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APPENDIXES

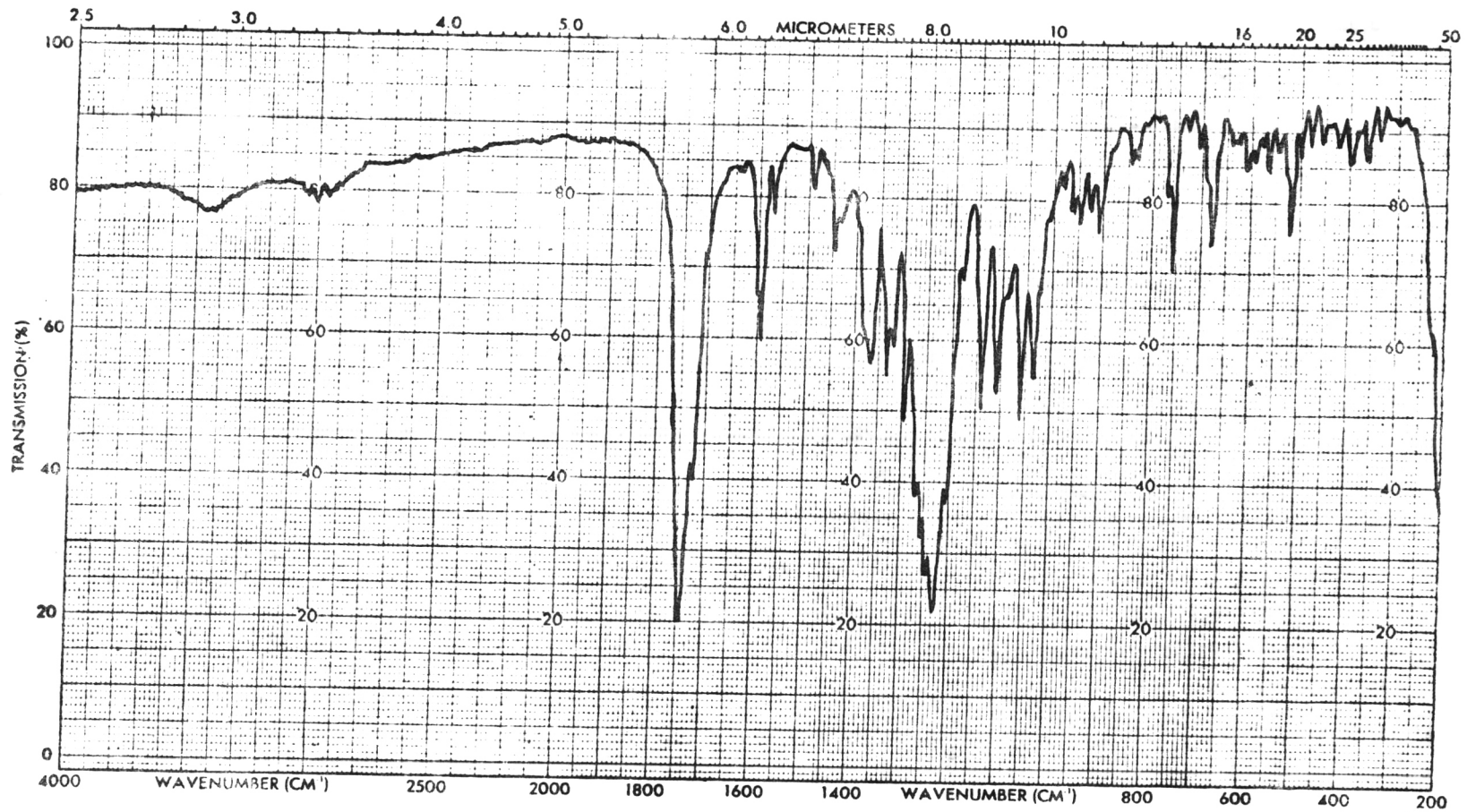


Figure 1. IR spectrum of N-(2,3,4,6-Tetra-O-acetyl-β-D-glucopyranosyl)-5-benzylidene rhodanine.

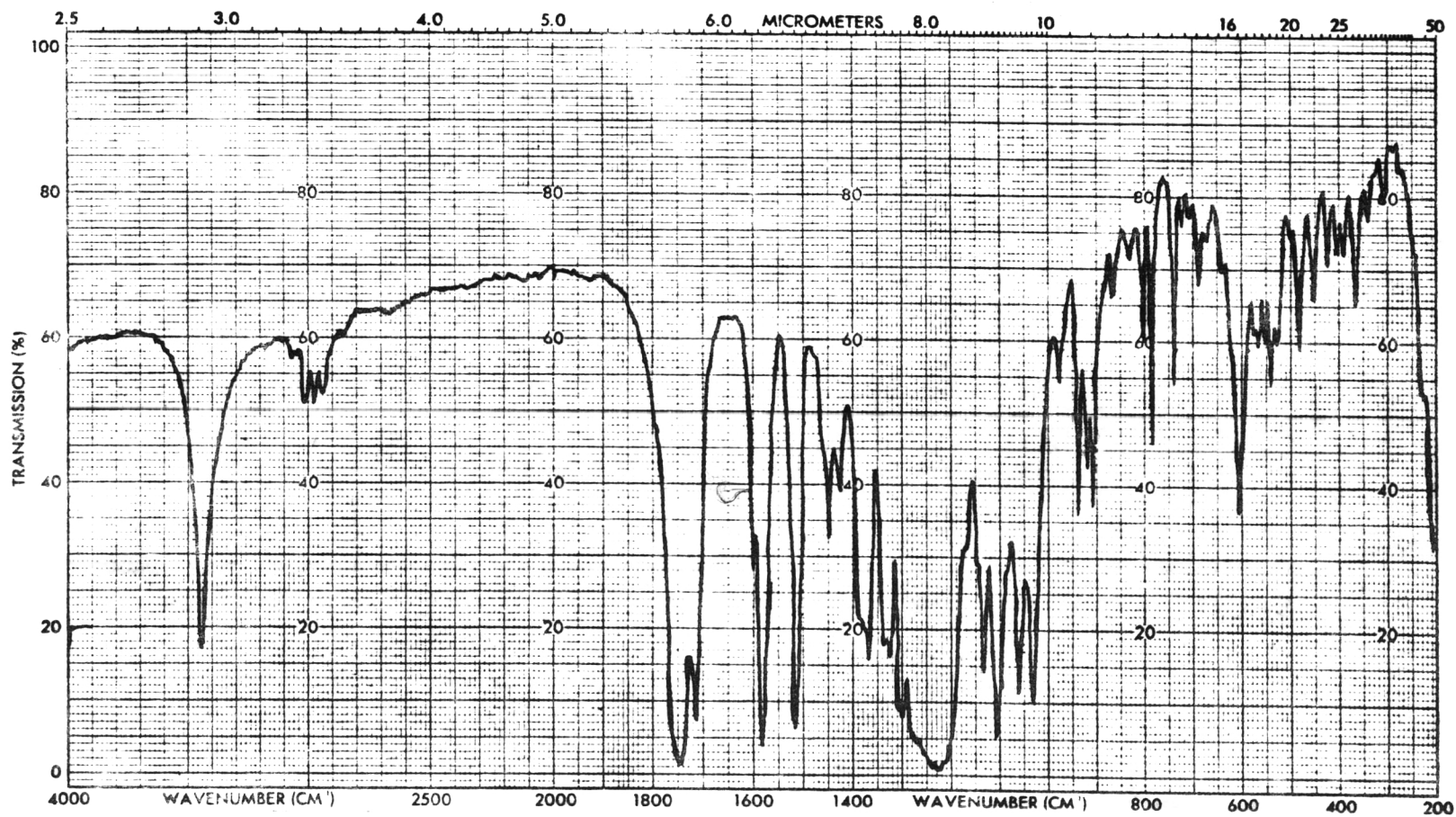


Figure 2. IR. spectrum of N-(2,3,4,6-Tetra-O-acetyl-β-D-glucopyranosyl)-5-(3-methoxy-4-hydroxy-benzylidene)rhodanine.

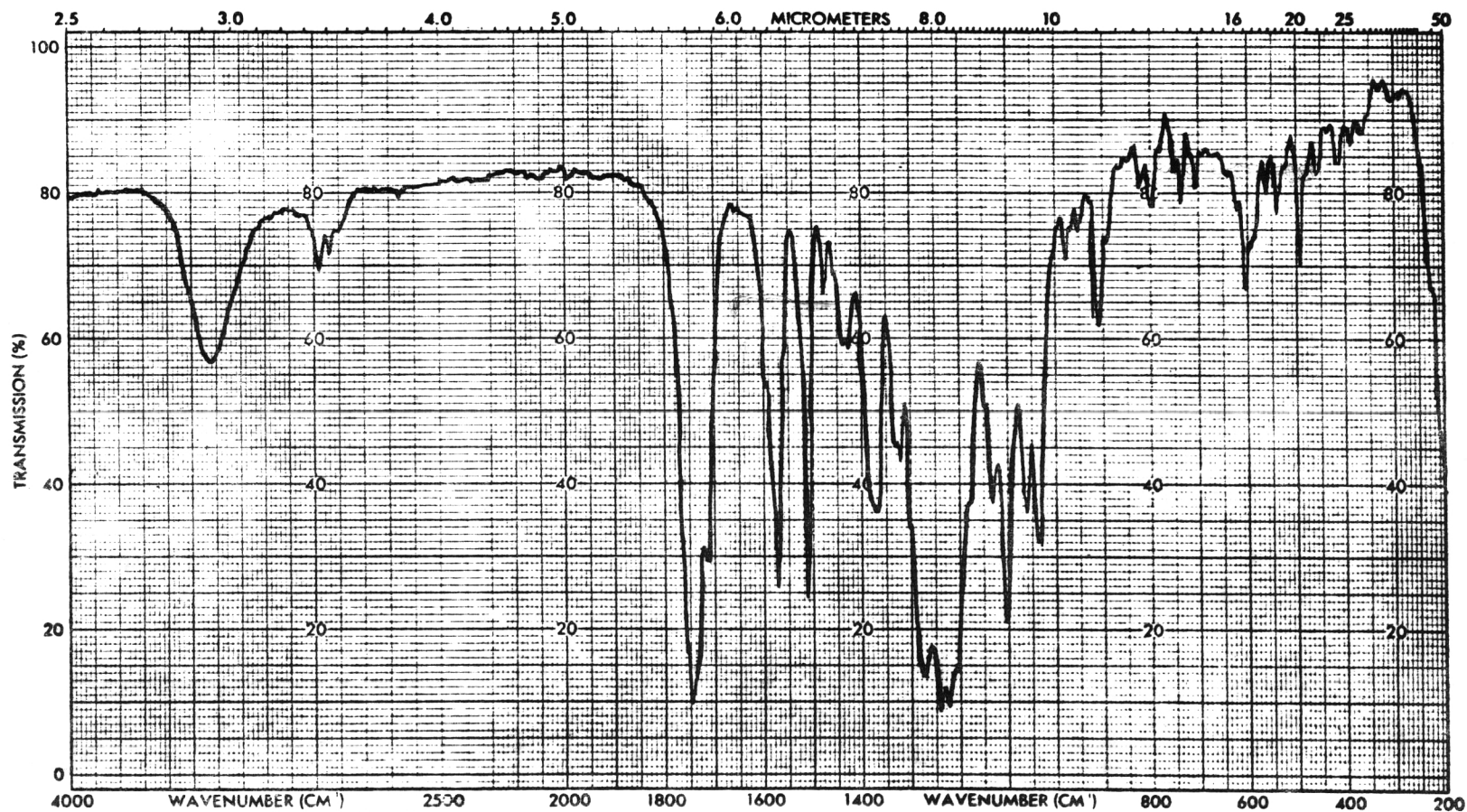


Figure 3. IR. spectrum of N-(2,3,4,6-Tetra-O-acetyl- β -D-glucopyranosyl)5-(3-ethoxy-4-hydroxy-benzylidene)rhodanine.

