

Supplementary Information

Synthesis and evaluation of pyridine-thiophene clubbed pyrazoline hybrids as potential antimicrobial and antimycobacterial agents: Experimental and computational insights

Krupa Prajapati^{*a}, Vikas Desai^a, Riki Tailor^b, Bhadrash Sudani^c, Priyank Mistry^d & Jignesh V Pandya^e

^a BKM Science College, Valsad, Gujarat, India

^b Sheth M. N. Science College, Patan, Gujarat, India

^c Government Engineering College, Valsad, Gujarat, India

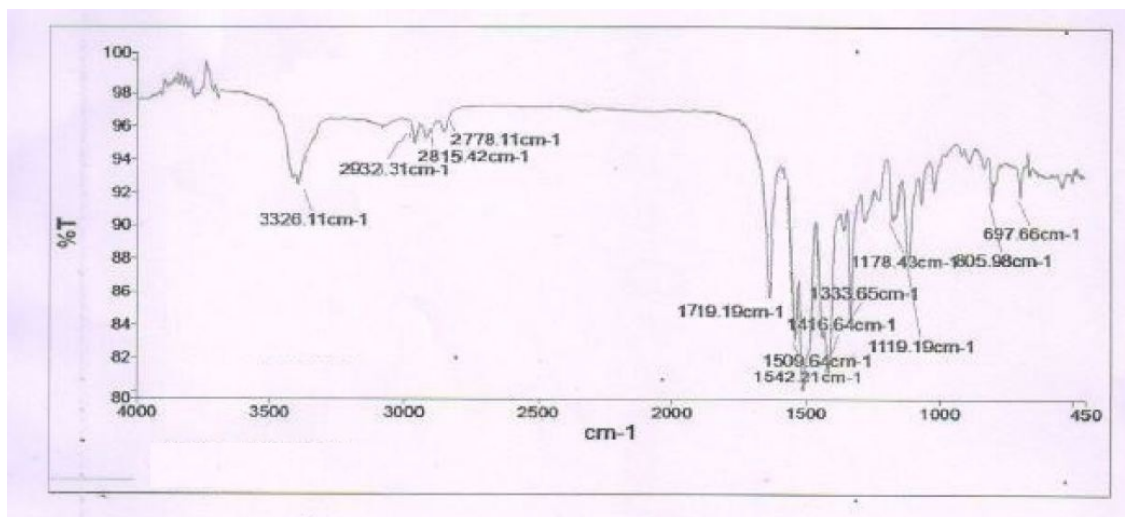
^d Atul Ltd, Atul, Gujarat, India

