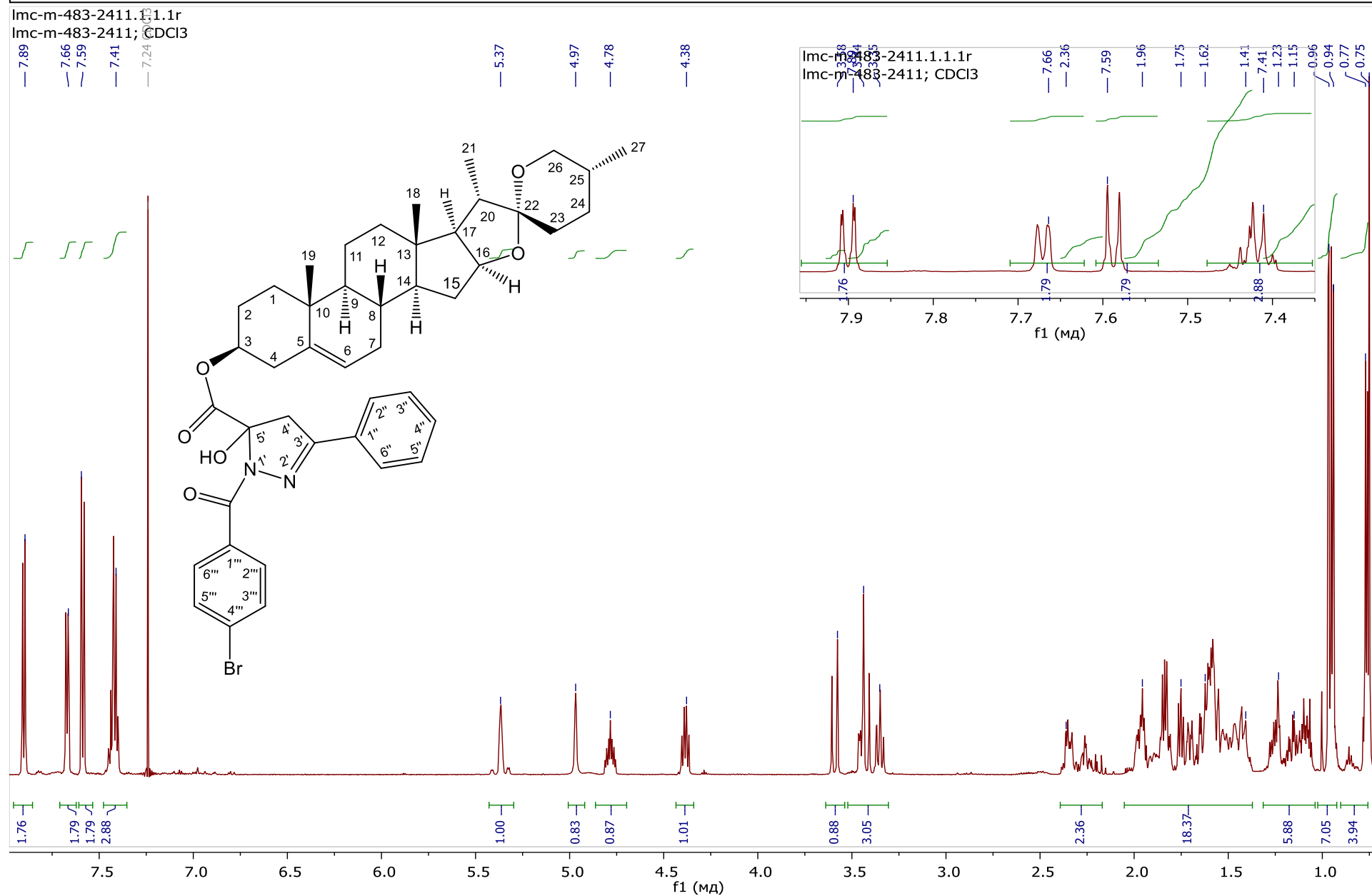
lmc-m-5021s.1.1.1r
lmc-m-5021s; CDCl₃



Compound 25 ((2*R*,25*R*)-spirost-5-en-3 β -yl 2-benzoyl-3-hydroxy-5-phenyl-2,3-dihydro-1*H*-pyrazole-3-carboxylate), ¹³C NMR, 151 MHz, CDCl₃



Compound 26 ((2*R*,2*R*)-spirost-5-en-3 β -yl 1-(4-bromobenzoyl)-5-hydroxy-3-phenyl-4,5-dihydro-1*H*-pyrazole-5-carboxylate), ¹H NMR, 600 MHz, CDCl₃



Compound 26 ((22*R*,25*R*)-spirost-5-en-3 β -yl 1-(4-bromobenzoyl)-5-hydroxy-3-phenyl-4,5-dihydro-1*H*-pyrazole-5-carboxylate), ¹³C NMR, 151 MHz, CDCl₃

