Properties

1. **Electrophoretic Purity:**
   - Single band on SDS-gel electrophoresis (MW ~ 64,000)
   - One major band on isoelectric focusing (pI ~ 6.5)

2. **Specific Activity:**
   - 220 U/mg protein (on polygalacturonic acid) at pH 6.0 and 60°C;
   - ~ 88 U/mg protein (on polygalacturonic acid) at pH 6.0 and 40°C
   
   One Unit of exo-polygalacturonase activity is defined as the amount of enzyme required to release one μmole of reducing-sugar equivalents per minute from polygalacturonic acid (10 mg/mL) in potassium phosphate buffer (100 mM) pH 6.0.

3. **Specificity:**
   Hydrolysis of polygalacturonic acid from the non-reducing end, releasing digalacturonate.

4. **Physicochemical Properties:**
   Recommended conditions of use are at pH 6.0-7.0 and up to 60°C
   - pH Optima: 6.0
   - pH Stability: 4.0-9.0 (> 75% control activity after 24 h at 4°C)
   - Temperature Optima: 60°C (10 min reaction)
   - Temperature Stability: up to 50°C (diluted with 1 mg/mL BSA)

5. **Storage Conditions:**
   The enzyme is supplied as an ammonium sulphate suspension in 0.02% (w/v) sodium azide and should be stored at 4°C. For assay, this enzyme should be diluted in potassium phosphate buffer (100 mM), pH 6.0 containing 1 mg/mL BSA. Swirl to mix the enzyme immediately prior to use.

6. **References:**
7. EXPERIMENTAL DATA:

**pH Optima**

![Graph showing pH Optima]

**pH Stability**

![Graph showing pH Stability]

**Thermal Optima**

![Graph showing Thermal Optima]

**Thermal Stability**

![Graph showing Thermal Stability]