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Supplementary Materials for "Inactivation of Vanadium Bromoperoxidase: Formation of 2-Oxohistidine" by Gretchen E. Meister Winter and Alison Butler*

Figure captions for the Supplementary Materials

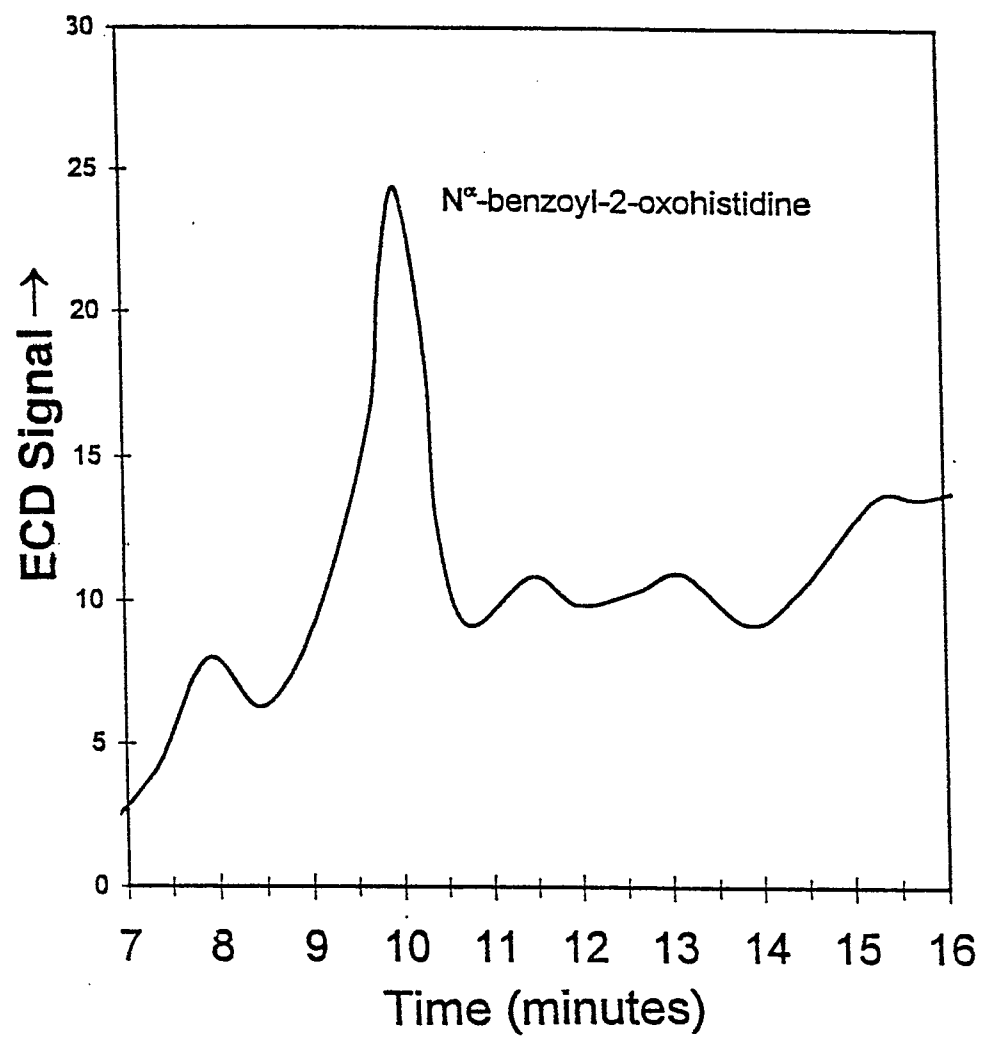
Figure S-1. HPLC-ECD showing the formation of N α -benzoyl-2-oxohistidine catalyzed by V-BrPO. Reaction conditions are as described in the test. The HPLC chromatogram was scanned with a Logitech Scanman 256 using the FotoTouch Color program and digitized using the "Un-Scan-It" program.

Figure S-2. HPLC-ECD showing the formation of N α -benzoyl-2-oxohistidine in the *cis*-VO $_2^+$ catalyzed oxidation of bromide by hydrogen peroxide. Conditions: 0.4 mM NH $_4$ VO $_3$, 5.0 mM H $_2$ O $_2$, 0.2 M KBr and 1.0 mM N α -benzoylhistidine in 50 mM HClO $_4$. The reaction was allowed to proceed for 1 hr before the HPLC-ECD was run. The HPLC chromatogram was digitized as described in Figure S-1.

Figure S-3. HPLC-ECD showing the formation of N α -benzoyl-2-oxohistidine in the MoO(O $_2$) $_2$ (ox) $^{2-}$ (ox $^{2-}$ is oxalate)-catalyzed oxidation of bromide by hydrogen peroxide. Reaction conditions: 1.5 mM K $_2$ MoO(O $_2$) $_2$ (ox), 5.0 mM H $_2$ O $_2$, 0.1 M KBr and 1.5 mM N α -benzoylhistidine in 90 mM oxalate buffer, pH 5.0. The reaction was allowed to proceed for 3 hr before HPLC-ECD analysis. The HPLC chromatogram was digitized as described in Figure S-1.

Figure S-4. HPLC-ECD showing the formation of N α -benzoyl-2-oxohistidine in the reaction of HOBr (1.0 mM) and N α -benzoylhistidine in acid (0.05 M HClO $_4$). The HPLC chromatogram was digitized as described in Figure S-1.

Figure S-1



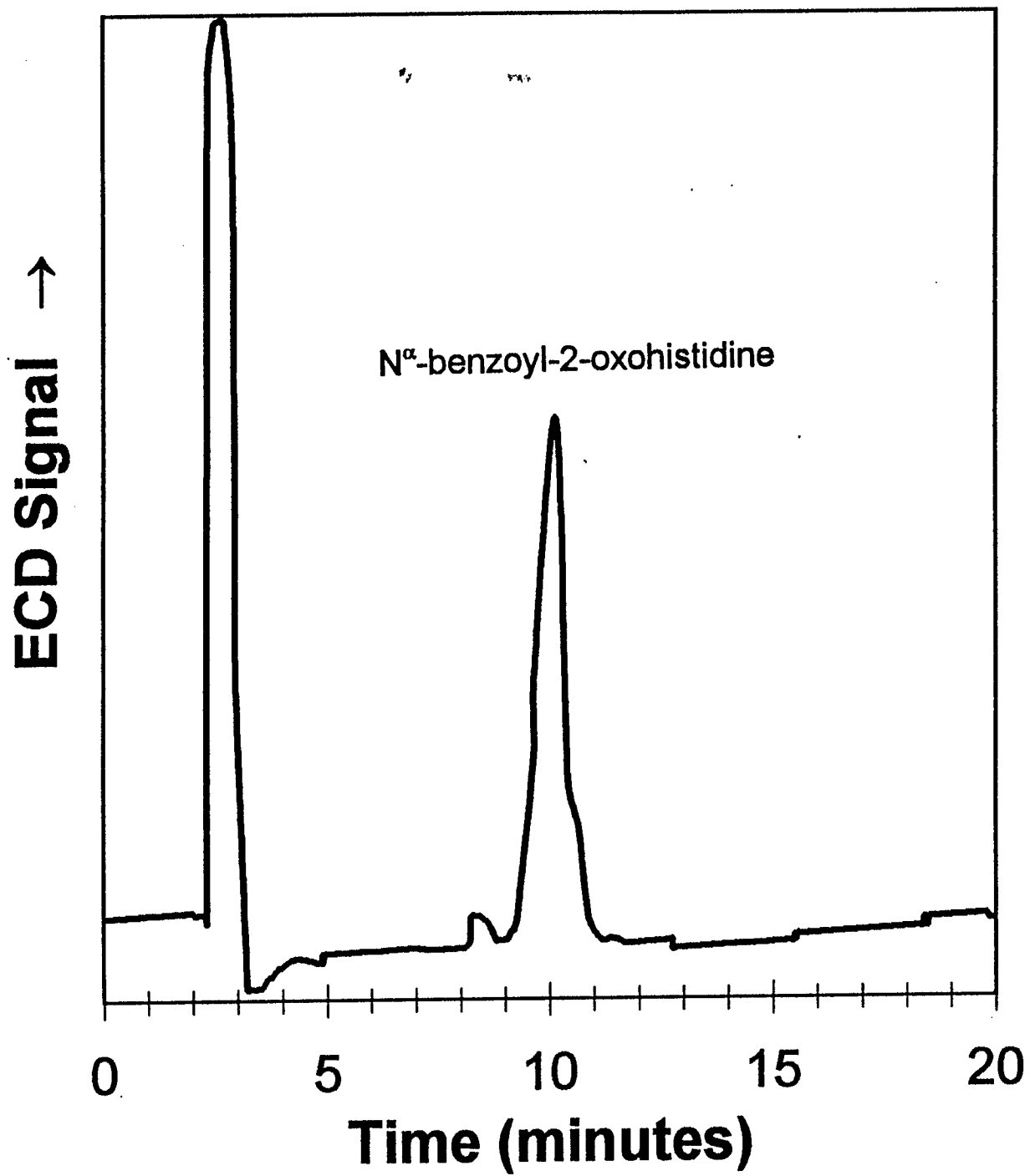


Figure S-2

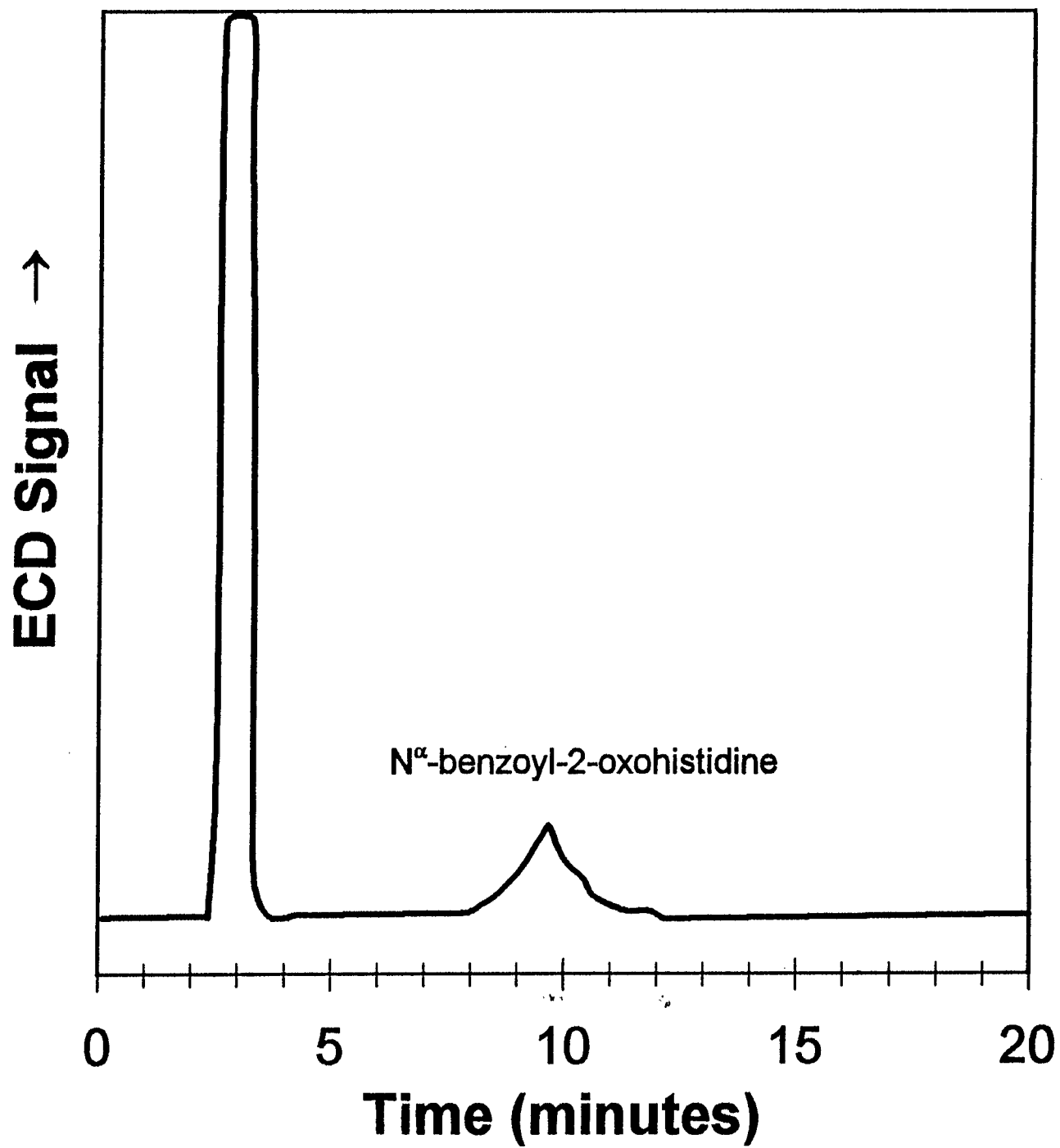


Figure S-3

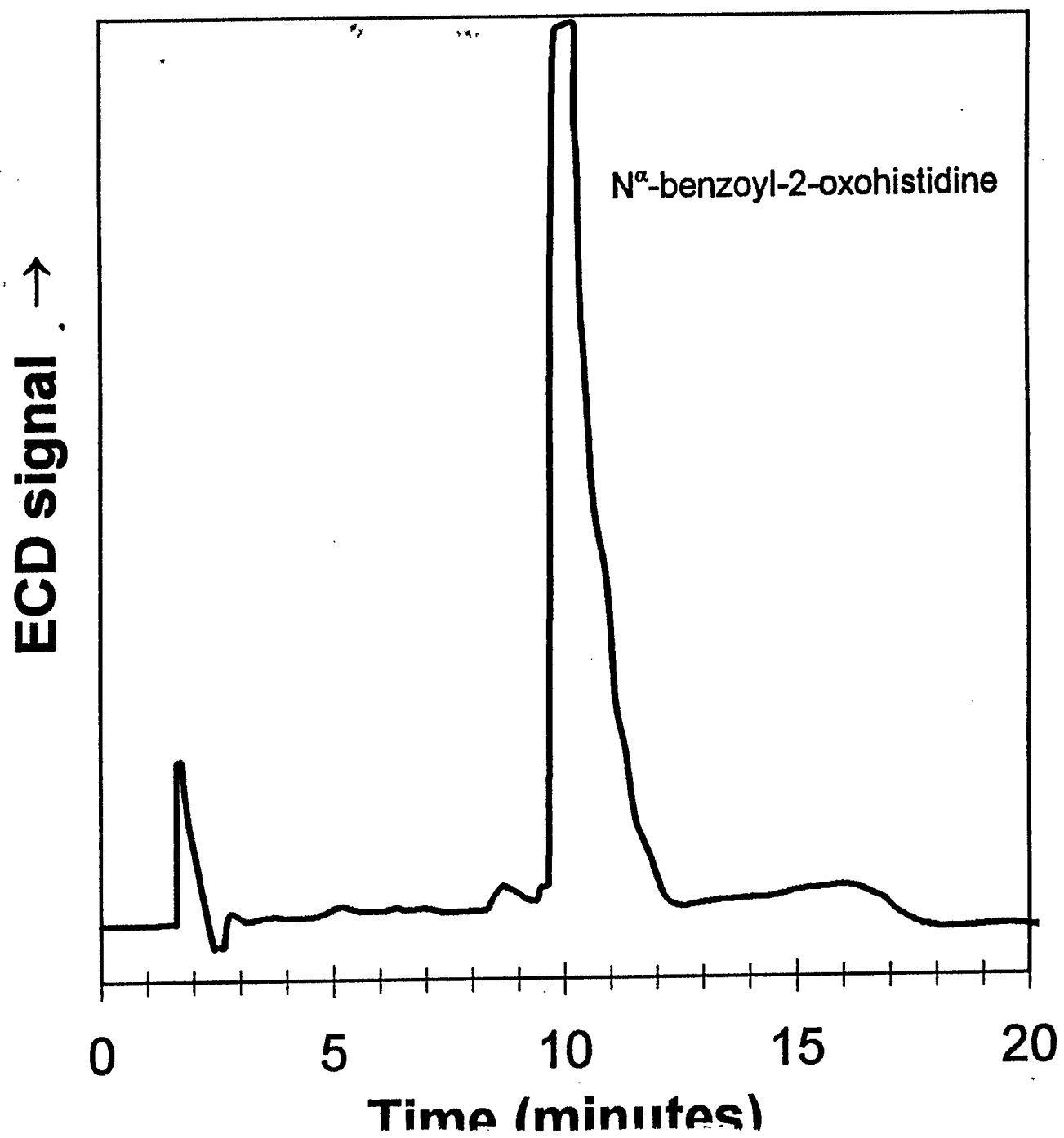


Figure S-4