

*Supplementary Materials*

## **The Highly Effective Electrochemical Oxidation of Substituted Benzyl Alcohols in A Biphasic Medium Is Mediated by Bromate on A Platinum Electrode**

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### **Specifications of the Benzaldehyde**

Different spectroscopic investigations, including UV, FTIR, and  $^1\text{H}$ -NMR, were used to characterize the electrolyzed product. The percentage of product yield was estimated using HPLC data.

### **Details about Benzaldehyde's spectrum**

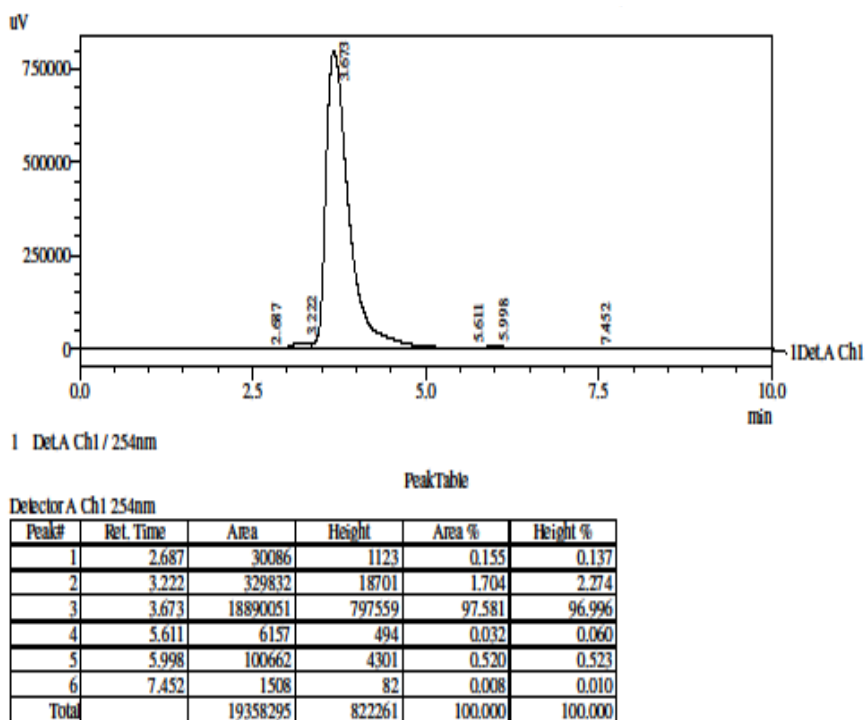
Brown oil, 97% yield

HPLC retaining Benzaldehyde's time is 2.45 minutes.

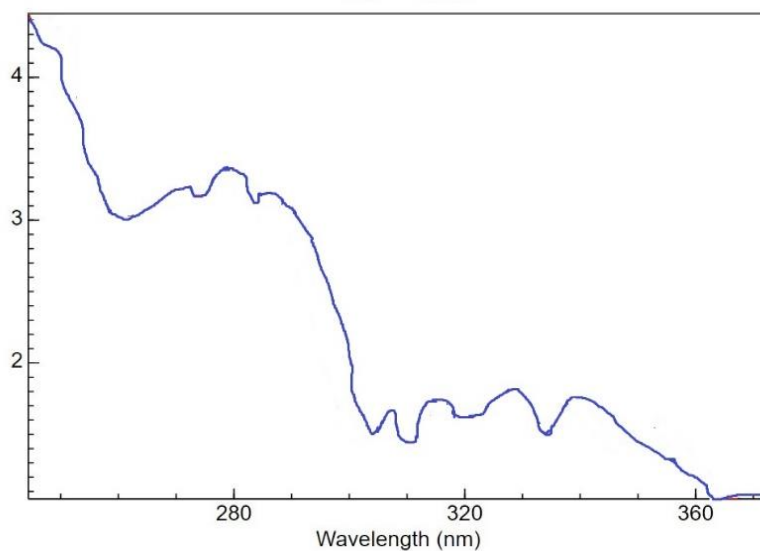
SPECTRUM OF UV: The maximum wavelength of benzaldehyde in water can be seen in the UV spectrum at 245 nm.

