

## *Supporting Information*

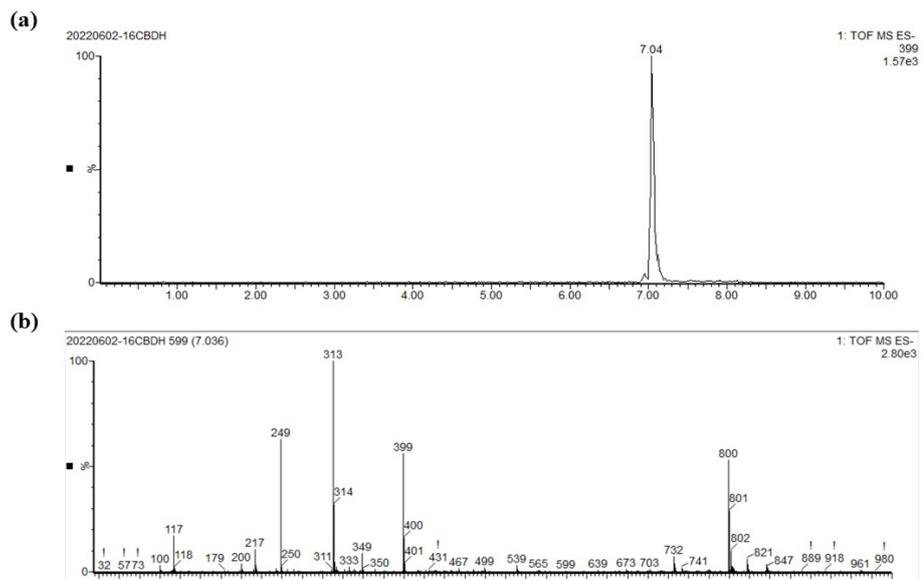
### **Development of a gold nanoparticle-based lateral-flow strip for the detection of cannabidiol in functional beverages**

#### **Contents:**

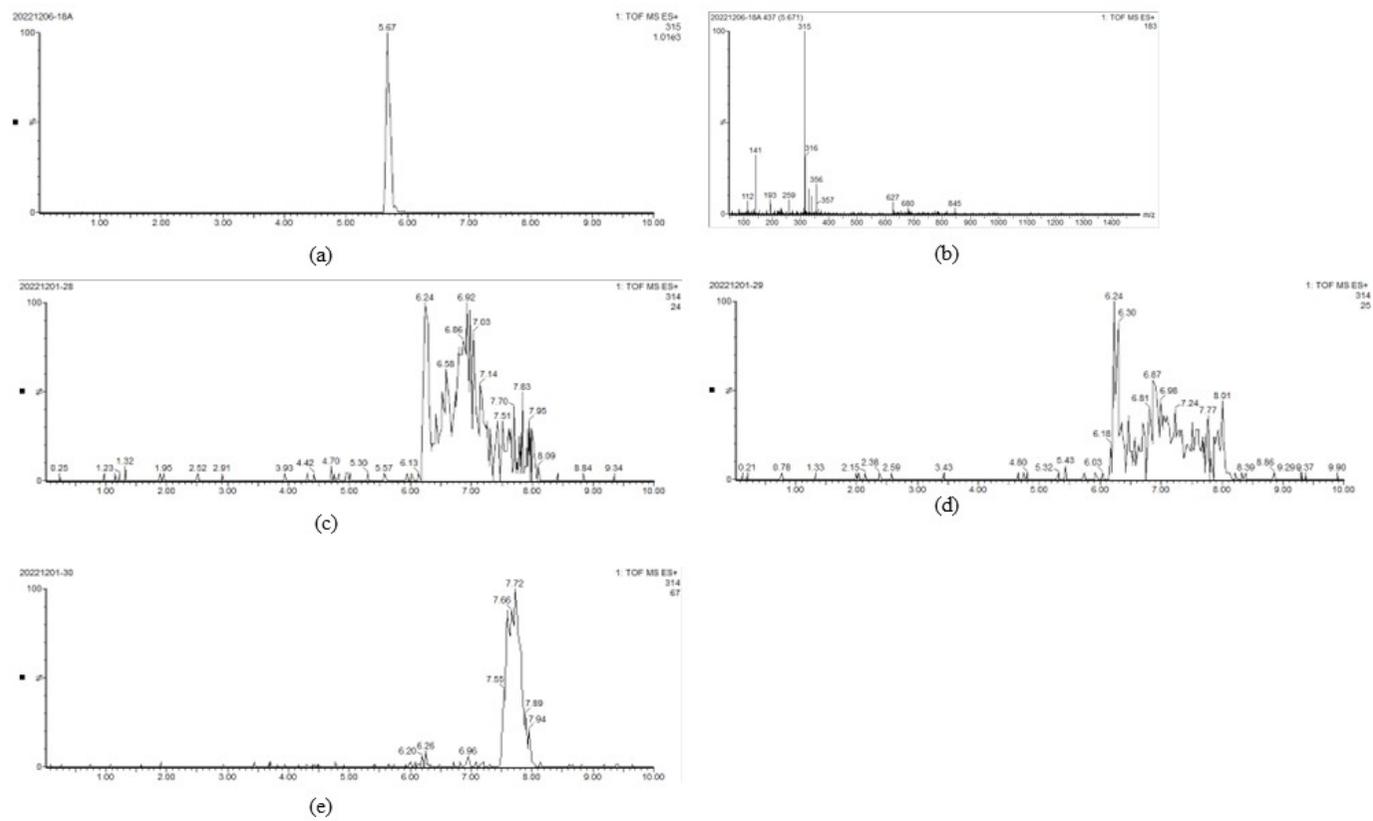
**Fig.S1.** The LC-MS characterization of CBDH. (a) EIC of CBDH. (b) MS spectrum of CBDH.

