

**Fig 1. Operation steps of HCoV-MS method.** Samples could be nasopharyngeal swabs, sputum, and alveolar lavage fluid.



d

c

b

a

**Fig 2. The limit of detection of the part of target genes.** (a) 1 copy/reaction. (b) 2.5 copies/reaction. (c) 5 copies/reaction. (d) 10 copies/reaction. The red arrow in the figure refers to extended or unextended primer.



**Fig 3. MS peak of the MPE probes.** (a) MS peaks of the D614G probes. (b) The zoomed MS peaks of the D614G probes (extended with G).