

# Student Data Sheet

Data:

Percent yield: Mass of starting material: \_\_\_\_\_

Mass of dry product: \_\_\_\_\_

Percent yield: \_\_\_\_\_

	Maleic acid		Fumaric acid	
	Literature*	Experimental	Literature*	Experimental
Acid Dissociation Constant $k_1$		—		—
Acid Dissociation Constant $k_2$		—		—
pH test				
Solubility in $H_2O$				
Melting point (optional)				—

\*Obtain from reference manual.

## Questions:

1. Would the isomerization of maleic acid occur if the reaction were performed in neutral water?
  
2. What is the function of the hydrochloric acid in the isomerization of maleic acid?
  
3. What are some possible sources of error in the preparation and isolation of fumaric acid?
  
4. Explain how the results from the analysis show that the product is indeed fumaric acid and not maleic acid.