SUPPLEMENTARY INFORMATION

Stereochemically Probing the Photo-Favorskii Rearrangement: A Mechanistic Investigation

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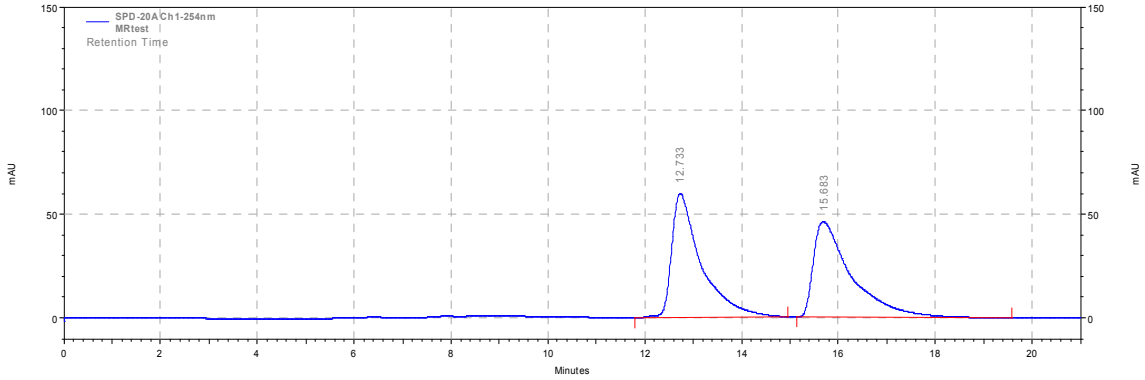
General Information

NMR spectra were recorded on a 400 MHz instrument, equipped with a quadruple-band gradient probe (H/C/P/F QNP) or a 500 MHz with a dual carbon/proton cryoprobe (CPDUL). ^{13}C NMR spectra were registered with broad-band decoupling. Chiral HPLC analyses were performed using Chiralcel OD-H column (250 x 4.6 mm, 10% IPA in hexanes).

HPLC Data

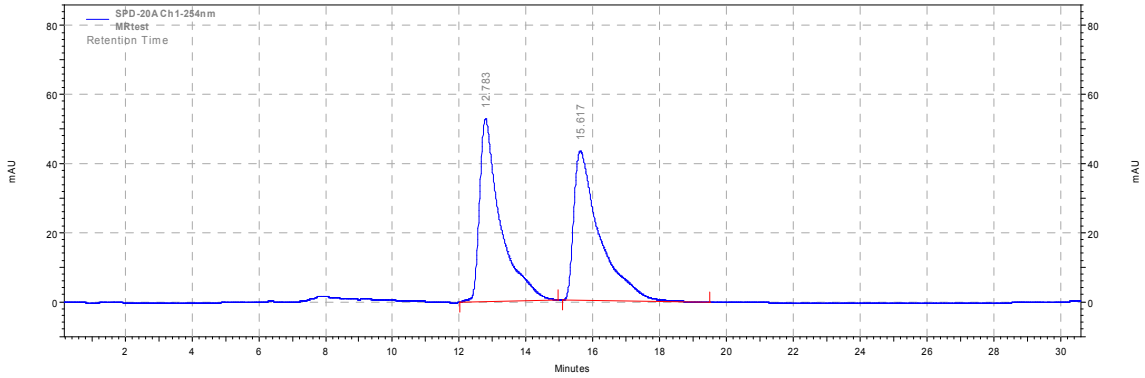
Chiral HPLC chromatogram trace of the authentic sample of racemic acid **9**:



SPD-20A Ch1-254nm Results

Retention Time	Area	Area %	Height	Height %
12.733	2528319	50.15	59887	56.48
15.683	2513244	49.85	46145	43.52
Totals	5041563	100.00	106032	100.00

