Supplemental Information for "A Novel Method for the Presumptive Identification of Heterocyclic Amines of Forensic Interest Using Photoluminescent Copper(I) Iodide Cluster Compounds"

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Fig. S1 The photoluminescence spectrum of CuI, recrystallized from a saturated acetonitrile solution, has a single emission peak at 420 nm, when excited with 255 nm light.



Fig. S2 The normalized photoluminescence spectra of (a) piperidine, a Culpiperidine cluster, and a 4:1 Cul-piperidine cluster (the 4:1 cluster spectra were used as the reference for comparison with the Cul-piperidine) and (b) piperazine, a Cul-piperazine cluster, and a 4:1 Cul-piperazine cluster.



Fig. S3 The normalized photouminescence spectra of (a) MBZP, a CuI-MBZP cluster, and a 4:1 CuI-MBZP cluster, (b) TBZP, a CuI-TBZP cluster, and a 4:1 CuI-TBZP cluster, (c) 4TFMPP, a CuI-4TFMPP cluster, and a 4:1 CuI-4TFMPP cluster, and (d) 3TFMPP, a CuI-3TFMPP cluster, and a 4:1 CuI-3TFMPP cluster.



Fig. S4 The normalized photoluminescence spectra of (a) DABCO, a CuI-DABCO cluster, and a 4:1 CuI-DABCO cluster and (b) hexamine, a CuI-hexamine cluster, and a 4:1 CuI-hexamine cluster.



Fig. S5 The normalized photoluminescence spectra of (a) quinine and a CuI-quinine cluster, (b) caffeine and a CuI-cluster, and (c) DM and a CuI-DM cluster.



Fig. S6 The photoluminescence spectra of CuI-PCP clusters made with various concentrations of PCP in solution from 2000 ppm to 1 ppm. The red emission bands seen for 100, 10, and 1 ppm are due to vacancy formation and surface oxidation of unreacted CuI.



Fig. S7 Visible fluorescence, under 253.7 nm UVC illumination, of analyte-CuI complexes examined in this manuscript. Samples were prepared by adding a few drops of the analyte dissolved in acetonitrile to CuI powder in each well plate.



Fig. S8 Visible fluorescence, under 253.7 nm UVC illumination, of analyte-CuI complexes examined in this manuscript. Samples were prepared by adding a few drops of the analyte dissolved in acetonitrile to CuI powder in each well plate.



Fig. S9 Visible fluorescence, under 302 nm UVB illumination, of the codeine-CuI complex. A samples of green P-22 commercial phosphor (silver doped zinc sulphide) is included for color reference. Samples were prepared by adding a few drops of the analyte dissolved in acetonitrile to CuI powder in each well plate.