1. **No.**

   FP01812223

2. **Title**

   Study of Measurement of Aerosol Compounds in the Enviromental Smoke of e-Cigarettes and heat-not-burn Cigarettes

3. **Period**

   2018-2019

4. **Summary**

   This study aimed to investigate influence of puffing protocols on the emission amount of chemicals in the mainstream smoke of electronic cigarettes and heat-not-burn tobaccos for further proposal of consistent puffing protocol which can be applied to toxicology, environmental and risk assessment. The target substance was set for carbonyl compounds as a common index and measured by DNPH-HPLC methodology coupled with automated vaping machine. The results showed the emission levels of carbonyl compounds in the mainstream of the heat-not-burn tobaccos, which included formaldehyde, acetaldehyde, acetone and so on, significantly varied with HCI, ISO and CORESTA protocols. A slight influence of puff profile was also found. This is probably because the carbonyl compounds are produced from glycerol and propylene glycol during the aerosol generation in the devices and/or extracted from tobacco leaves. Therefore, the puffing protocol should be carefully considered for evaluating the hazardous effects of the mainstream smoke of the novel media.