Spectrum of FTIR:  $\text{cm}^{-1}$  v: 827 (aromatic C-H bending), 1598 (aromatic C-H bending), 1702 (frequency of aldehydic C=O stretching), 2819-2737 (frequency of aldehydic C-H stretching), and 3065 (aromatic C-H stretching)

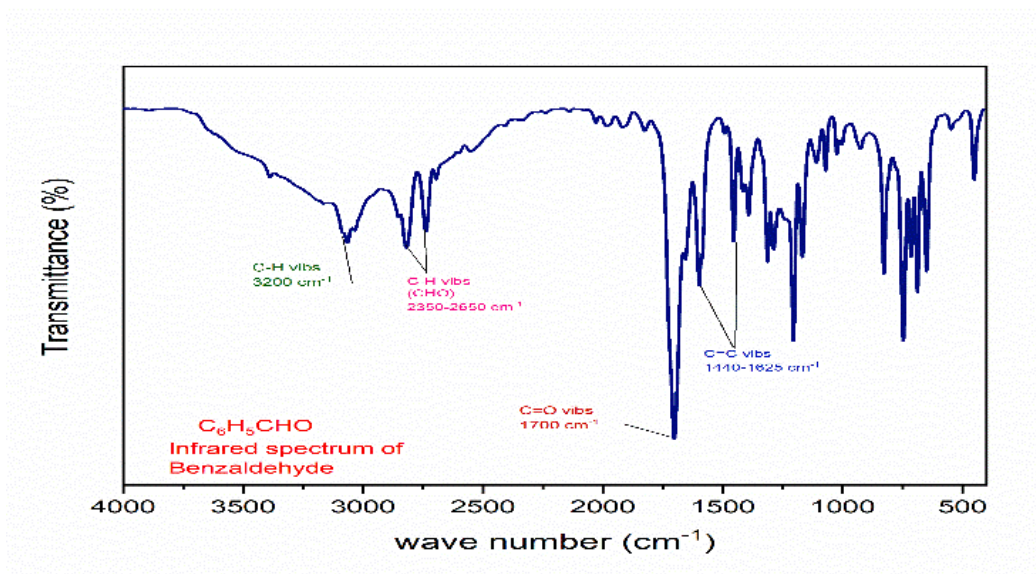
400 MHz,  $\text{CDCl}_3$  at  $^1\text{H}$ -NMR, 10.02 (ppm) (1H, S) (O=C-H) 7.90-7.87(2H, t, benzene-H) 1H,t,benzene=H, 7.66-7.617.56-7.51(2H,t,benzene-H)



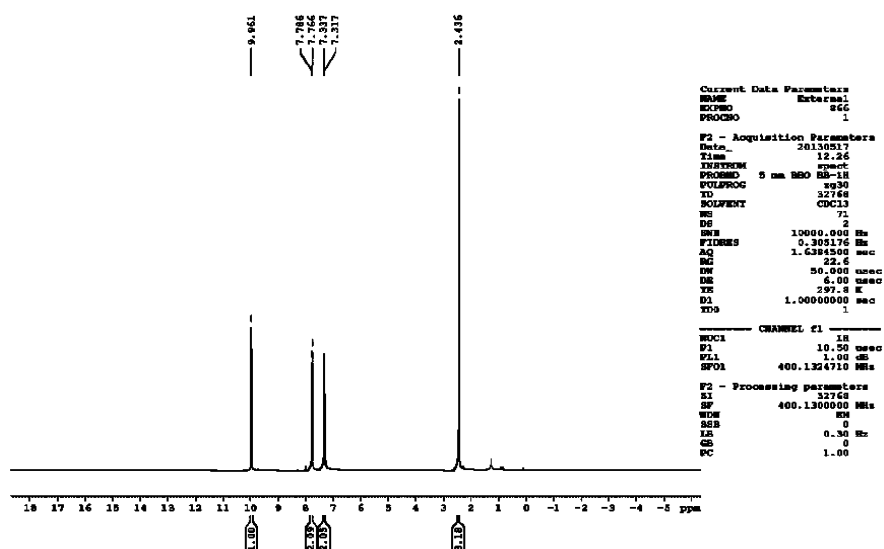
**Figure 1S.** HPLC data of benzaldehyde



**Figure 2S.** UV Spectrum of benzaldehyde



**Figure 3S.** FT-IR Spectrum of benzaldehyde



**Figure S4.**  $^1\text{H}$ -NMR Spectrum of benzaldehyde