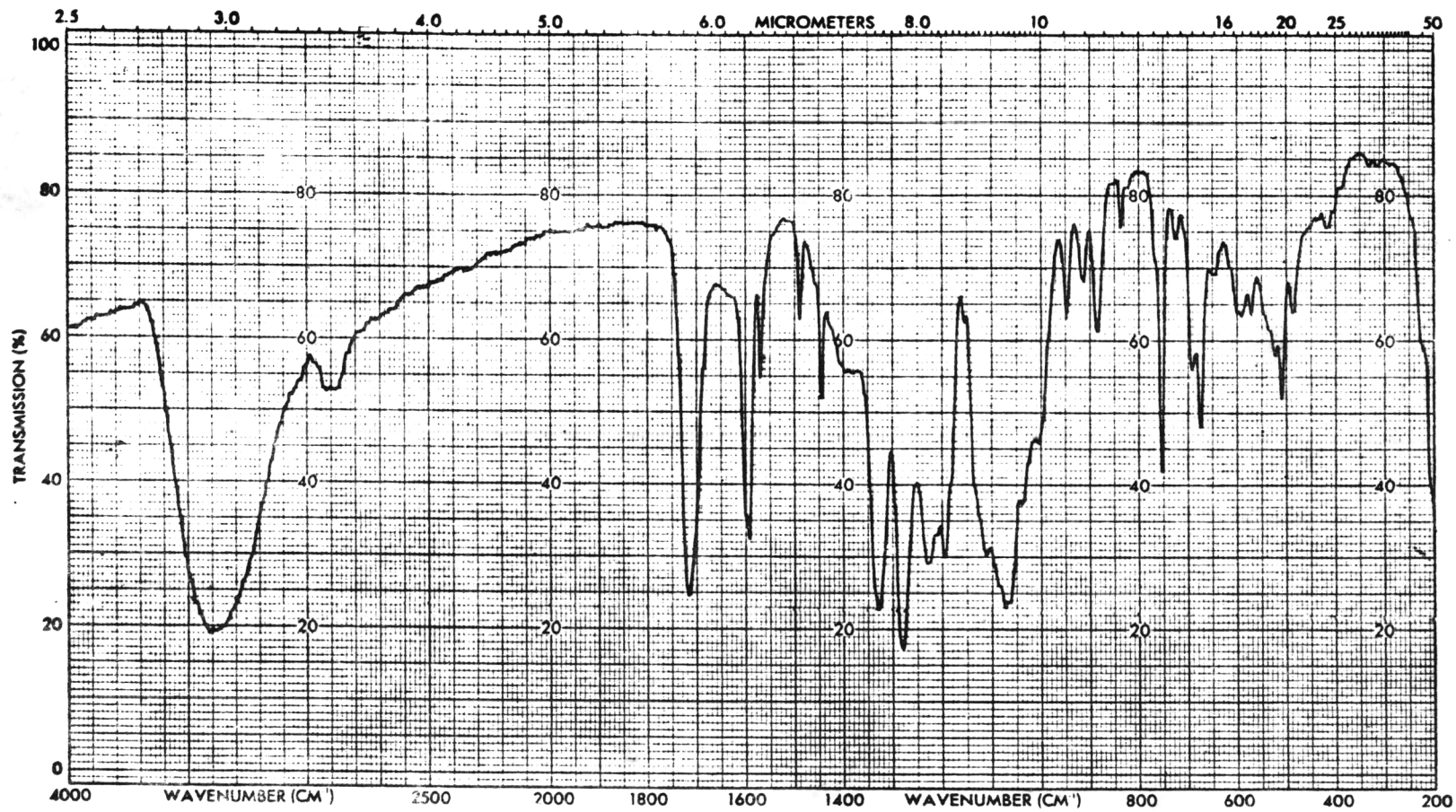


Figure 4₀ IR. spectrum of N-B-D-Glucopyranosyl-5-benzylidene rhodanine.

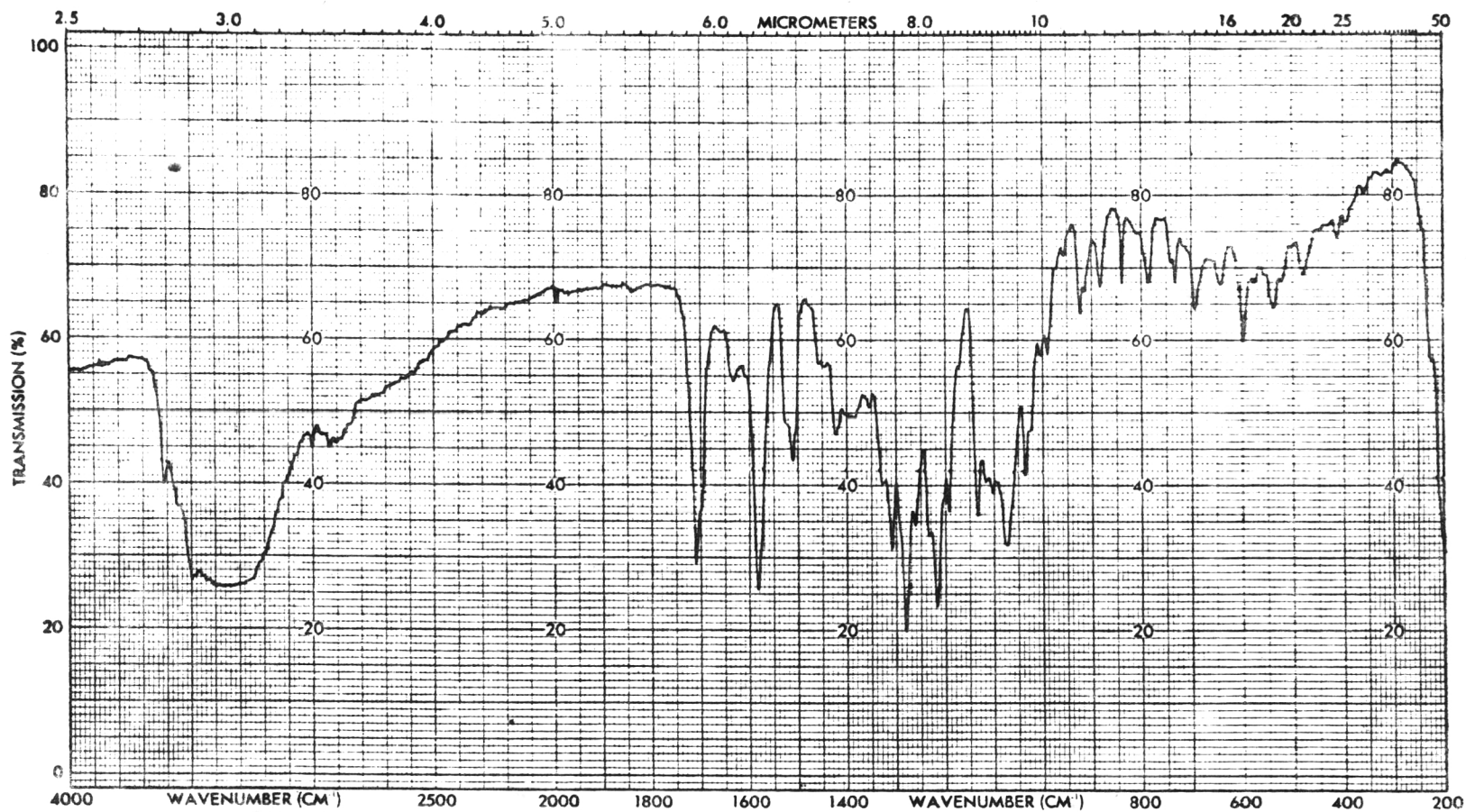


Figure 5. IR. spectrum of N- β -D-Glucopyranosyl-5-(3-methoxy-4-hydroxybenzylidene)rhodanine.

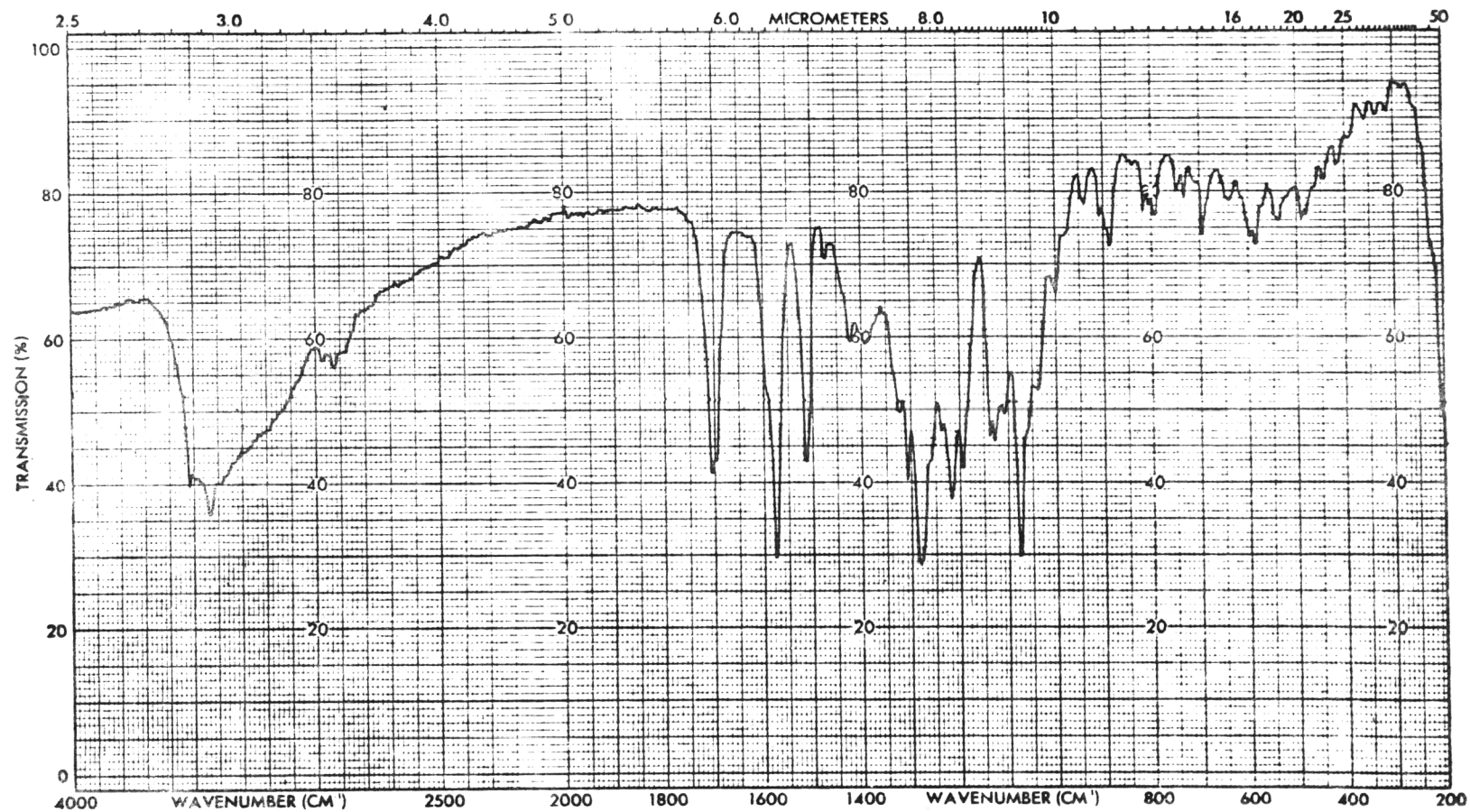


Figure 6. IR. spectrum of *N*- β -D-Glucopyranosyl-5-(3-ethoxy-4-hydroxybenzylidene)rhodanine.

