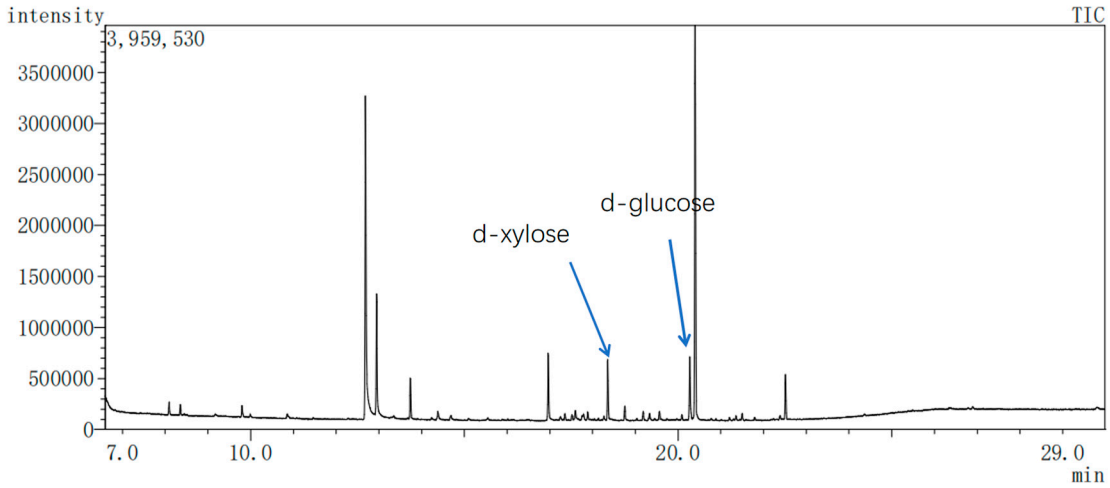



**Figure A1** Total Ion Flow Chromatogram

**Table S1**. molecular docking free binding energy value

| Macromolecule | Ligand | Binding energy（kcal/moL） |
|---|---|---|
| D-Galactopyranose | Anthocyanin | -1.6 |
| | Quercetin | -1.4 |
| | p-Coumaric acid | -1.4 |
| D-Glucopyranose | Anthocyanin | -1.6 |
| | Quercetin | -2.1 |
| | p-Coumaric acid | -1.4 |
| D-xylopyranose | Anthocyanin | -1.3 |
| | Quercetin | -1.7 |
| | p-Coumaric acid | -1.2 |