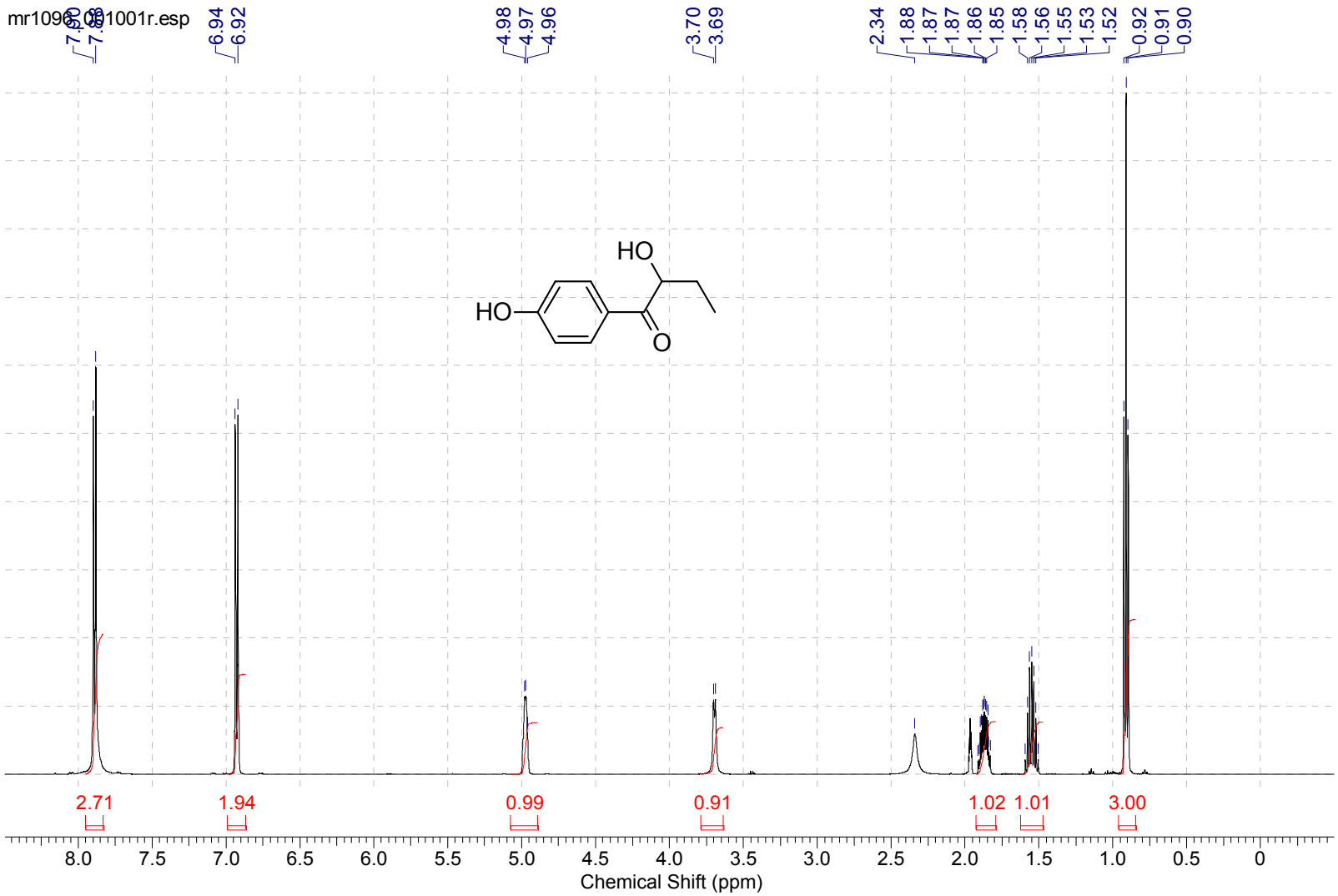
Chiral HPLC chromatogram trace of acid **9** recovered from the photolysis experiment:



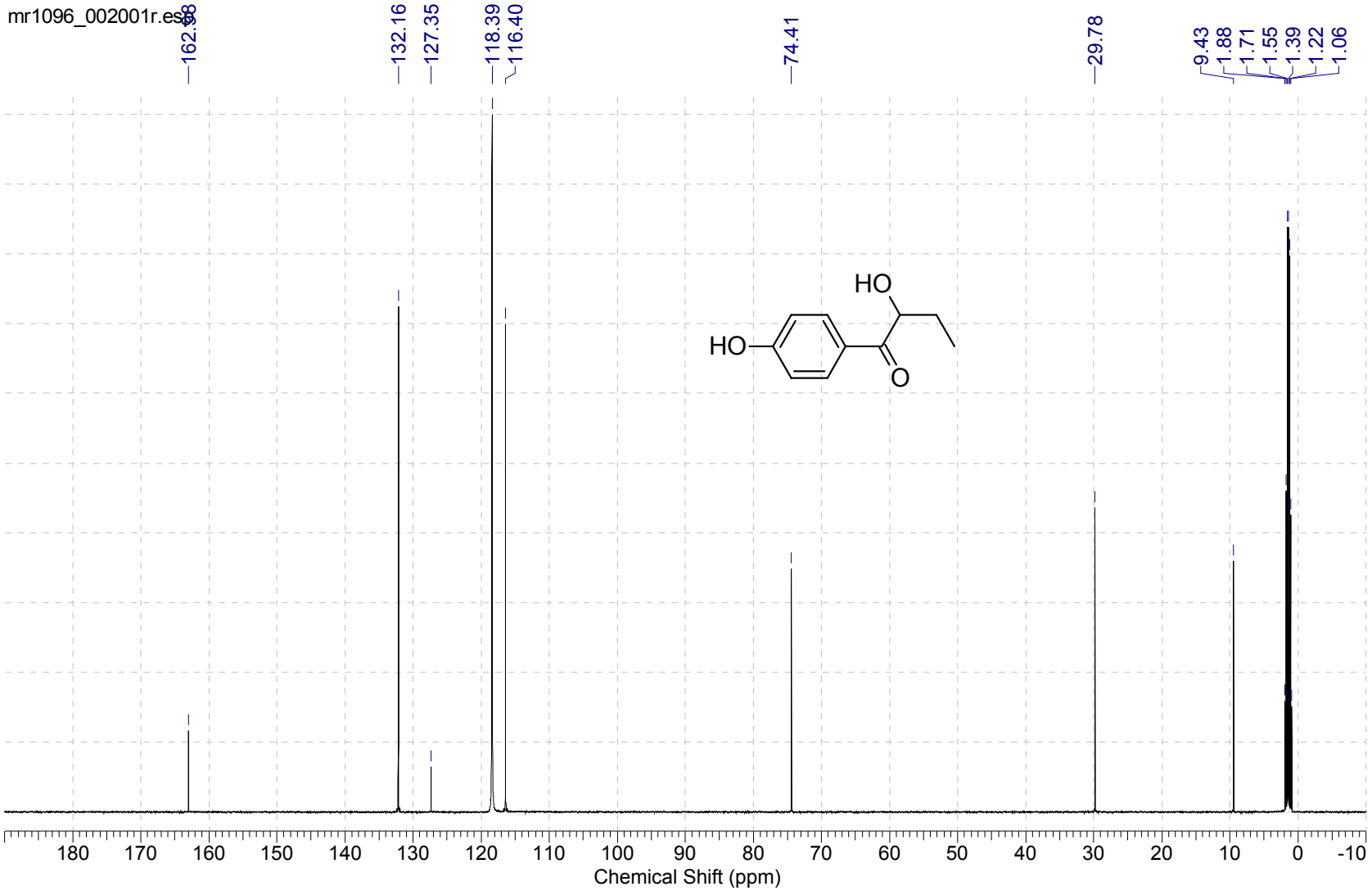
SPD-20A Ch1-254nm Results

Retention Time	Area	Area %	Height	Height %
12.783	2294863	49.71	52933	55.03
15.617	2321444	50.29	43250	44.97
Totals	4616307	100.00	96183	100.00

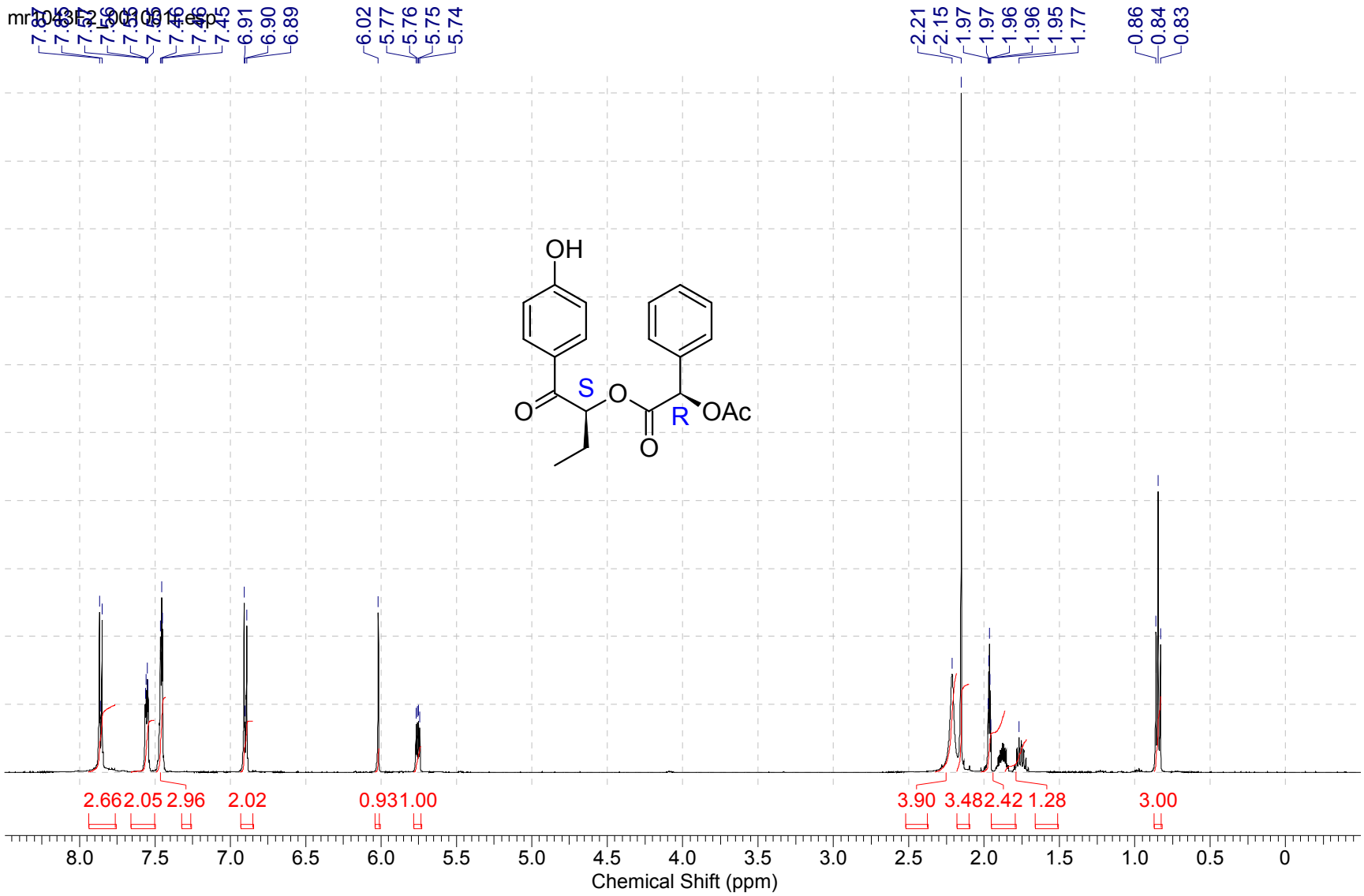
^{1}H spectrum of 14



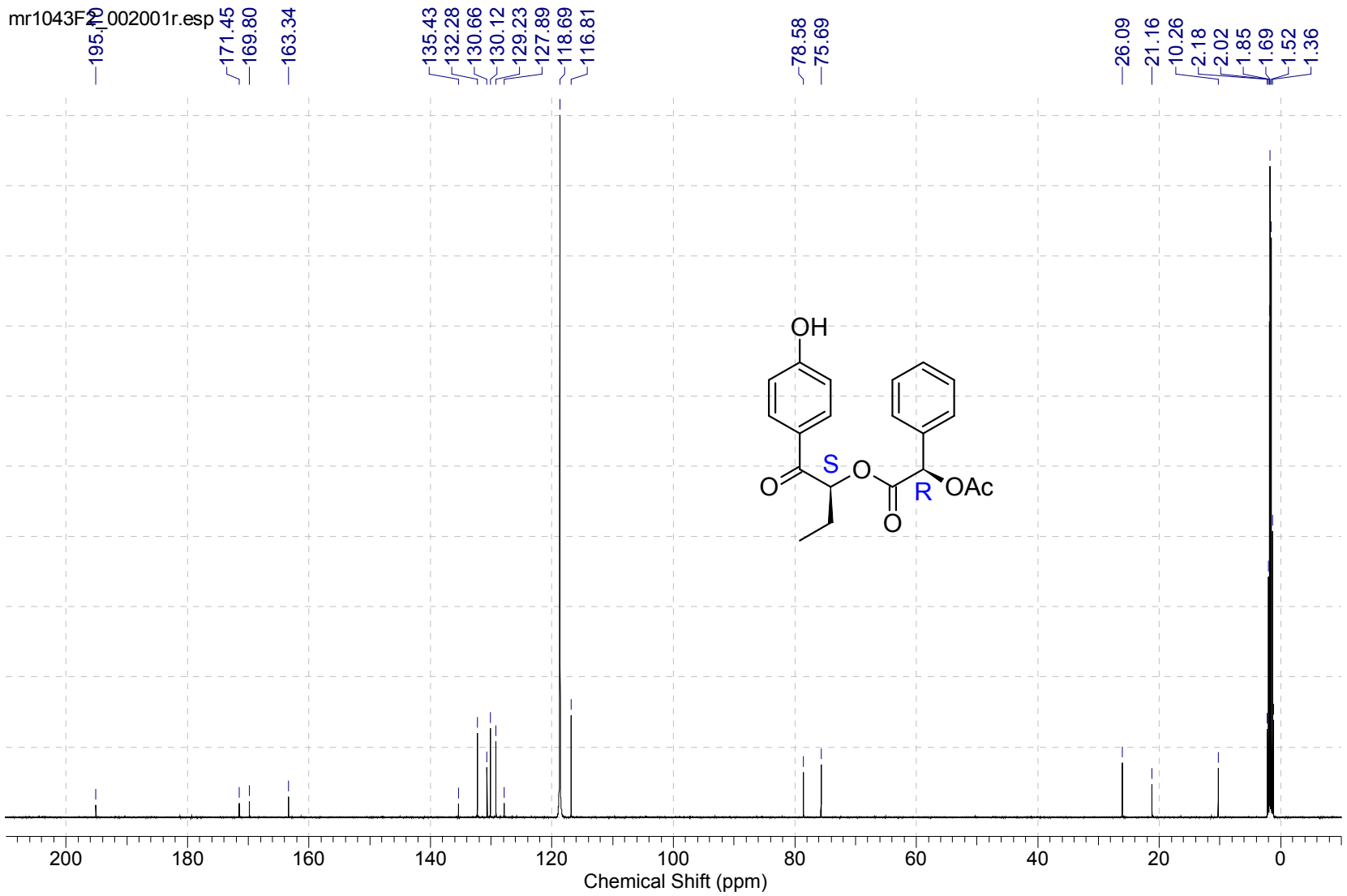