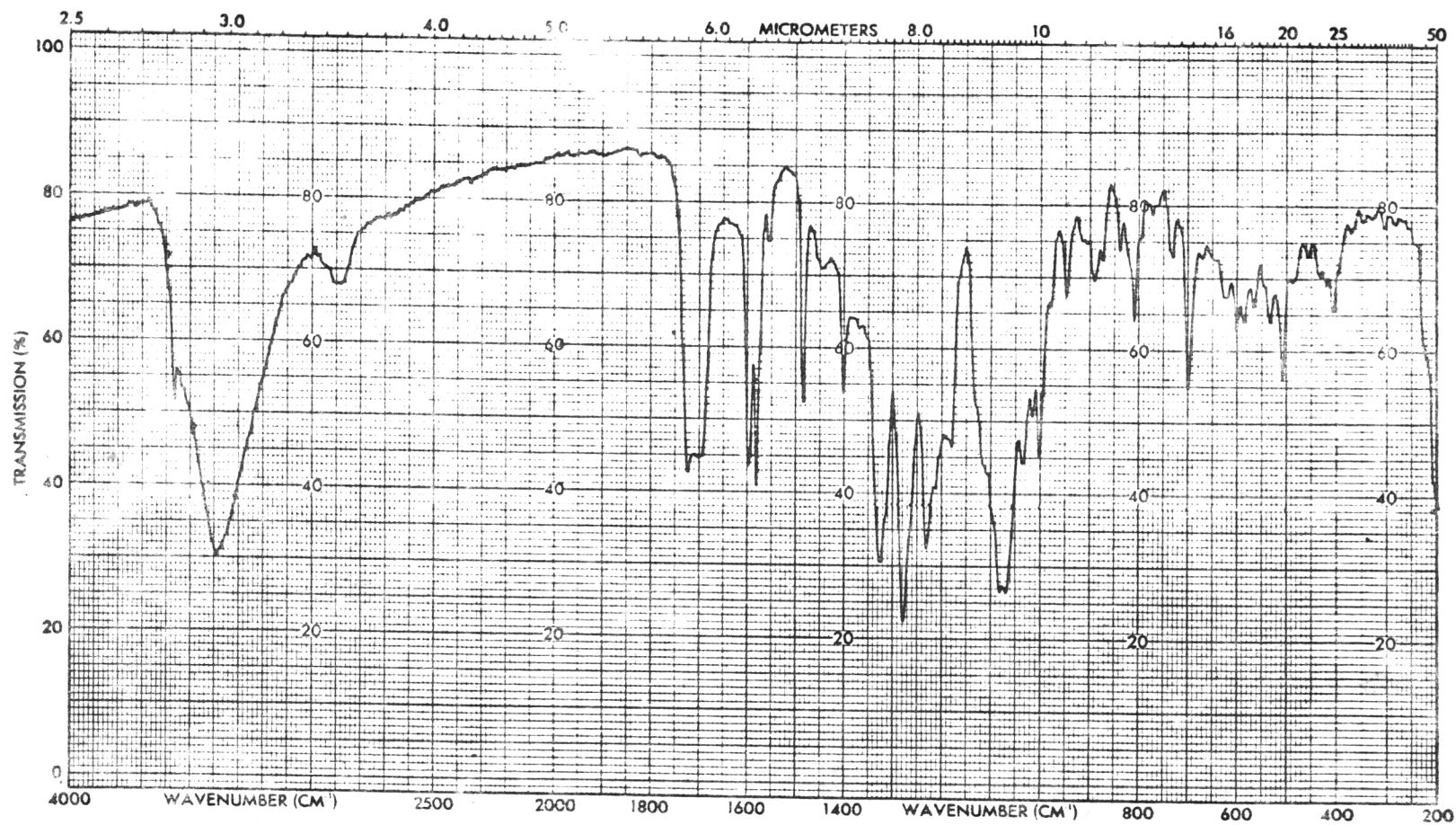


Figure 7. IR. spectrum of *N*- β -D-Glucopyranosyl-5-(4-chlorobenzylidene)rhodanine.

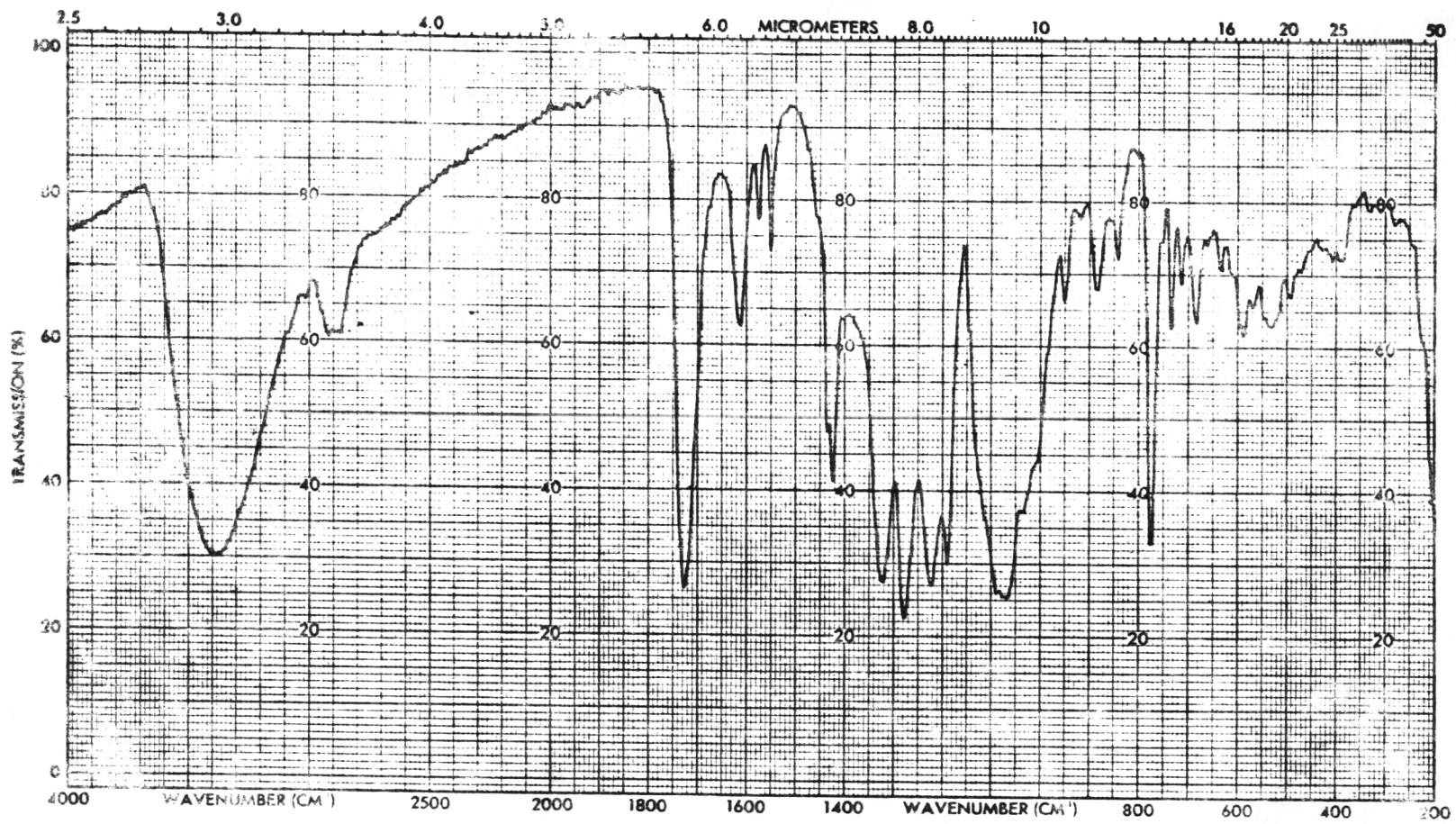


Figure 8. IR. spectrum of N- β -D-Glucopyranosyl-5-(2,6-dichlorobenzylidene)rhodanine.



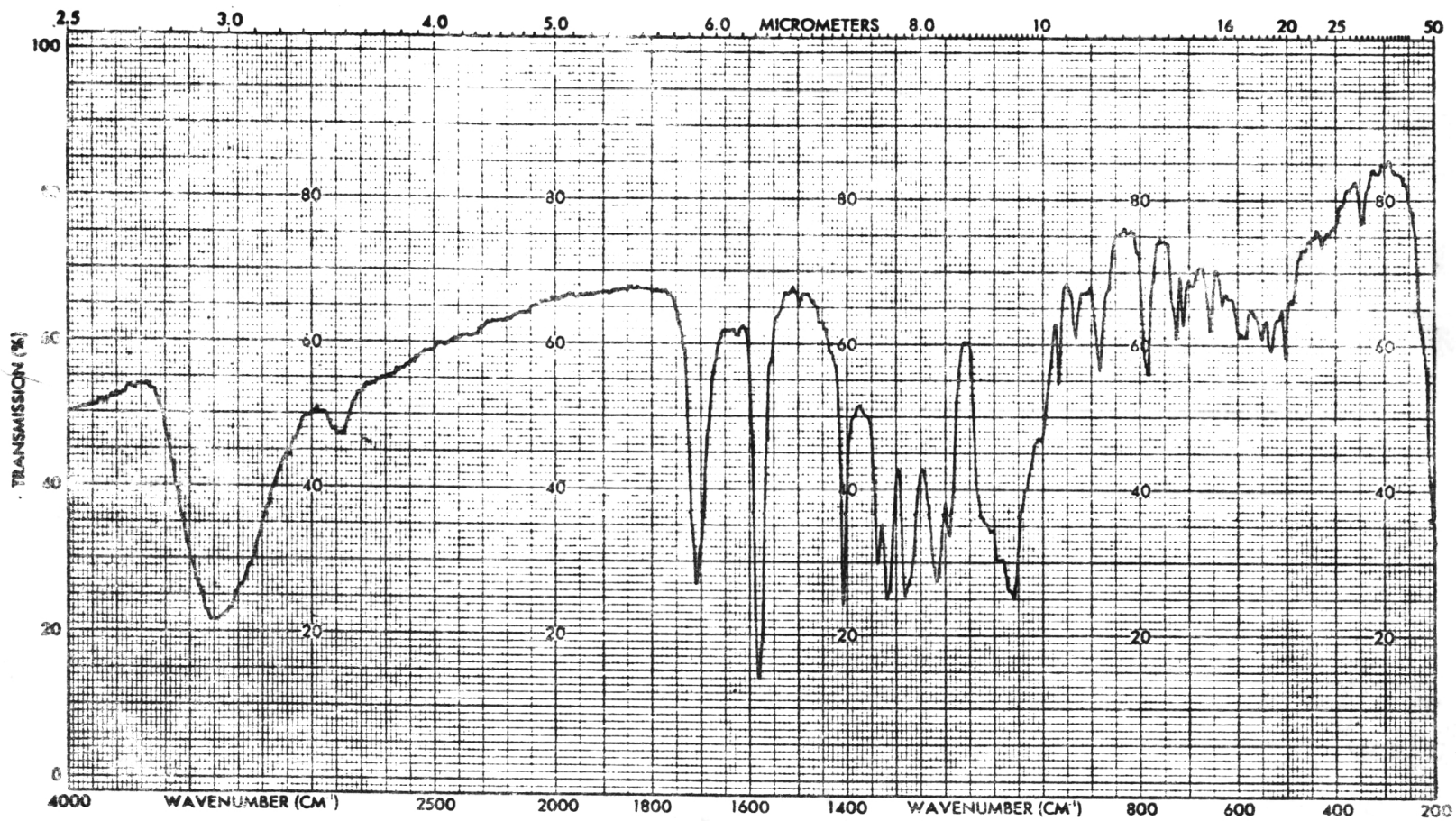


Figure 9. IR. spectrum of N-β-D-Glucopyranosyl-5-(5-bromo-2-thienylmethylene)rhodanine.