^e Shri Sarvajani PG Science College, Mehsana, Gujarat, India

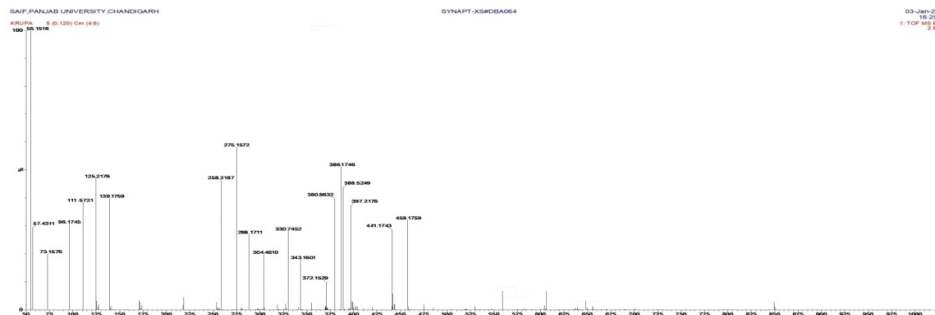
E-mail: prajapatikrupa7733@gmail.com

Received 3 March 2024; accepted (revised) 22 May 2024

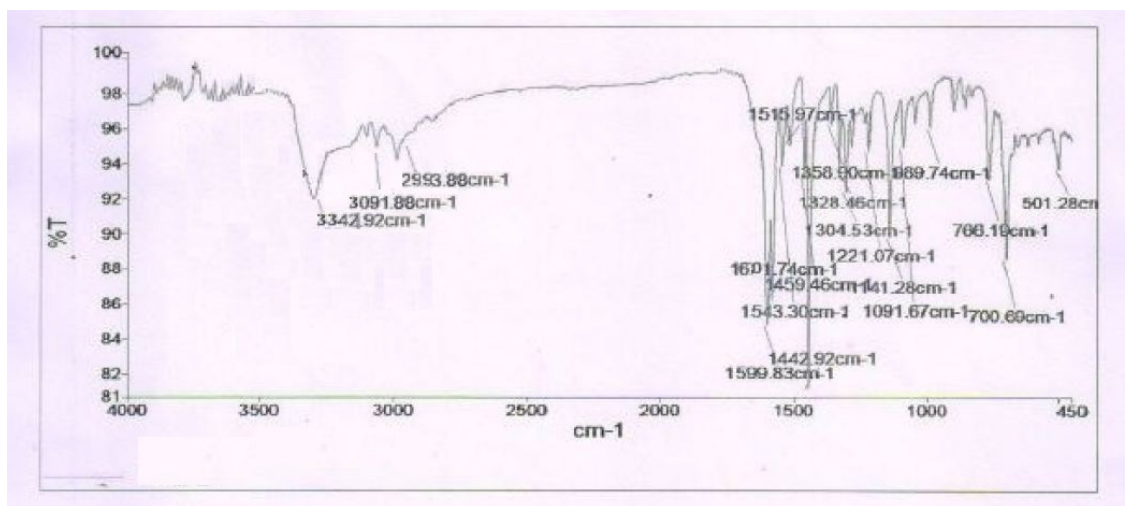
FTIR of 1-(5-(2-chlorophenyl)-3-(5-((2-(6-chloropyridin-2-yl)hydrazono)methyl)thiophen-2-yl)-4,5-dihydro-1H-pyrazol-1-yl)ethanone, 8a:



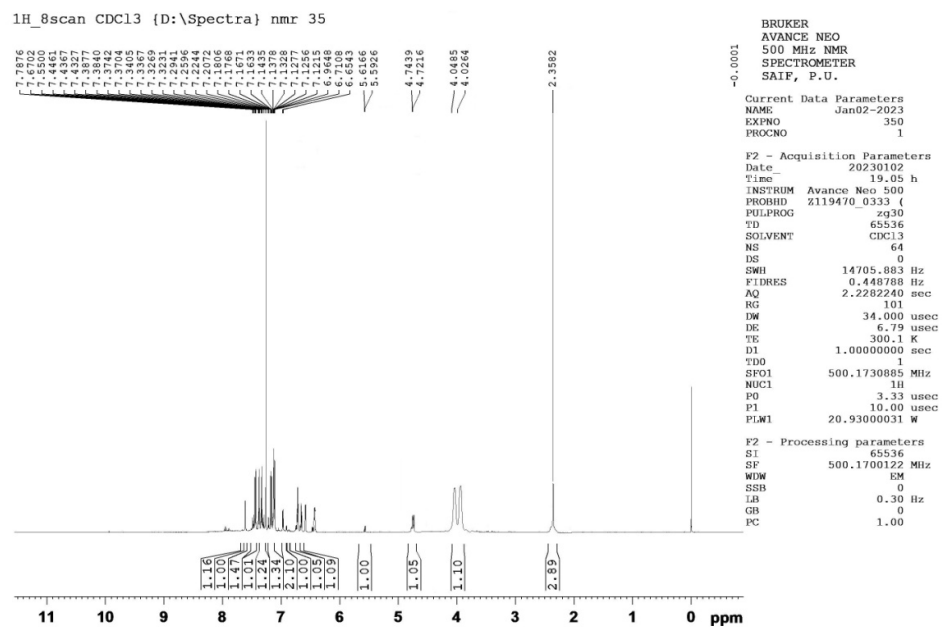
Mass spectrum of 1-(5-(2-chlorophenyl)-3-(5-((2-(6-chloropyridin-2-yl)hydrazono)methyl)thiophen-2-yl)-4,5-dihydro-1H-pyrazol-1-yl)ethanone , 8a:



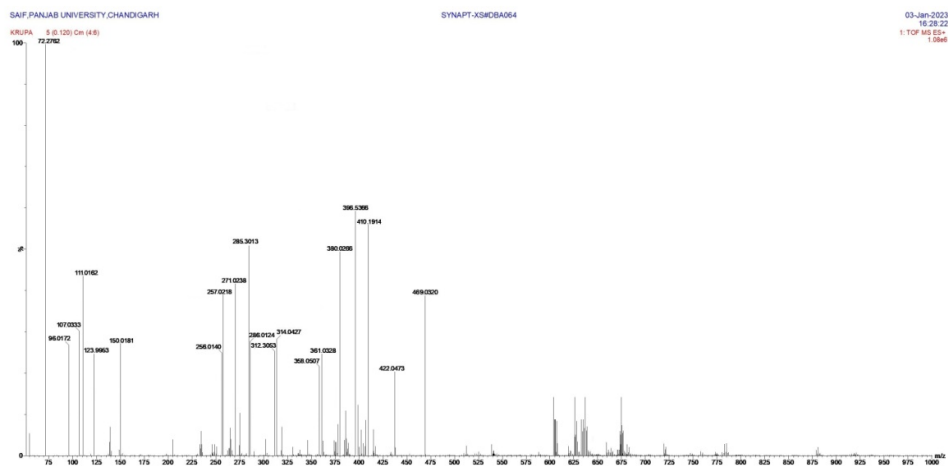
FTIR of 1-(5-(2-nitrophenyl)-3-(5-((2-(6-chloropyridin-2-yl)hydrazono)methyl)thiophen-2-yl)-4,5-dihydro-1H-pyrazol-1-yl)ethanone, 8c:



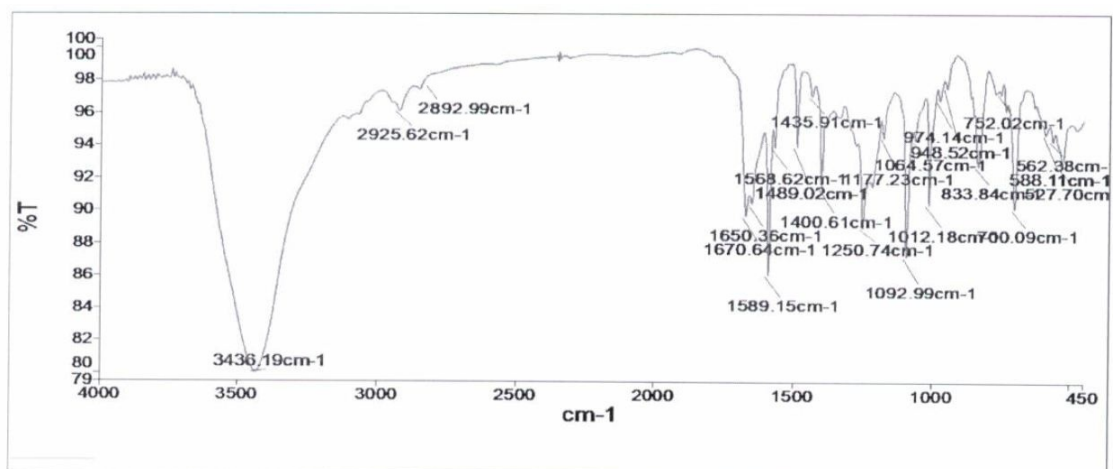
¹H-NMR of 1-(5-(2-nitrophenyl)-3-(5-((2-(6-chloropyridin-2-yl)hydrazono)methyl)thiophen-2-yl)-4,5-dihydro-1H-pyrazol-1-yl)ethanone, 8c:



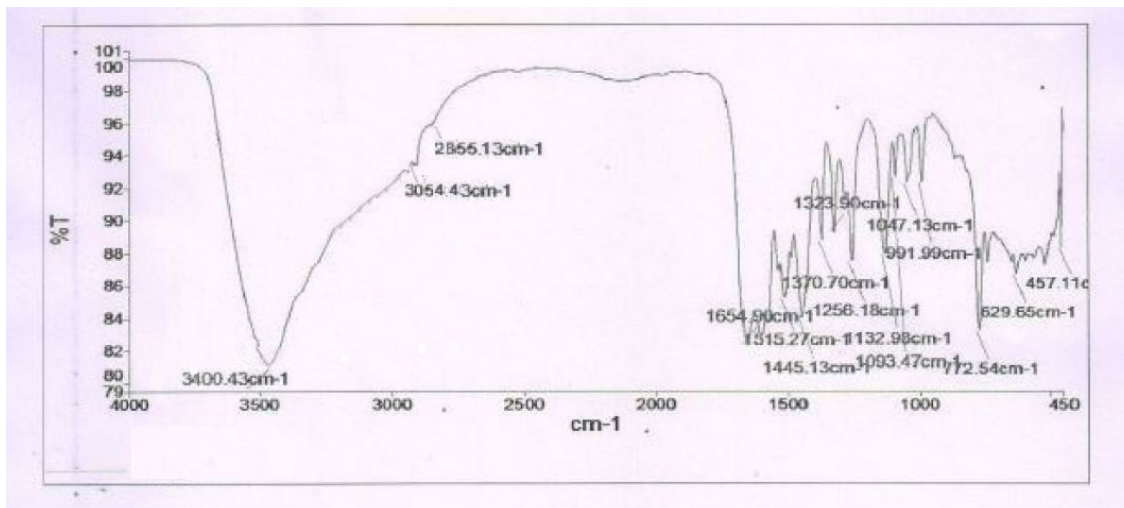
Mass spectrum of 1-(5-(2-nitrophenyl)-3-(5-((2-(6-chloropyridin-2-yl)hydrazono)methyl)thiophen-2-yl)-4,5-dihydro-1H-pyrazol-1-yl)ethanone, 8c:



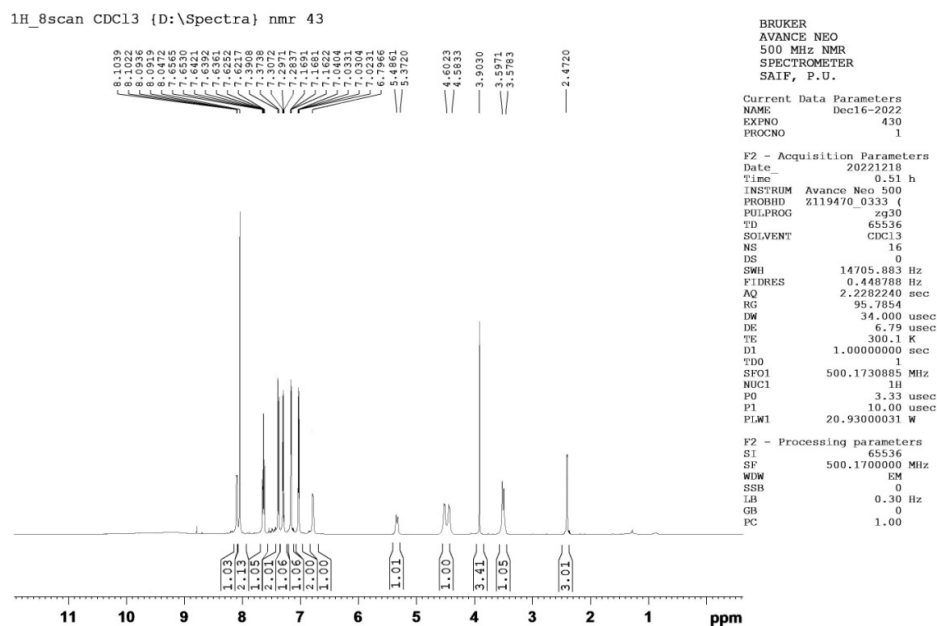
FTIR of 1-(5-(3-bromophenyl)-3-(5-((2-(6-chloropyridin-2-yl)hydrazono)methyl)thiophen-2-yl)-4,5-dihydro-1H-pyrazol-1-yl)ethanone, 8d:



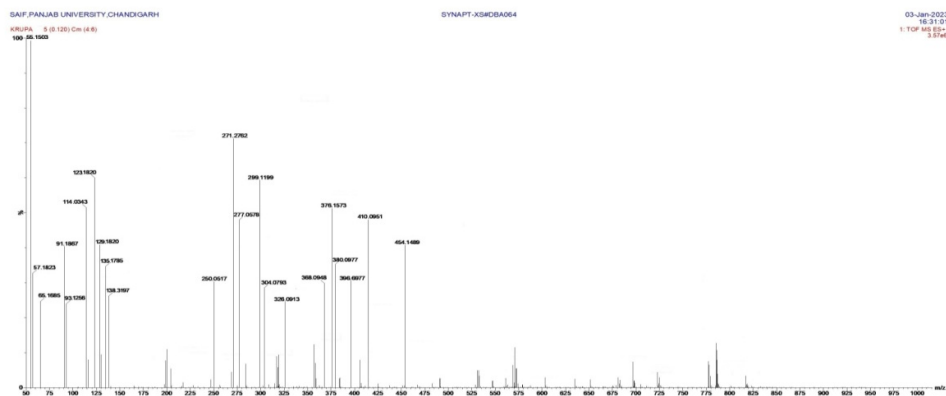
FTIR of 1-(5-(3-methoxyphenyl)-3-(5-((2-(6-chloropyridin-2-yl)hydrazono)methyl)thiophen-2-yl)-4,5-dihydro-1H-pyrazol-1-yl)ethanone, 8f:



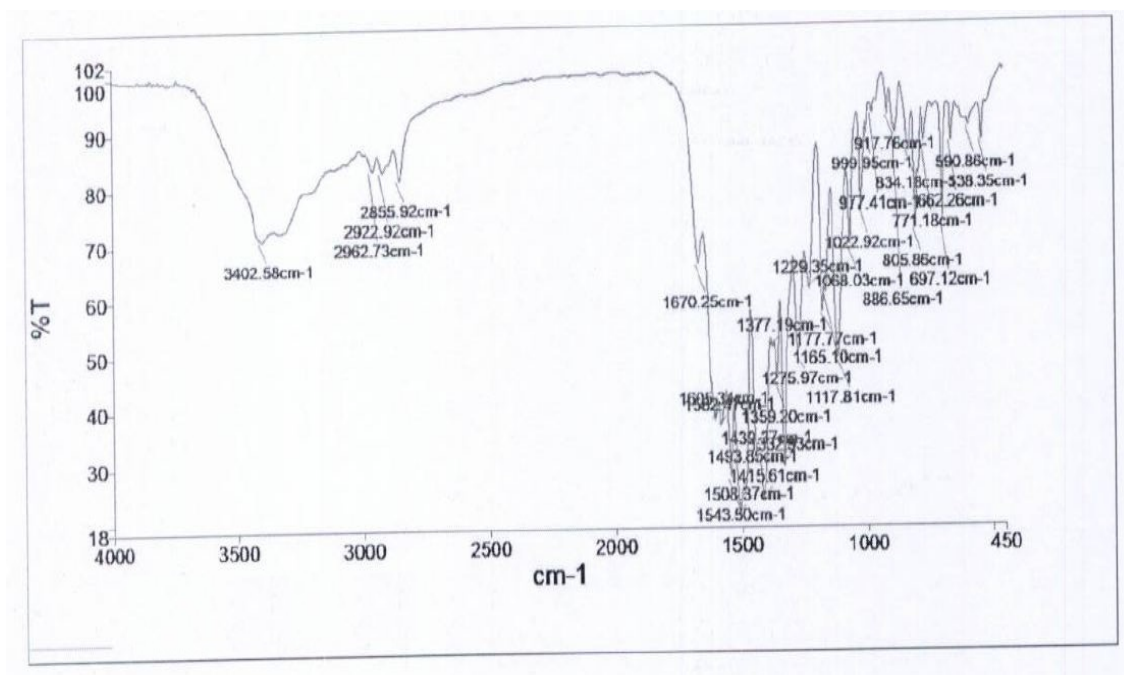
¹H-NMR of 1-(5-(3-methoxyphenyl)-3-(5-((2-(6-chloropyridin-2-yl)hydrazono)methyl)thiophen-2-yl)-4,5-dihydro-1H-pyrazol-1-yl)ethanone, 8f:



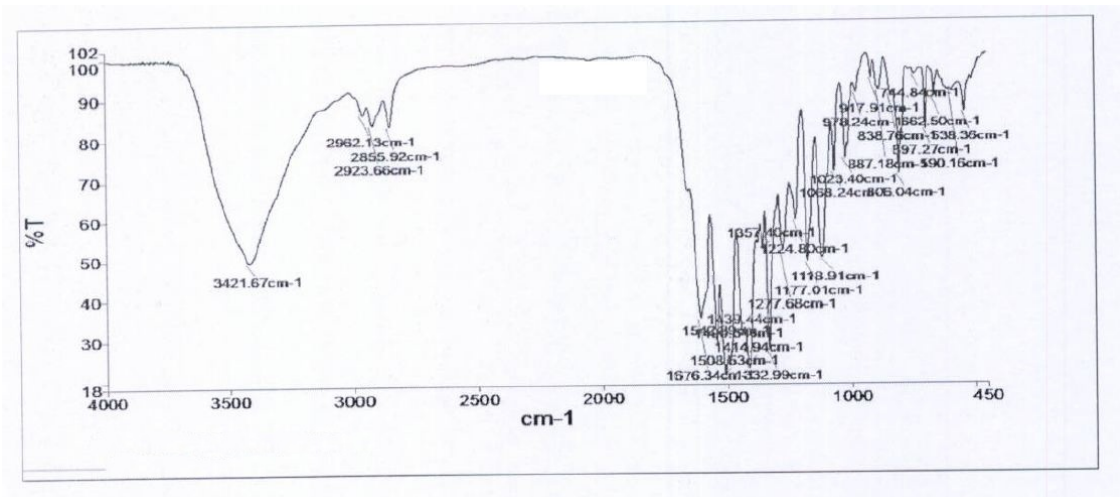
Mass spectrum of 1-(5-(3-methoxyphenyl)-3-(5-((2-(6-chloropyridin-2-yl)hydrazono)methyl)thiophen-2-yl)-4,5-dihydro-1H-pyrazol-1-yl)ethanone, 8f:



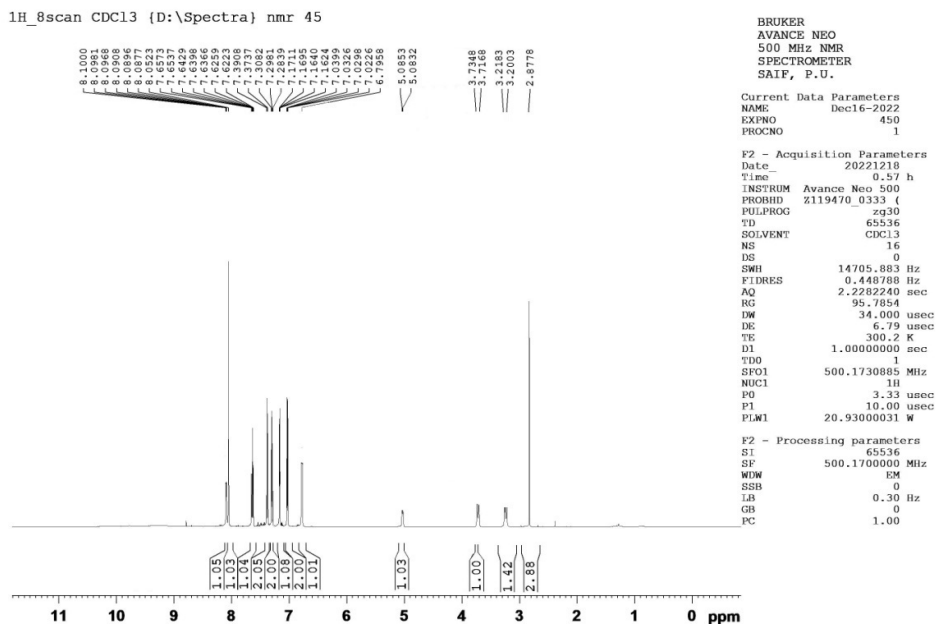
FTIR of 1-(5-(4-methylphenyl)-3-(5-((2-(6-chloropyridin-2-yl)hydrazono)methyl)thiophen-2-yl)-4,5-dihydro-1H-pyrazol-1-yl)ethanone, 8i:



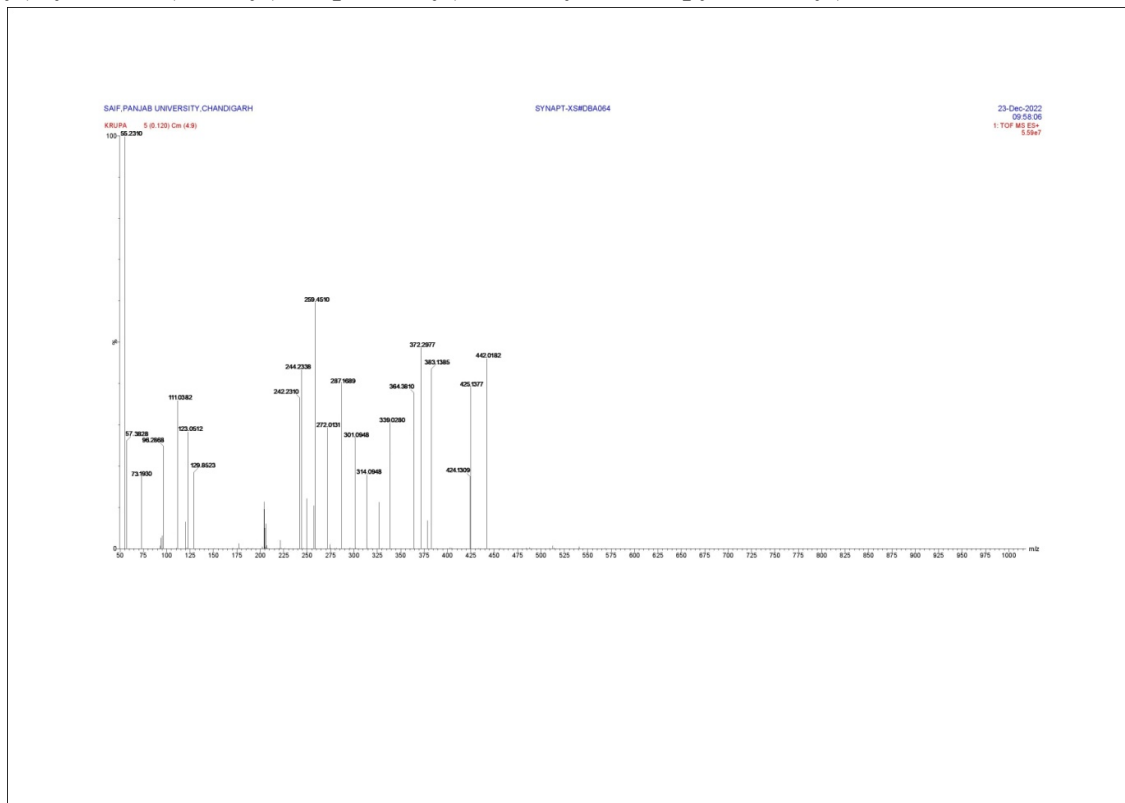
FTIR of 1-(5-(4-fluorophenyl)-3-(5-((2-(6-chloropyridin-2-yl)hydrazono)methyl)thiophen-2-yl)-4,5-dihydro-1H-pyrazol-1-yl)ethanone, 8h:



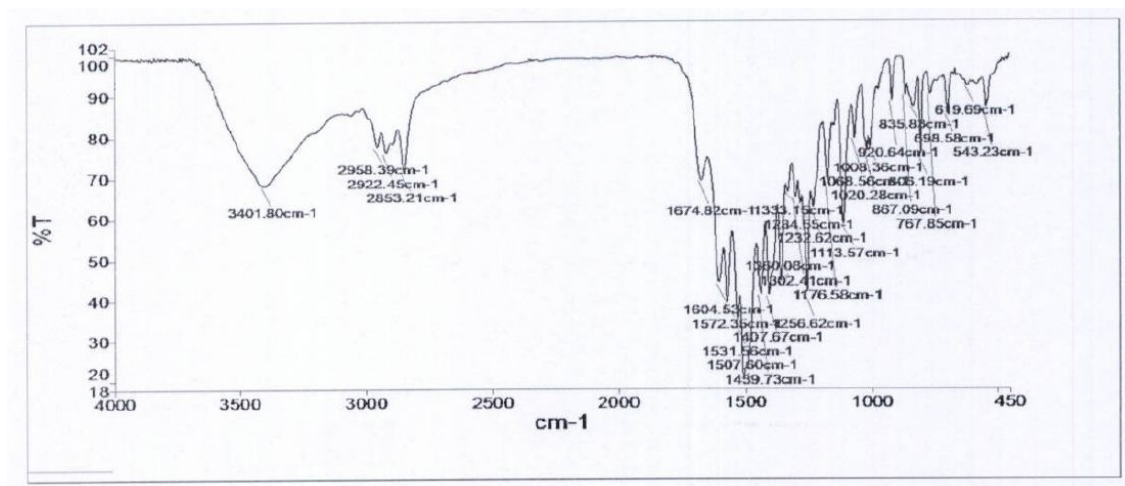
¹H-NMR of 1-(5-(4-fluorophenyl)-3-(5-((2-(6-chloropyridin-2-yl)hydrazono)methyl)thiophen-2-yl)-4,5-dihydro-1H-pyrazol-1-yl)ethanone, 8h:



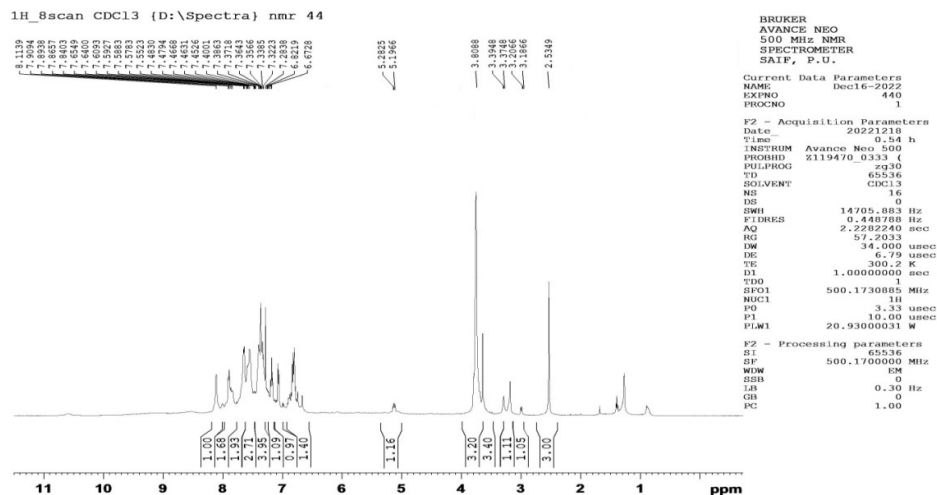
Mass spectrum of 1-(5-(4-fluorophenyl)-3-(5-((2-(6-chloropyridin-2-yl)hydrazono)methyl)thiophen-2-yl)-4,5-dihydro-1H-pyrazol-1-yl)ethanone, 8h:



FTIR of 1-(5-(2,4-dimethoxyphenyl)-3-(5-((2-(6-chloropyridin-2-yl)hydrazono)methyl)thiophen-2-yl)-4,5-dihydro-1H-pyrazol-1-yl)ethanone, 8j:



¹H-NMR of 1-(5-(2,4-dimethoxyphenyl)-3-(5-((2-(6-chloropyridin-2-yl)hydrazono)methyl)thiophen-2-yl)-4,5-dihydro-1H-pyrazol-1-yl)ethanone, 8j:



Mass spectrum of 1-(5-(2,4-dimethoxyphenyl)-3-(5-((2-(6-chloropyridin-2-yl)hydrazono)methyl)thiophen-2-yl)-4,5-dihydro-1H-pyrazol-1-yl)ethanone, 8j:

