

Supporting Information

for

Acyloxy Nitroso Compounds as Nitroxyl (HNO)

Donors: Kinetics, Reactions with Thiols and

Vasodilation Properties

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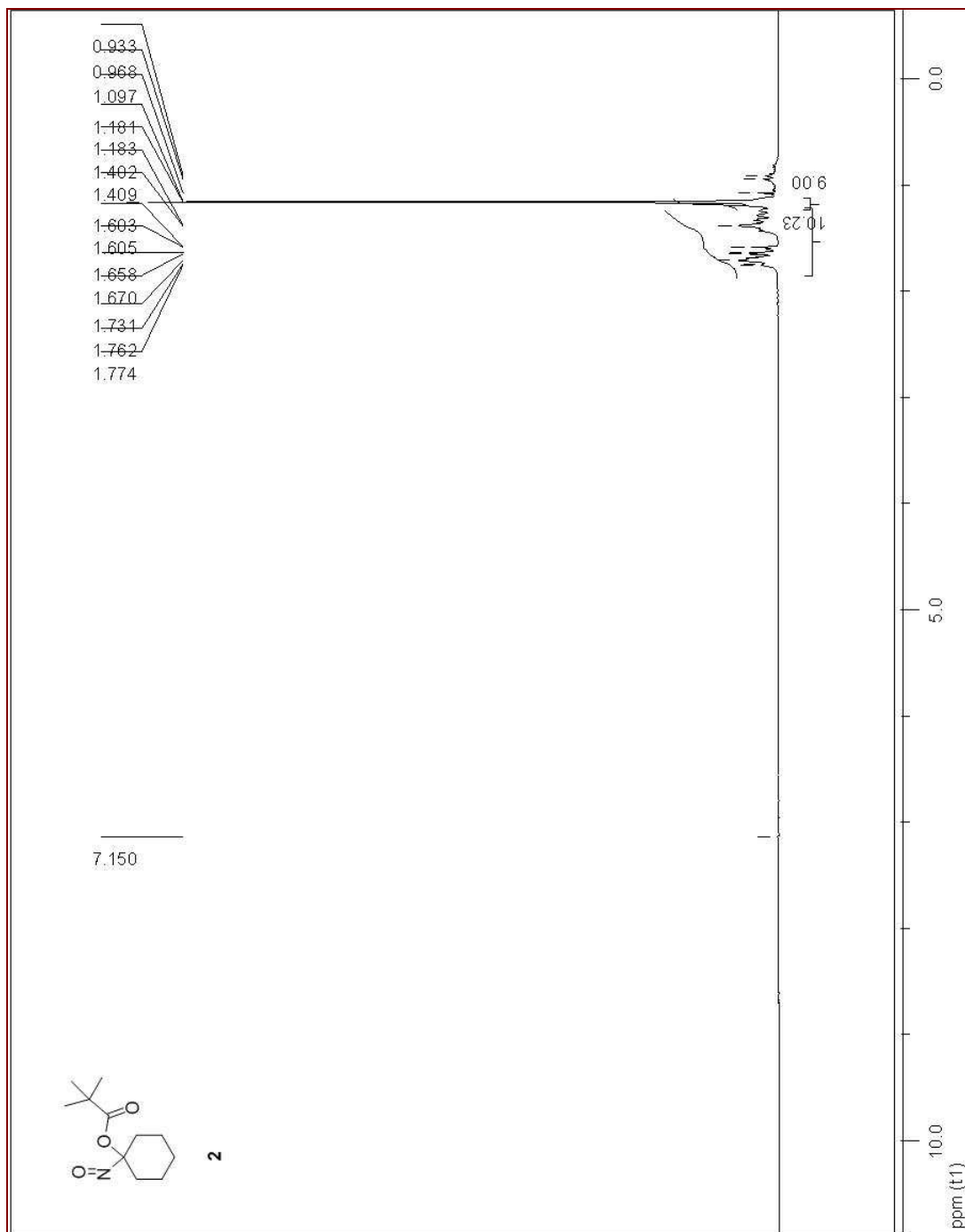


Figure S1. ¹H NMR spectrum for **2**.

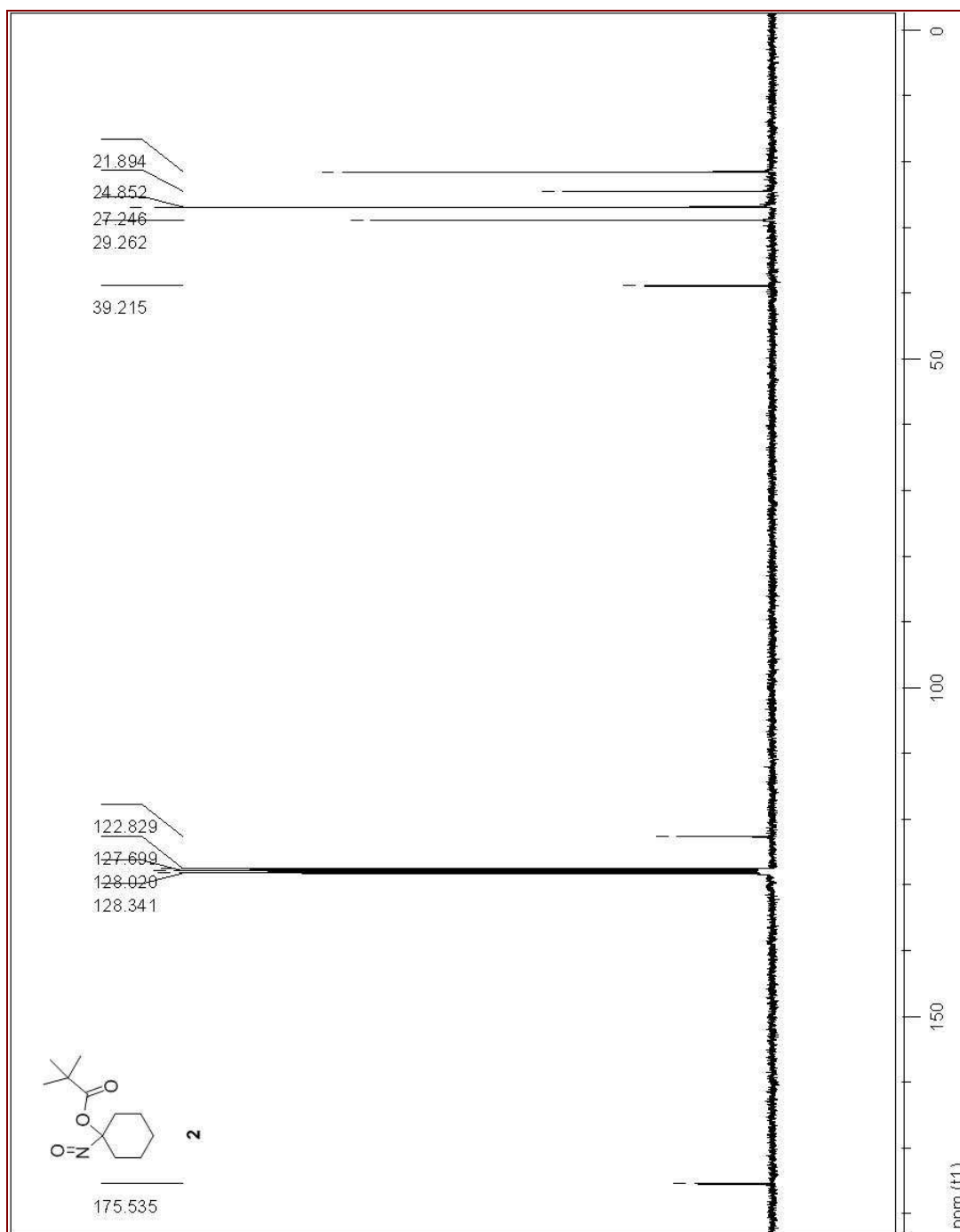
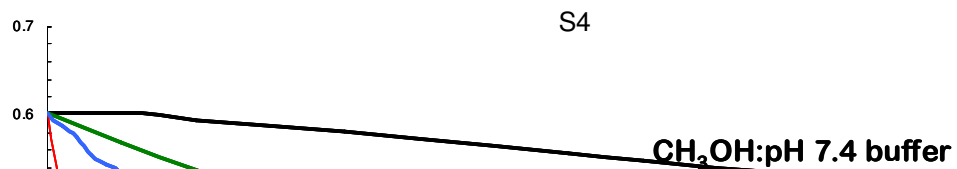


Figure S2. ^{13}C NMR spectrum for **2**.