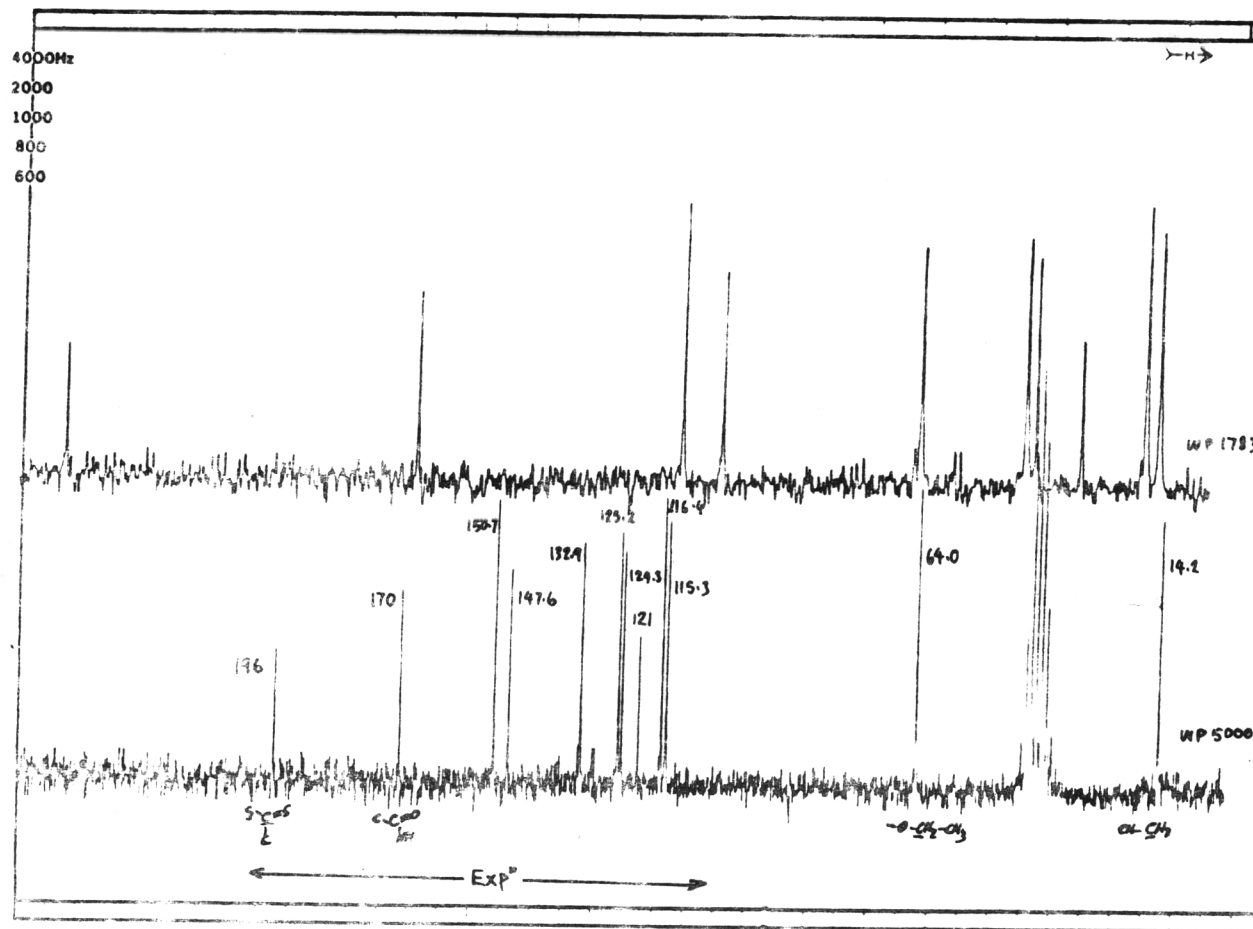


Figure 10. ¹³C-NMR. spectrum of 5-(3-methoxy-4-hydroxybenzylidene)melanine

LOCK SIGNAL d₆ DMSO
 SPIN RATE 40 rps. TEMP - °C
 ACQUISITION
 SPECTRAL WIDTH(SW) 5000 Hz.
 NO. OF TRANSIENTS(NT) 4710
 ACQUISITION TIME(AT) 0.50 sec
 PULSE WIDTH(PW) 15 μsec
 PULSE DELAY(PD) 1.50 sec
 DATA POINTS(DP) 5000
 TRANSMITTER OFFSET(TO) 52
 HIGH FIELD / LOW FIELD
 RECEIVER GAIN (RG) 3
 DECOUPLER MODE(DM) 1
 DECOUPLER OFFSET(DO) 54
 NOISE BANDWIDTH(NB) 8000 kHz
 DISPLAY
 SENS. ENHANCEMENT(SE) -0.80 sec
 WIDTH OF PLOT(WP) 5000 Hz
 END OF PLOT(EP) -150 Hz
 WIDTH OF CHART(WC) 5000 Hz
 END OF CHART(EC) -150 Hz
 VERTICAL SCALE(VS) 70
 REFERENCE LINE(RL) -

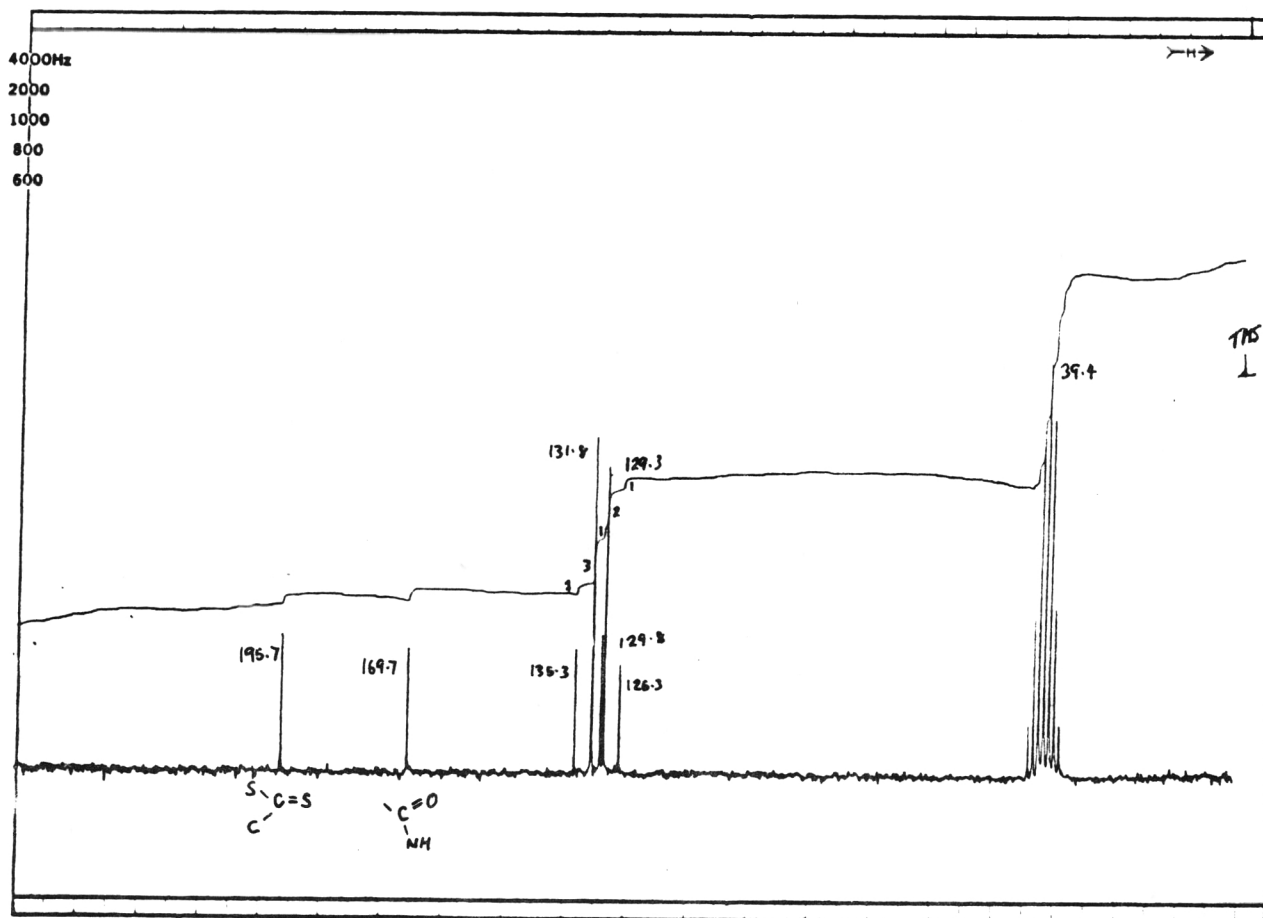


Figure 11. ^{13}C NMR. spectrum of 5-(4-Chlorobenzylidene)rhodanine.