**Fig.S2.** The LC-MS spectrums of cannabidiol negative three functional beverage samples.

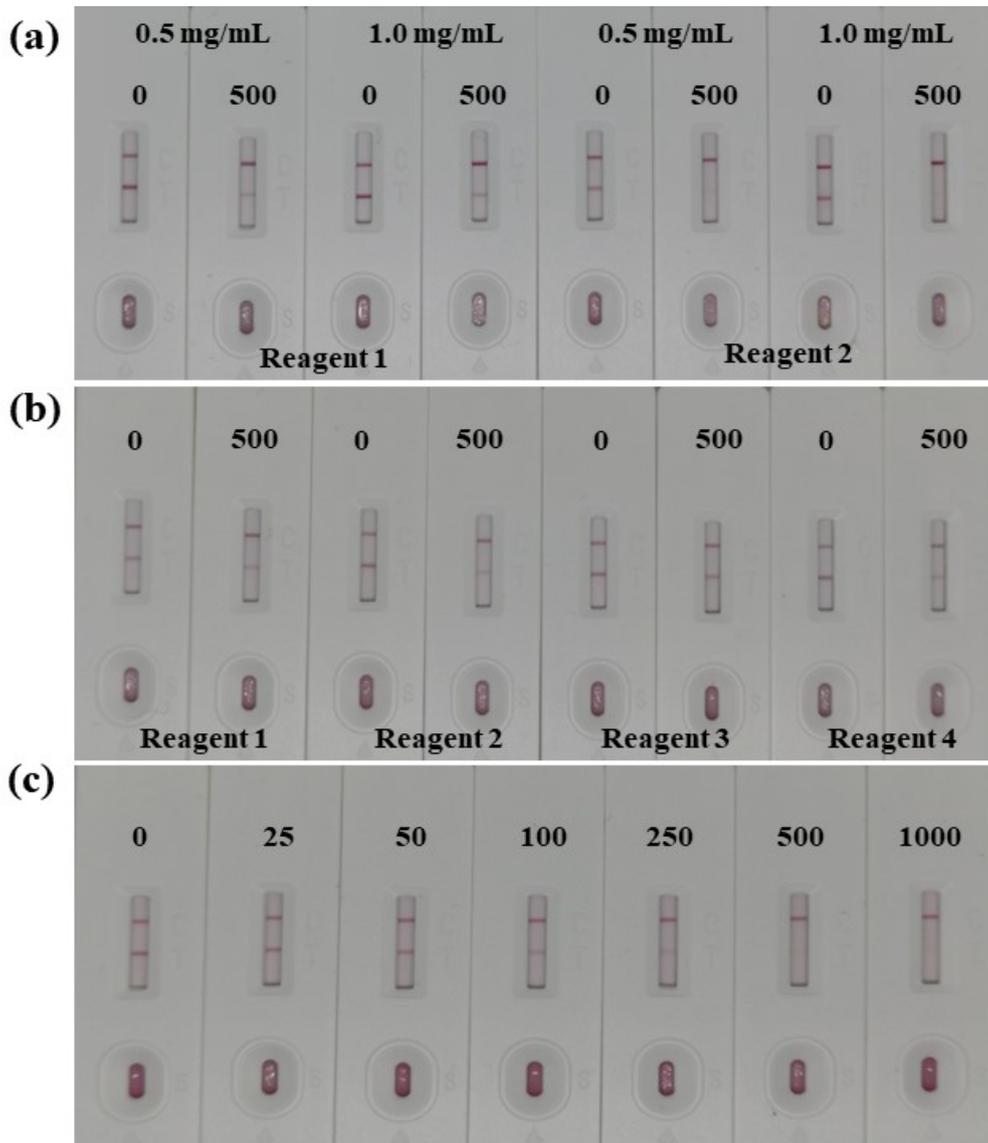
**Fig.S3.** Optimization of the immunochromatographic assay strip. (a) The optimization of the antigen and the colloidal gold-mAb concentration (Reagent 1, 5 µg/mL mAb; Reagent 2, 10 µg/ mL and detection using 0.01 mol/L PBS with 0 ng/mL and 100 ng/mL). (b) ICA strip with different running basic buffer and the reagent 1, 2, 3, 4, which represent Tween-20, PEG, Triton X-100 and On-870, and detection using 0.01 mol/L PBS with 0 ng/mL and 500 ng/mL respectively). (c) Sensitivity of the strips with the CBD standard (0, 25, 50, 100, 250, 500, 1000 ng/ mL).



**Fig. S1.** The LC-MS characterization of CBDH. (a) EIC of CBDH. (b) MS spectrum of CBDH.



**Fig. S2.** The LC-MS spectrums of cannabidiol negative three functional beverage samples.



**Fig.S3.** Optimization of the immunochromatographic assay strip. (a) The optimization of the antigen and the colloidal gold-mAb concentration (Reagent 1, 5  $\mu\text{g}/\text{mL}$  mAb; Reagent 2, 10  $\mu\text{g}/\text{mL}$  and detection using 0.01 mol/L PBS with 0 ng/mL and 100 ng/mL). (b) ICA strip with different running basic buffer and the reagent 1, 2, 3, 4, which represent Tween-20, PEG, Triton X-100 and On-870, and detection using 0.01 mol/L PBS with 0 ng/mL and 500 ng/mL respectively). (c) Sensitivity of the strips with the CBD standard (0, 25, 50, 100, 250, 500, 1000 ng/ mL).