(A)



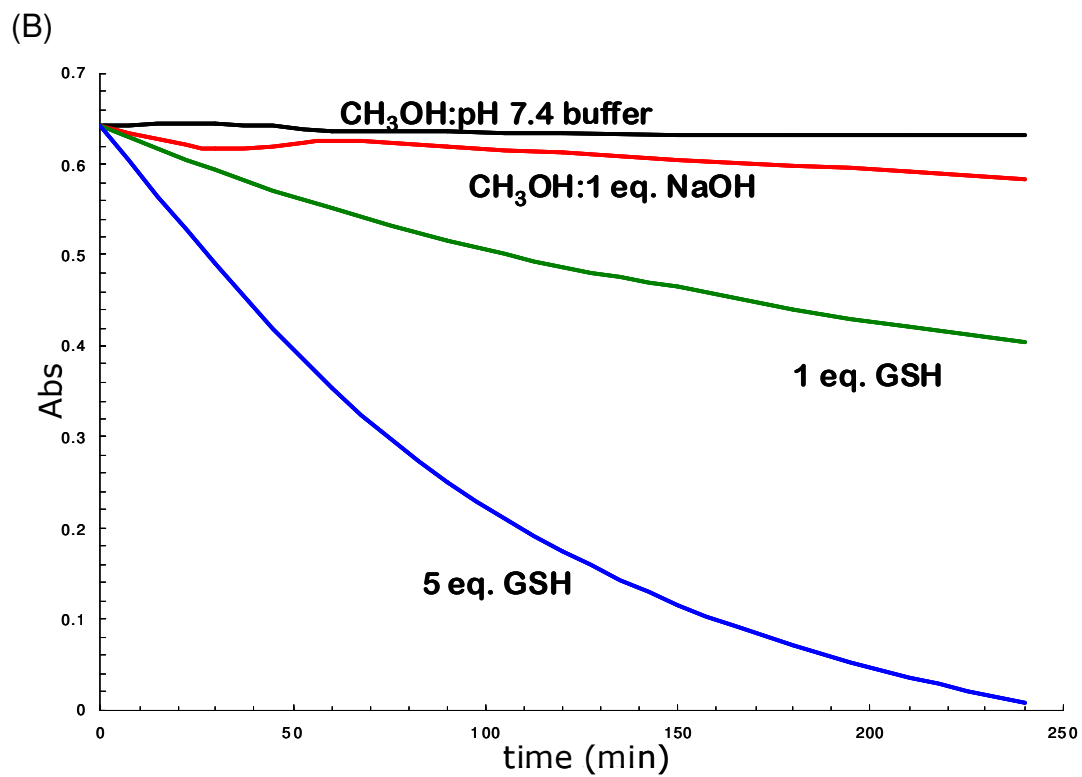
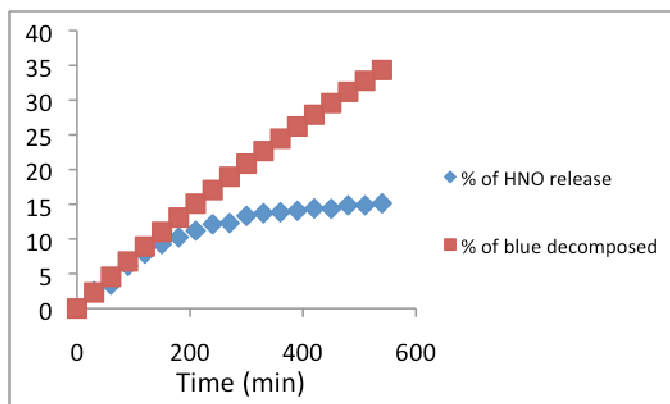


Figure S3. (A) UV-Vis decomposition of **1** (B) UV-Vis decomposition of **2**.

(A)



(B)