LOCK SIGNAL d_6 DMSO
 SPIN RATE 40 rps. TEMP - °C
 ACQUISITION
 SPECTRAL WIDTH(SW) 5000 Hz.
 NO. OF TRANSIENTS(NT) 9040
 ACQUISITION TIME(AT) 0.50 sec
 PULSE WIDTH(PW) 5 μ sec
 PULSE DELAY(PD) 1.50 sec
 DATA POINTS(DP) 5000
 TRANSMITTER OFFSET(TO) 52
 HIGH FIELD / LOW FIELD -
 RECEIVER GAIN (RG) 3
 DECOUPLER MODE(DM) 1
 DECOUPLER OFFSET(DO) 54
 NOISE BANDWIDTH(NB) 8000 kHz
 DISPLAY
 SENS. ENHANCEMENT(SE) -0.80 sec
 WIDTH OF PLOT(WP) 5000 Hz
 END OF PLOT(EP) -150 Hz
 WIDTH OF CHART(WC) 5000 Hz
 END OF CHART(EC) -150 Hz
 VERTICAL SCALE(VS) 70
 REFERENCE LINE(RL) -

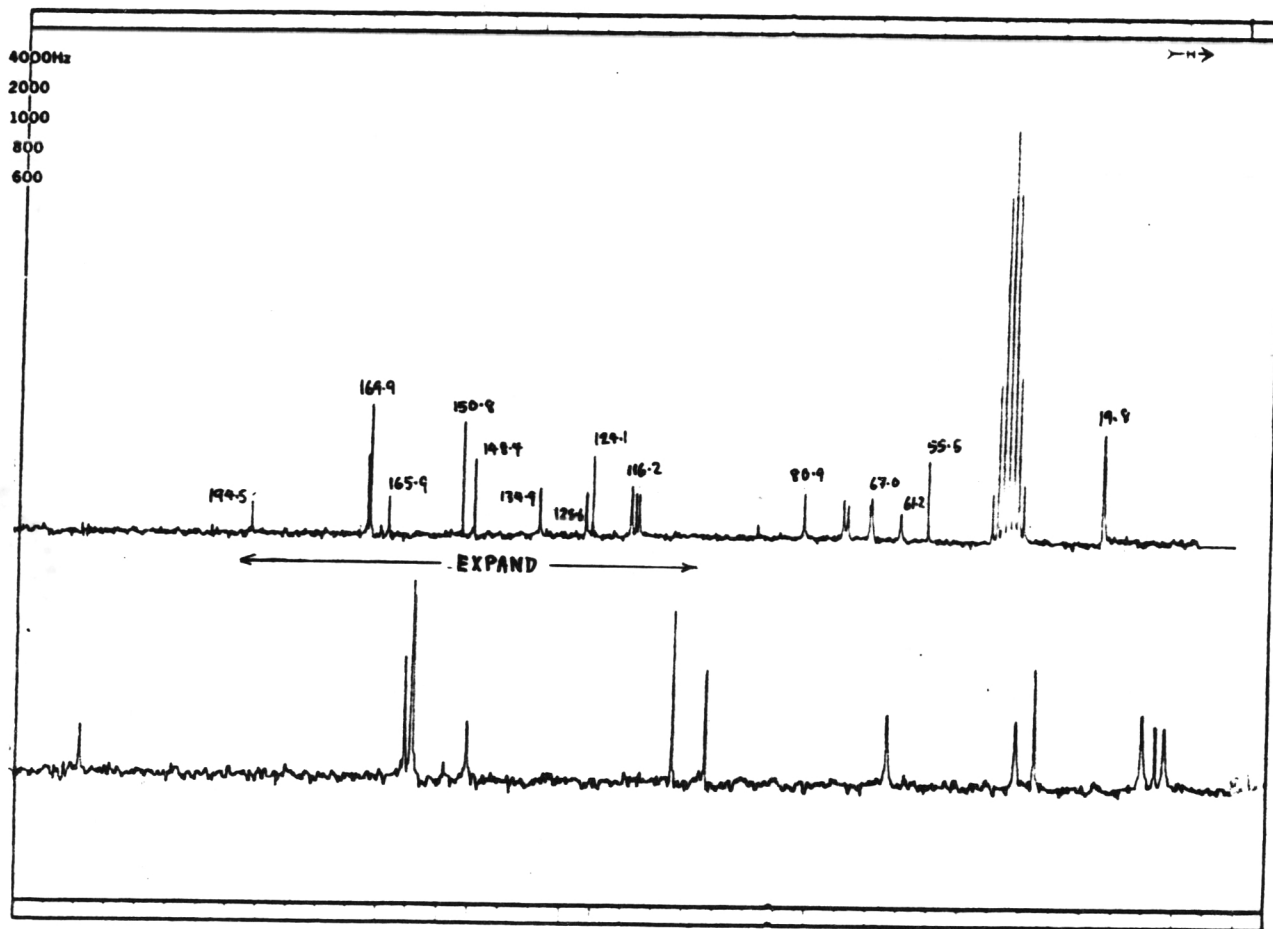


Figure 12. ^{13}C NMR. sepctrum of N-(2,3,4,6-Tetra-O-acetyl- β -D-glucopyranosyl)-5-(3-methoxy-4-hydroxybenzylidene)rhodanine.

LOCK SIGNAL d_6DMSO
 SPIN RATE 40 rps. TEMP - °C
 ACQUISITION
 SPECTRAL WIDTH(SW) 5000 Hz.
 NO. OF TRANSIENTS(NT) 25000
 ACQUISITION TIME(AT) 0.50 sec
 PULSE WIDTH(PW) 12 μ sec
 PULSE DELAY(PD) 1.5 sec
 DATA POINTS(DP) 5000
 TRANSMITTER OFFSET(TO) 52
 HIGH FIELD / LOW FIELD
 RECEIVER GAIN (RG) 3
 DECOUPLER MODE(DM) 1
 DECOUPLER OFFSET(DO) 54
 NOISE BANDWIDTH(NB) 8000 kHz
 DISPLAY
 SENS. ENHANCEMENT(SE) -0.80 sec
 WIDTH OF PLOT(WP) 5000 Hz
 END OF PLOT(EP) -150 Hz
 WIDTH OF CHART(WC) 5000 Hz
 END OF CHART(EC) -150 Hz
 VERTICAL SCALE(VS) 70
 REFERENCE LINE(RL) -

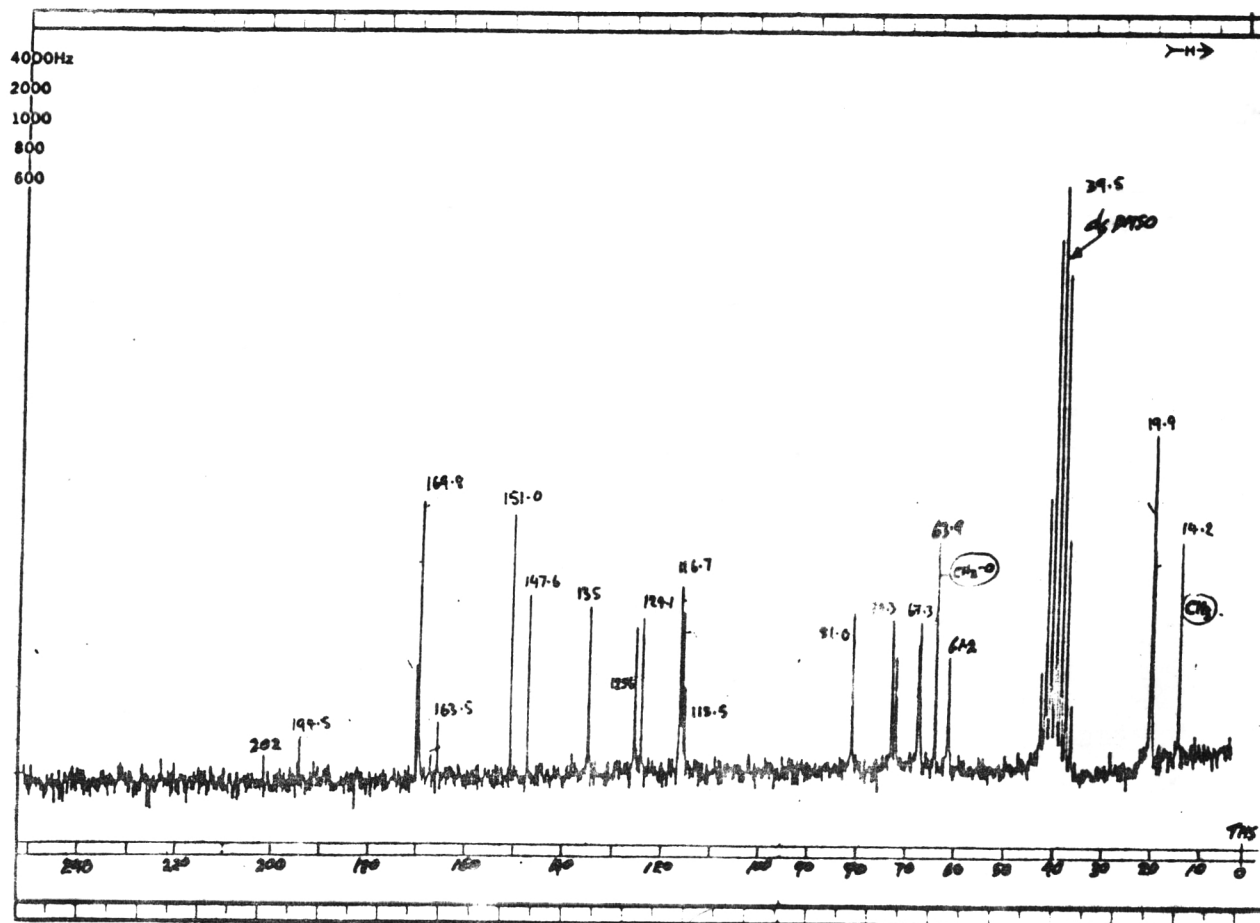


Figure 13. ¹³C NMR. spectrum of N-(2,3,4,6-Tetra-O-acetyl-β-D-glucopyranosyl)-5-(3-methoxy-4-hydroxybenzylidene)rhodanine.

LOCK SIGNAL d_6 DMSO
 SPIN RATE 35 rps. TEMP - °C
 ACQUISITION
 SPECTRAL WIDTH(SW) 5000 Hz.
 NO. OF TRANSIENTS(NT) 35200
 ACQUISITION TIME(AT) 0.50 sec
 PULSE WIDTH(PW) 20 μsec
 PULSE DELAY(PD) 1.0 sec
 DATA POINTS(DP) -
 TRANSMITTER OFFSET(TO) 52
 HIGH FIELD / LOW FIELD
 RECEIVER GAIN (RG) 3
 DECOUPLER MODE(DM) 1
 DECOUPLER OFFSET(DO) 55
 NOISE BANDWIDTH(NB) 8000 kHz
 DISPLAY
 SENS. ENHANCEMENT(SE) -0.80 sec
 WIDTH OF PLOT(WP) 5000 Hz
 END OF PLOT(EP) -150 Hz
 WIDTH OF CHART(WC) 5000 Hz
 END OF CHART(EC) -150 Hz
 VERTICAL SCALE(VS) 100
 REFERENCE LINE(RL) 120