^{13}C spectrum of 14



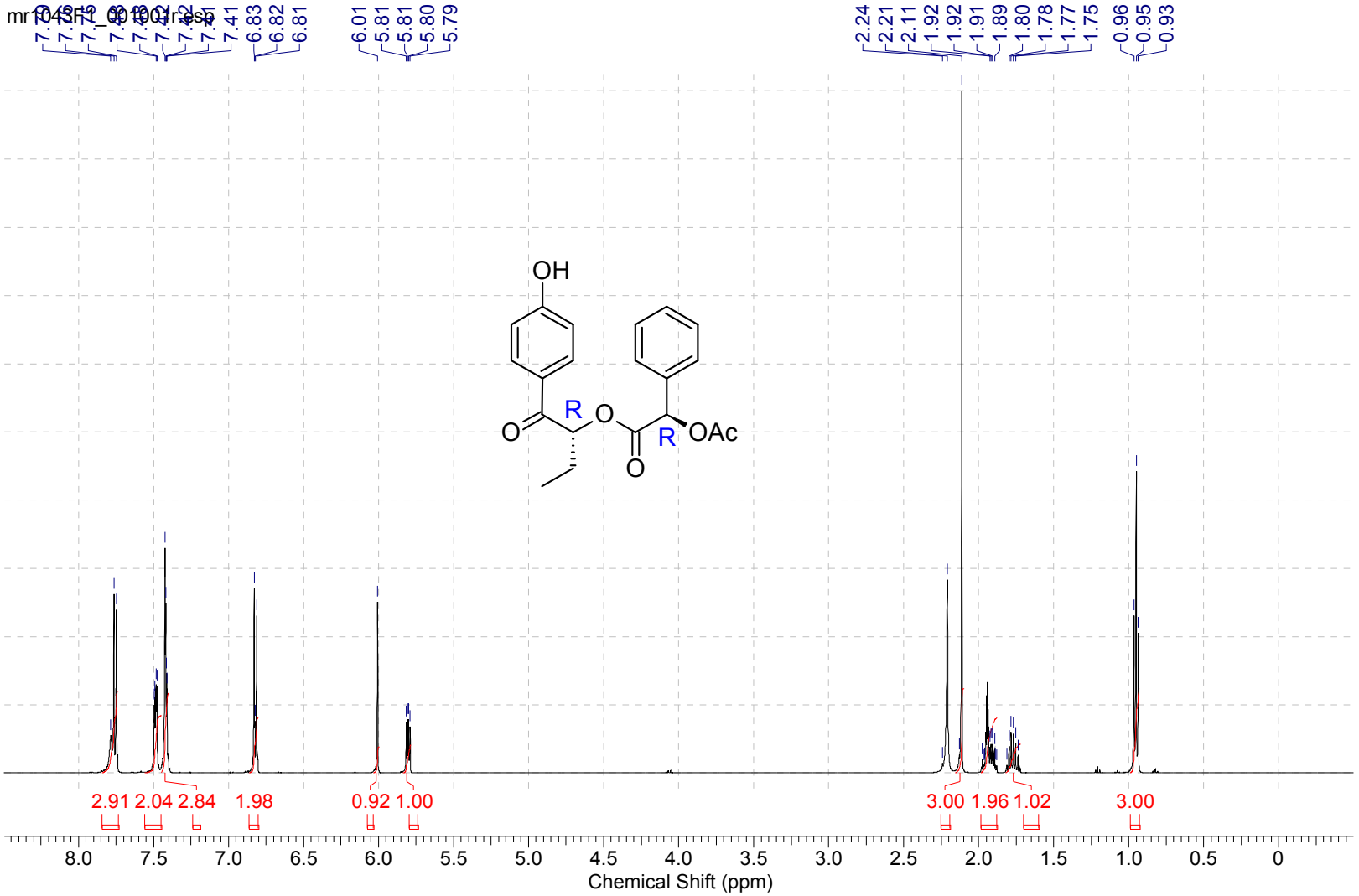
^{1}H spectrum of (*S*,*R*)-12a



^{13}C spectrum of (*S*,*R*)-12a



^{1}H spectrum of (R,R)-12b



^{13}C spectrum of (R,R)-12b