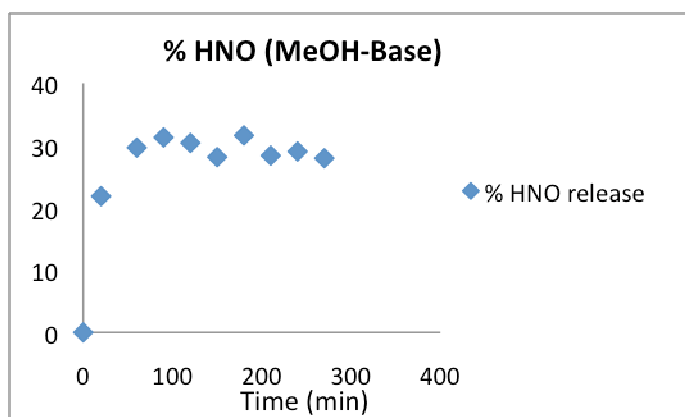
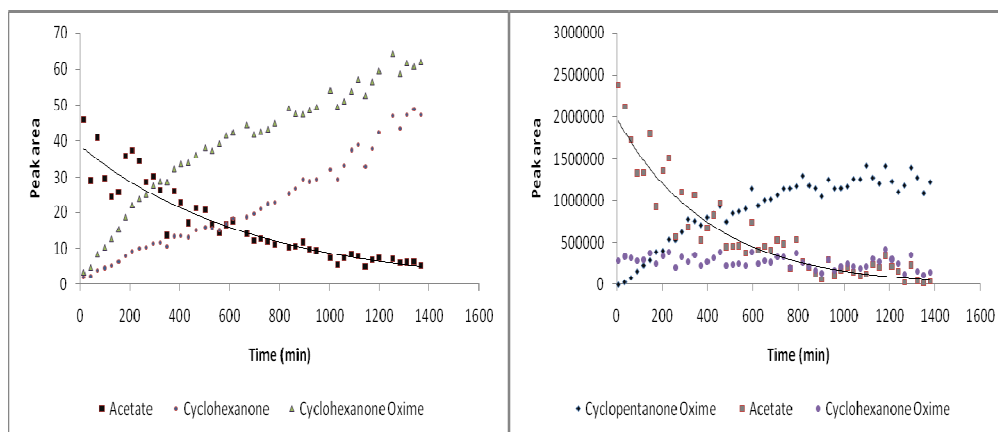
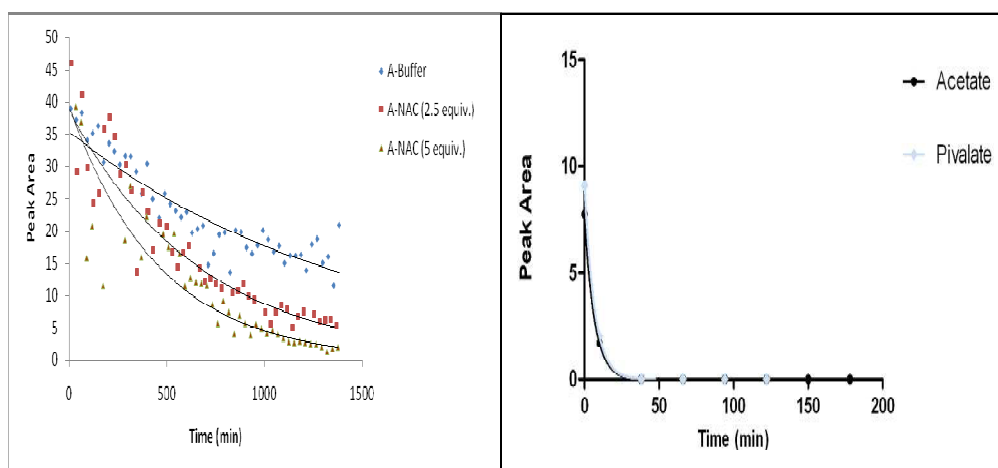


Figure S4. (A) Amount of HNO released and amount of **1** decomposed over time in 0.1 M Tris buffer, pH 7.6 (B) Amount of HNO released and amount of **1** decomposed over time in 0.1 M NaOH.



(A)

(B)



(C)

(D)

Figure S5. Peak areas of the GC-MS spectra of (A) Buffer hydrolysis of **1** with NAC (B) Buffer hydrolysis of **1** with NAC in presence of cyclopentanone (C) Buffer hydrolysis of **1** with different equivalents of NAC (D) Buffer hydrolysis of **1** and **2** with TP.