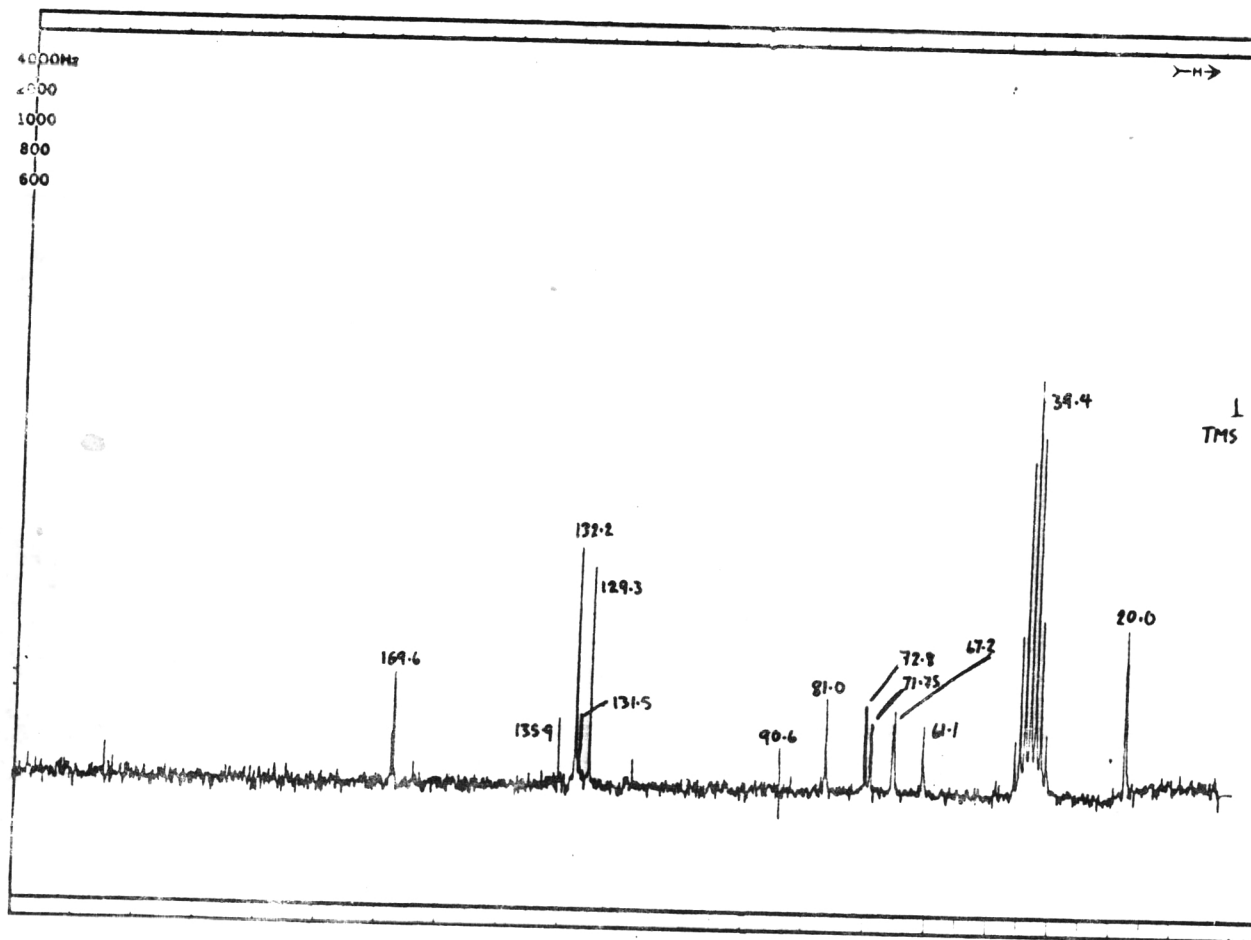


Figure 14. ¹³C NMR spectrum of N-(2,3,4,6-Tetra-O-acetyl-β-D-glucopyranosyl)-5-(4-chlorobenzylidene)rhodanine.

LOCK SIGNAL d₆ DMSO
 SPIN RATE 40 rps. TEMP - °C
 ACQUISITION
 SPECTRAL WIDTH(SW) 5000 Hz.
 NO. OF TRANSIENTS(NT) 36K
 ACQUISITION TIME(AT) 0.5 sec
 PULSE WIDTH(PW) 20 μsec
 PULSE DELAY(PD) 1.0 sec
 DATA POINTS(DP) -
 TRANSMITTER OFFSET(TO) 52
 HIGH FIELD / LOW FIELD -
 RECEIVER GAIN (RG) 3
 DECOUPLER MODE(DM) 1
 DECOUPLER OFFSET(DO) 54
 NOISE BANDWIDTH(NB) 8000 kHz
 DISPLAY
 SENS. ENHANCEMENT(SE) 0.800 sec
 WIDTH OF PLOT(WP) 5000 Hz
 END OF PLOT(EP) -150 Hz
 WIDTH OF CHART(WC) 5000 Hz
 END OF CHART(EC) -150 Hz
 VERTICAL SCALE(VS) 70
 REFERENCE LINE(RL) -

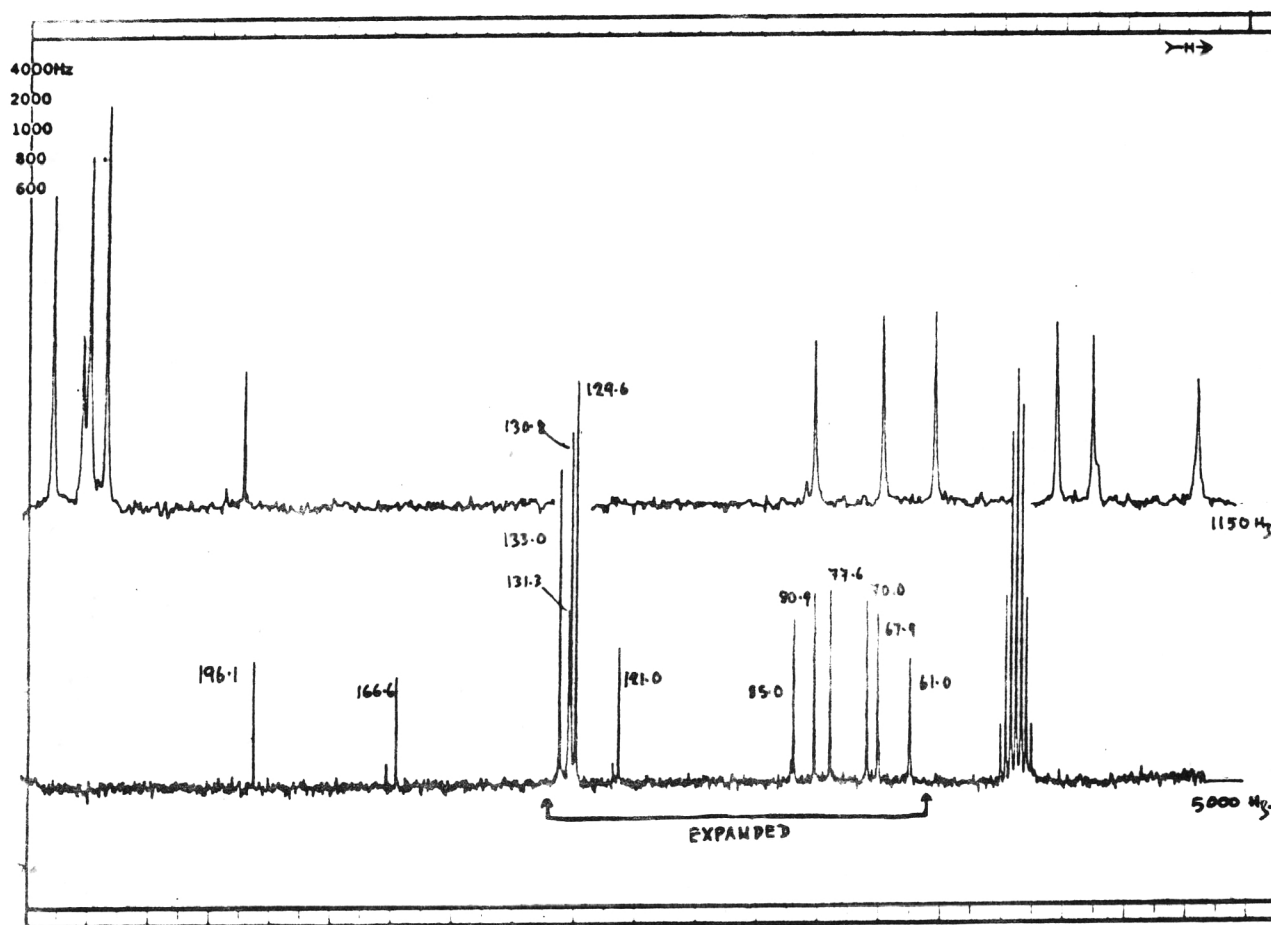


Figure 15. ^{13}C NMR. spectrum of N- β -D-Glucopyranosyl-5-benzylidene-rhodanine.

LOCK SIGNAL d_6 DMSO
 SPIN RATE 40 rps. TEMP - °C
 ACQUISITION
 SPECTRAL WIDTH(SW) 5000 Hz.
 NO. OF TRANSIENTS(NT) 16000
 ACQUISITION TIME(AT) 0.50 sec
 PULSE WIDTH(PW) 10 μ sec
 PULSE DELAY(PD) 1.000 sec
 DATA POINTS(DP) 5000
 TRANSMITTER OFFSET(TO) 52
 HIGH FIELD / LOW FIELD -
 RECEIVER GAIN (RG) 3
 DECOUPLER MODE(DM) 1
 DECOUPLER OFFSET(DO) 54
 NOISE BANDWIDTH(NB) 8000 kHz
 DISPLAY
 SENS. ENHANCEMENT(SE) -0.80 sec
 WIDTH OF PLOT(WP) 5000 Hz
 END OF PLOT(EP) -150 Hz
 WIDTH OF CHART(WC) 5000 Hz
 END OF CHART(EC) -150 Hz
 VERTICAL SCALE(VS) 100
 REFERENCE LINE(RL) -

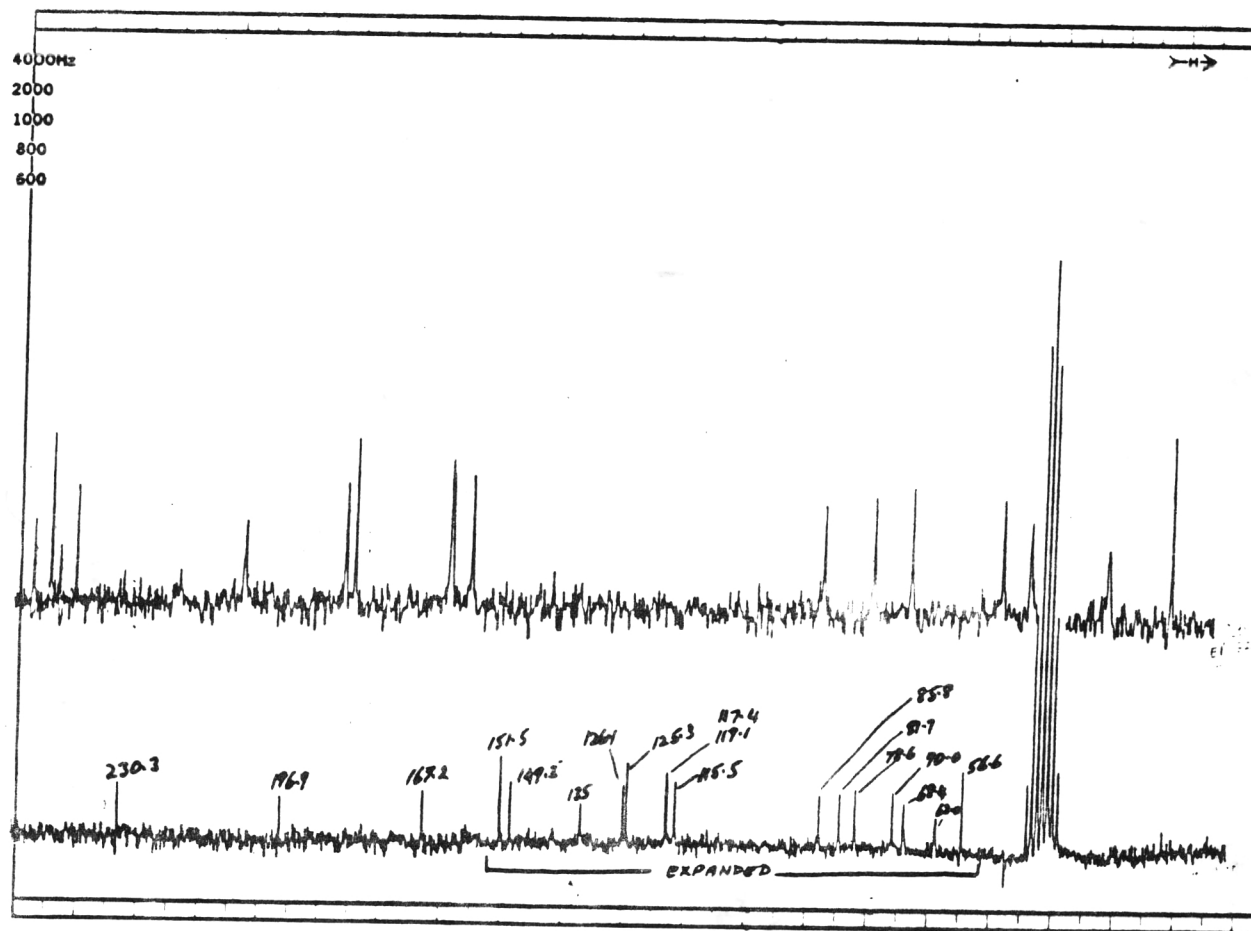


Figure 16. ^{13}C NMR. spectrum of N- β -D-Glucopyranosyl-5-(3-methoxy-4-hydroxybenzylidene)rhodanine.

