

1. 敘述水活性(water activity, A_w)之定義，及 A_w 對微生物（包括 halophilic, osmophilic, xerophilic）生長之影響。(10%)
2. Describe the principle of using a combination of intrinsic and extrinsic factors in the prevention of *Clostridium botulinum* growth in sausage. (10%)
3. List and discuss the significance of: (1) psychrotropic bacteria in raw milk, (2) high thermotolerant bacteria in raw milk to be used for pasteurized grade A milk, and (3) >10 coliforms per milliliter in pasteurized grade A milk. (15%)
4. Describe the sequential growth of microorganisms during the natural fermentation of sauerkraut and grape wine. (15%)
5. 請分別舉出利用細菌、真菌所開發之農產加工品各一種(葡萄酒除外)，須包括該微生物之完整學名，並簡述利用該微生物之理由，與該微生物有何可改進之空間可使得該產品不論在製程或品質上得以因此而改善。(30%)
6. 請描述生命學中 Three Domains 觀念，並簡述如何利用自然界中極端環境微生物多樣性資源，於食品微生物乃至蔬果加工之應用。(20%)

試題隨卷繳回