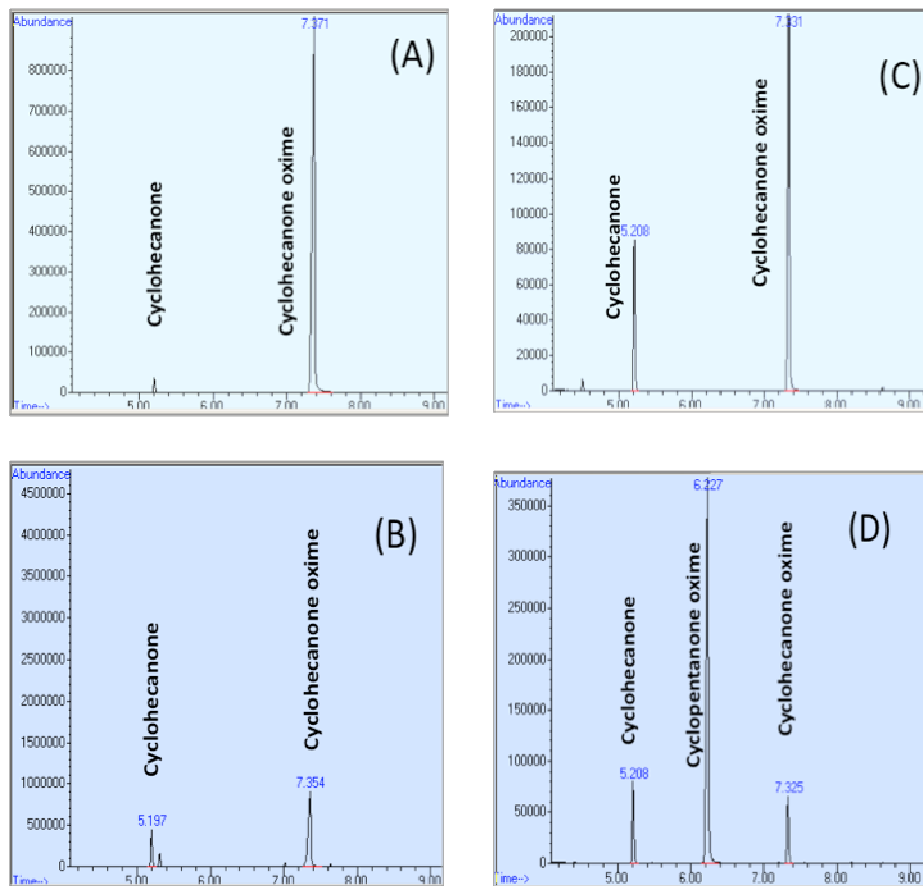


Figure S6. GC-MS spectra of (A) Basic GSH decomposition of **1** (B) Basic GSH decomposition of **1** in presence of cyclopentanone (C) Buffer GSH decomposition of **1** (D) Buffer GSH decomposition of **1** in presence of cyclopentanone.