LOCK SIGNAL d_6 DMSO
 SPIN RATE 30 rps. TEMP - °C
 ACQUISITION
 SPECTRAL WIDTH(SW) 5000 Hz.
 NO. OF TRANSIENTS(NT) 27000
 ACQUISITION TIME(AT) 0.50 sec
 PULSE WIDTH(PW) 12 (54) μ sec
 PULSE DELAY(PD) 1.0 sec
 DATA POINTS(DP) 5000
 TRANSMITTER OFFSET(TO) 52
 HIGH FIELD / LOW FIELD
 RECEIVER GAIN (RG) 3
 DECOUPLER MODE(DM) 1
 DECOUPLER OFFSET(DO) 54
 NOISE BANDWIDTH(NB) 8000 kHz
 DISPLAY
 SENS. ENHANCEMENT(SE) -0.800 sec
 WIDTH OF PLOT(WP) 5000 Hz
 END OF PLOT(EP) -150 Hz
 WIDTH OF CHART(WC) 5000 Hz
 END OF CHART(EC) -150 Hz
 VERTICAL SCALE(VS) 100
 REFERENCE LINE(RL) -

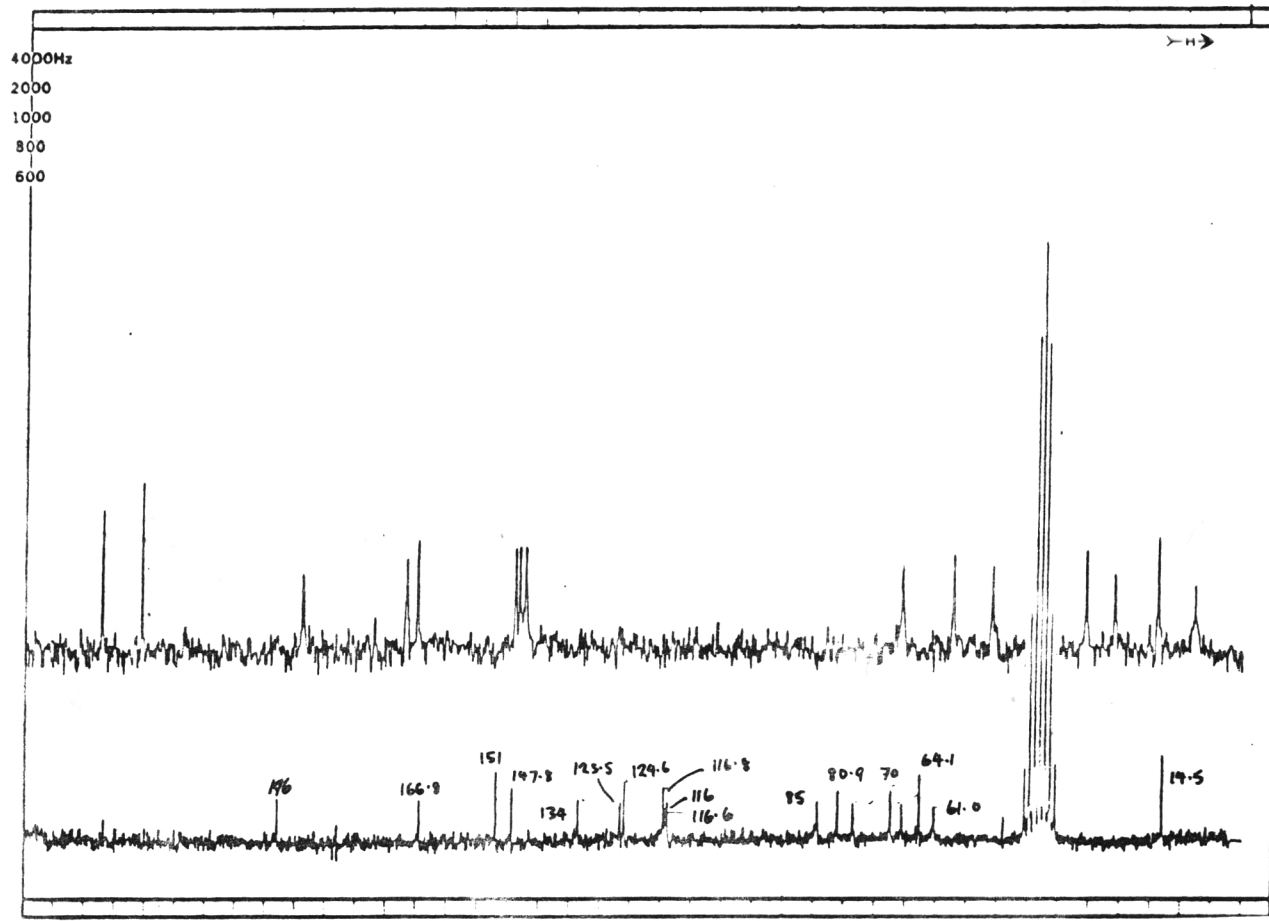


Figure 17. ^{13}C NMR. spectrum of N- β -D-Glucopyranosyl-5-(3-ethoxy-4-hydroxybenzylidene)rhodanine.

LOCK SIGNAL $d_6 d_6$ DMSO
 SPIN RATE 30rps. TEMP - °C
 ACQUISITION
 SPECTRAL WIDTH(SW) 5000 Hz.
 NO. OF TRANSIENTS(NT) 26000
 ACQUISITION TIME(AT) 0.819 sec
 PULSE WIDTH(PW) 12 μ sec
 PULSE DELAY(PD) 1.181 sec
 DATA POINTS(DP) 8192
 TRANSMITTER OFFSET(TO) 52
 HIGH FIELD / LOW FIELD
 -
 RECEIVER GAIN (RG) 3
 DECOUPLER MODE(DM) 1
 DECOUPLER OFFSET(DO) 54
 NOISE BANDWIDTH(NB) 8000 kHz
 DISPLAY
 SENS. ENHANCEMENT(SE) -0.800sec
 WIDTH OF PLOT(WP) 5000 Hz
 END OF PLOT(EP) -150 Hz
 WIDTH OF CHART(WC) 5000 Hz
 END OF CHART(EC) -150 Hz
 VERTICAL SCALE(VS) 100
 REFERENCE LINE(RL) -

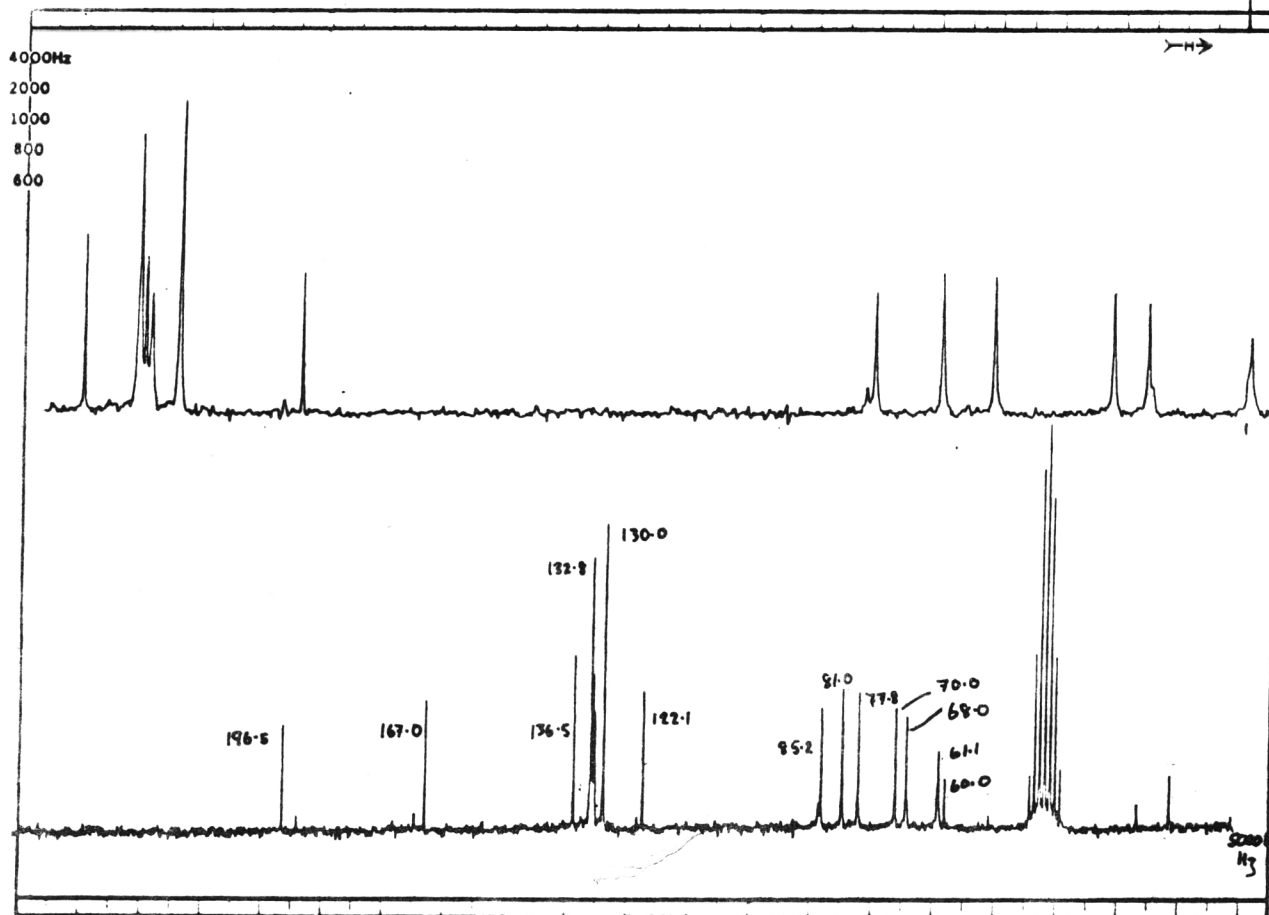


Figure 18. ¹³C NMR. spectrum of N-β-D-Glucopyranosyl-(4-chlorobenzylidene)rhodanine.

