



Figure S1. Scanning electron microscopy images of polymeric microparticles formulated with mannitol and the extracts obtained by ultrasound assisted extraction (UAE) for Perle and Nugget varieties from *H. lupulus*. Note: MP2, MP5 and MP10 mean microparticles with mannitol at 2%, 5% and 10% (w/w), respectively. The magnitudes of the images are x8,000 and small image x500.