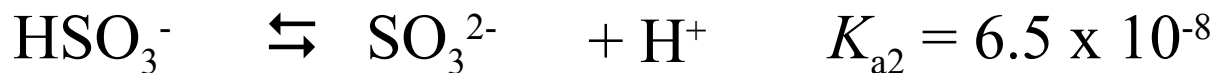
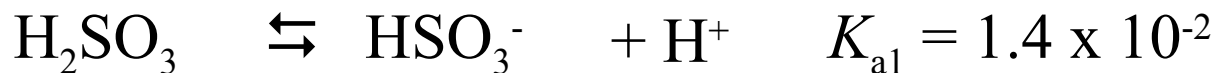


# Polyprotic Acid



2 equivalents of base

0.10 M  $\text{H}_2\text{SO}_3$

0.1 M NaOH

**half-way point**  $\text{pH} = \text{p}K_a$

$$-\log 1.4 \times 10^{-2} = 1.85$$

$$-\log 6.5 \times 10^{-8} = 7.19$$

**1<sup>st</sup> equivalence point**

$$\frac{1.84 + 7.19}{2} = 4.52$$

**2<sup>nd</sup> equivalence point**

conjugate base,  $\text{SO}_3^-$

buffering regions