LOCK SIGNAL d_6 DMSO
 SPIN RATE 30 rps. TEMP - °C
 ACQUISITION
 SPECTRAL WIDTH(SW) 5000 Hz.
 NO. OF TRANSIENTS(NT) 26K
 ACQUISITION TIME(AT) 0.819 sec
 PULSE WIDTH(PW) 12 μsec
 PULSE DELAY(PD) 1.181 sec
 DATA POINTS(DP) 8000
 TRANSMITTER OFFSET(TO) 52
 HIGH FIELD / LOW FIELD
 RECEIVER GAIN (RG) 3
 DECOUPLER MODE(DM) 1
 DECOUPLER OFFSET(DO) 54
 NOISE BANDWIDTH(NB) 8000 kHz
 DISPLAY
 SENS. ENHANCEMENT(SE) -0.80 sec
 WIDTH OF PLOT(WP) 5000 Hz
 END OF PLOT(EP) -150 Hz
 WIDTH OF CHART(WC) 5000 Hz
 END OF CHART(EC) -150 Hz
 VERTICAL SCALE(VS) 70
 REFERENCE LINE(RL) -

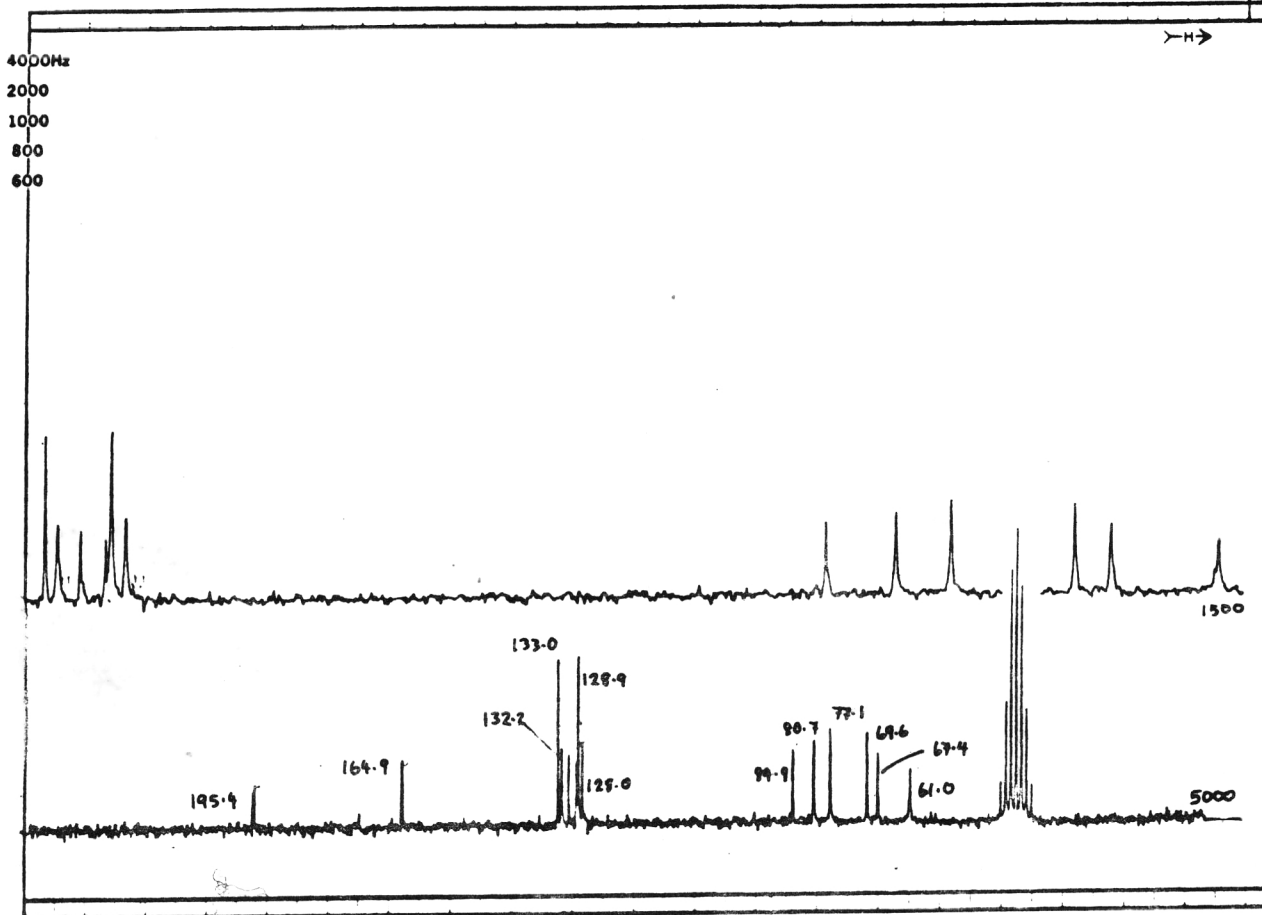


Figure 19. ^{13}C NMR. spectrum of N- β -D-Glucopyranosyl-5-(2,6-dichloro-benzylidene)rhodanine.

LOCK SIGNAL d_6 DMSO
 SPIN RATE 35 rps. TEMP - °C
 ACQUISITION
 SPECTRAL WIDTH(SW) 5000 Hz.
 NO. OF TRANSIENTS(NT) 13000
 ACQUISITION TIME(AT) 0.819 sec
 PULSE WIDTH(PW) 12 μ sec
 PULSE DELAY(PD) 1.181 sec
 DATA POINTS(DP) 8192
 TRANSMITTER OFFSET(TO) 52
 HIGH FIELD / LOW FIELD -
 RECEIVER GAIN (RG) 3
 DECOUPLER MODE(DM) 1
 DECOUPLER OFFSET(DO) 54
 NOISE BANDWIDTH(NB) 8000 kHz
 DISPLAY
 SENS. ENHANCEMENT(SE) -0.800 sec
 WIDTH OF PLOT(WP) 5000 Hz
 END OF PLOT(EP) -150 Hz
 WIDTH OF CHART(WC) 5000 Hz
 END OF CHART(EC) -150 Hz
 VERTICAL SCALE(VS) 50
 REFERENCE LINE(RL) -

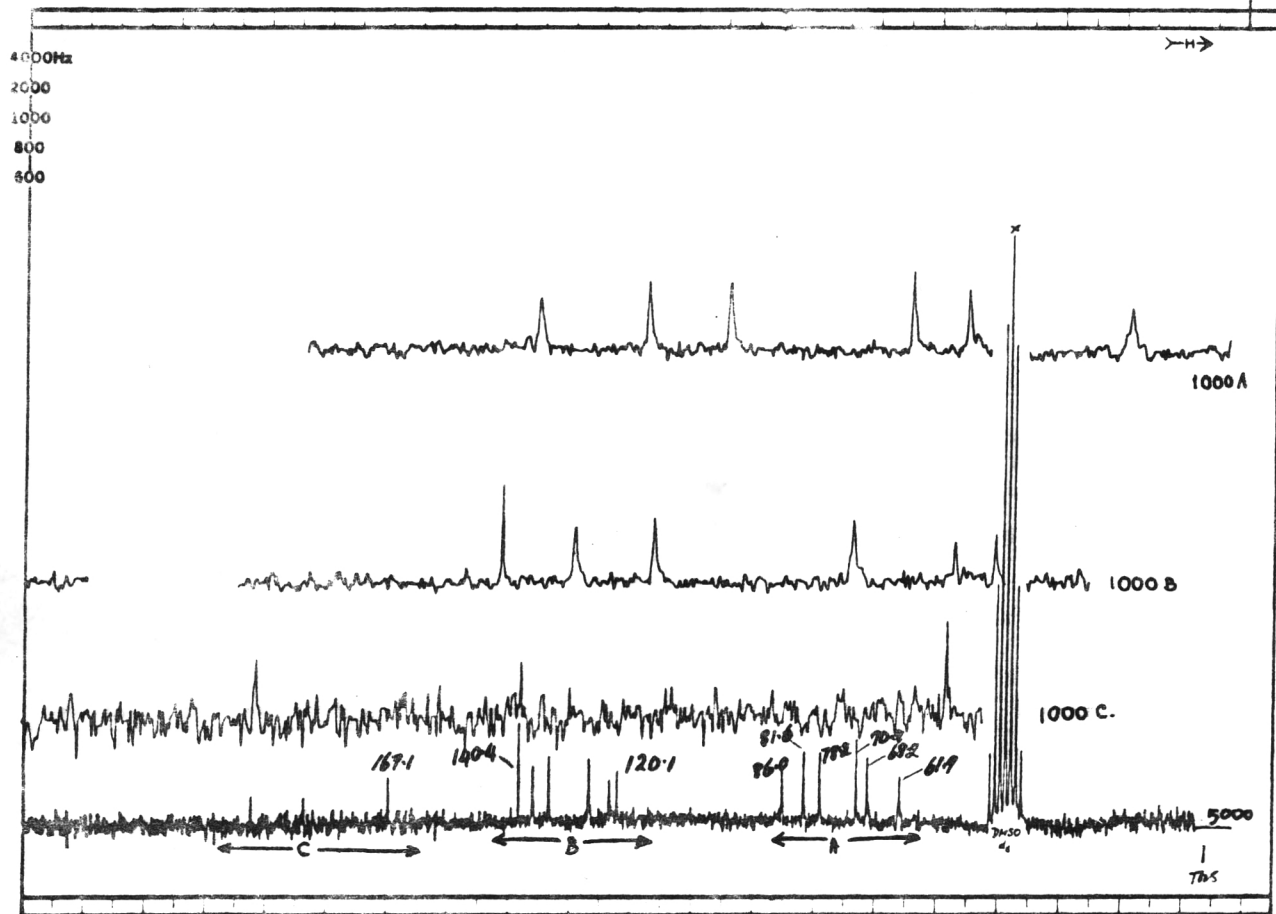


Figure 20. ^{13}C NMR. spectrum of N- β -D-Glucopyranosyl-5-(5-bromo-2-thienylmethylene)rhodanine.

LOCK SIGNAL d_6DMSO
 SPIN RATE 35 rps. TEMP - $^{\circ}\text{C}$
 ACQUISITION
 SPECTRAL WIDTH(SW) 5000 Hz.
 NO. OF TRANSIENTS(NT) 25000
 ACQUISITION TIME(AT) 0.819 sec
 PULSE WIDTH(PW) 12 μsec
 PULSE DELAY(PD) 1.181 sec
 DATA POINTS(DP) 8192
 TRANSMITTER OFFSET(TO) 52
 HIGH FIELD / LOW FIELD -
 RECEIVER GAIN (RG) 3
 DECOUPLER MODE(DM) 1
 DECOUPLER OFFSET(DO) 54
 NOISE BANDWIDTH(NB) 1000 kHz
 DISPLAY
 SENS. ENHANCEMENT(SE) -0.800 sec
 WIDTH OF PLOT(WP) 5000 Hz
 END OF PLOT(EP) -150 Hz
 WIDTH OF CHART(WC) 5000 Hz
 END OF CHART(EC) -150 Hz
 VERTICAL SCALE(VS) 100
 REFERENCE LINE(RL) -

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