Table S1. Purification of FAE from the solid-state culture of *X. polymorpha*.

| Purification steps     | Total activity (U) | Total protein (mg) | Specific activity (U mg\(^{-1}\)) | Yield (%) | Purification (fold) |
|------------------------|--------------------|--------------------|-----------------------------------|-----------|---------------------|
| Crude extract          | 57.4               | 910.8              | 0.06                              | 100       | 1.0                 |
| Ultrafiltration        | 54.5               | 620.5              | 0.09                              | 94.9      | 1.5                 |
| DEAE Sepharose         | 43.9               | 68.2               | 0.64                              | 76.5      | 10.7                |
| Superdex Sepharose     | 20.6               | 11.5               | 1.79                              | 35.9      | 29.8                |
| Mono Q                 | 4.9                | 1.9                | 8.80                              | 8.5       | 146.7               |
Figure S1. SDS-PAGE (left) and native IEF (right) of GH78 glycoside hydrolase of *X. polymorpha* (lanes 2 & 3) after SEC-HPLC; Protein maker (lanes 1 & 4).