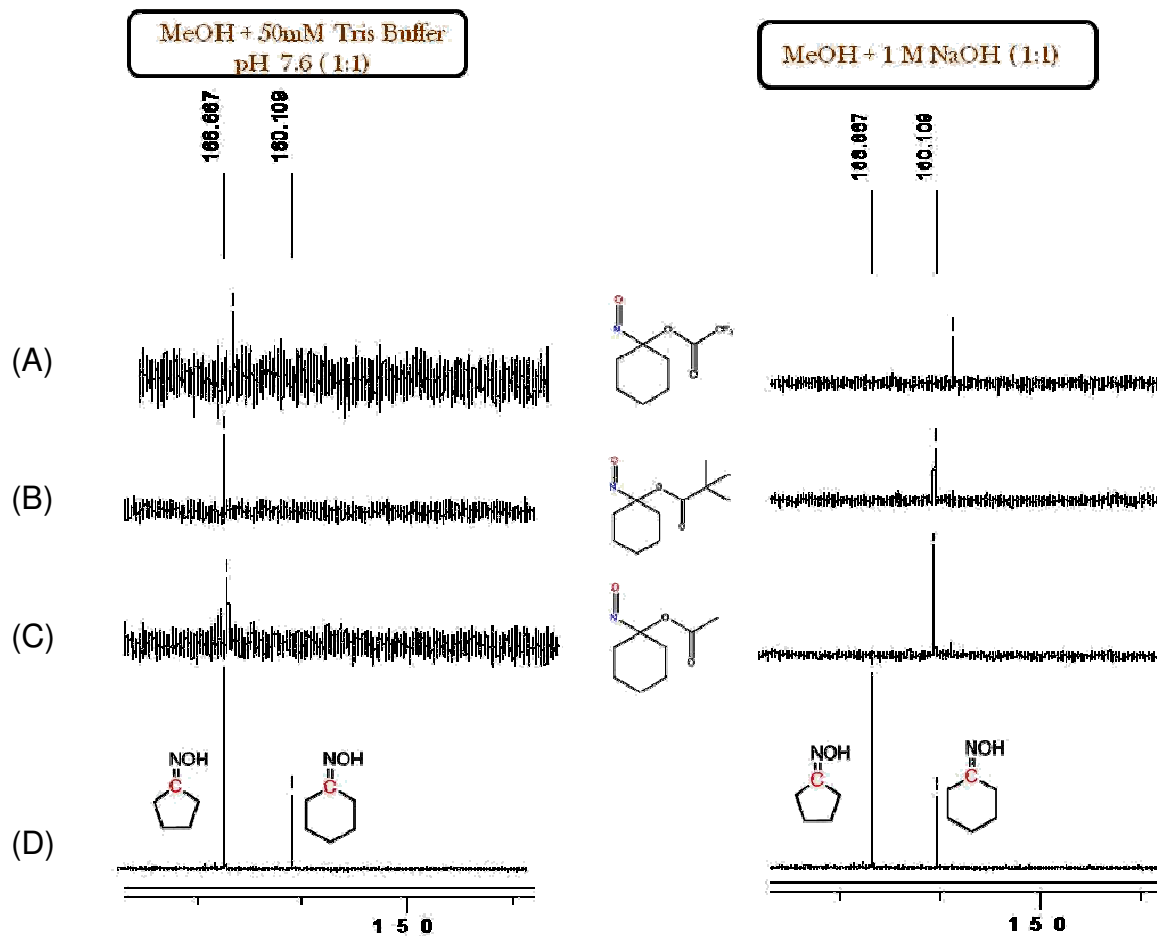
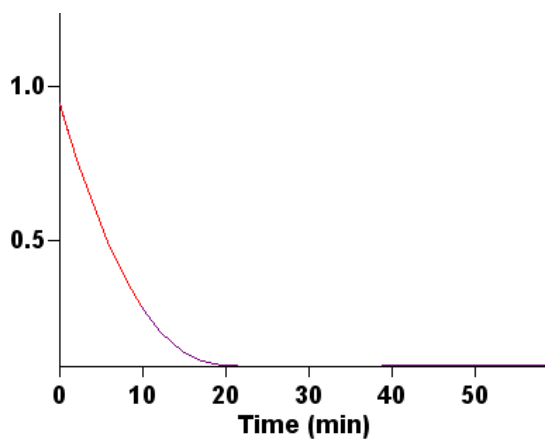


Figure S7. ^{13}C NMR spectra of (A) Reaction of **3** with GSH in presence of cyclopentanone at different conditions (B) Reaction of **2** with GSH in presence of cyclopentanone at different conditions (C) Reaction of **1** with GSH in presence of cyclopentanone at different conditions (D) Standard cyclohexanone oxime and cyclopentanone oxime.

(A)



(B)

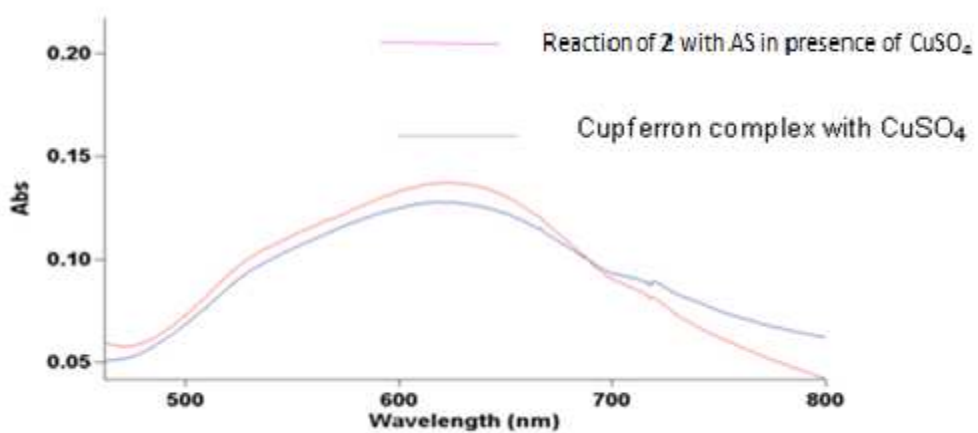


Figure S8. (A) UV-Vis decomposition of **2** upon the addition of Angeli's salt (B) UV-Vis spectrum of the products formed from the reaction of **2** with AS in presence of CuSO₄ compared to that of cupferron with CuSO₄.