**中五化學 熱力學**

答案

**利用標準生成焓變計算標準反應焓變**

已知：

1. [NH3(g)] = -46.0 kJ mol-1
2. [NO2(g)] = +33.9 kJ mol-1
3. [H2O(l)] = -285.8 kJ mol-1

計算以下反應的標準反應焓變：

4NH3(g) + 7O2(g) 4NO2(g) + 6H2O(l)

4NH3(g) + 7O2(g)  4NO2(g) + 6H2O(l)

**路線1**

**路線2**

[NH3(g)]

[H2O(l)]

[NO2(g)]

2N2(g) + 6H2(g) + 7O2(g)

= ([NO2(g)] x \_\_4\_\_) + ([H2O(l)] x \_\_6\_\_) + (-[NH3(g)] x \_\_4\_\_)

= (+33.9 x 4) + (-285.8 x 4) + (+46.0)

= -1395.2 kJ mol-1