**Quality control of Gastrodia elata by high-performance liquid chromatography with fluorescence detection (HPLC-FLD) and principal component analysis (PCA) and hierarchical cluster analysis (HCA)**

**Bocheng Yu** a**, Zhen Li** a**, Jinyi Wu** a**, Jiamin Ying** a**, Yuqing Tang** a**, Bingchu Wu** a**, Chunlan Tang** a**,\*, Jinyan Xu** b**,\***

a Department of Preventative Medicine, Zhejiang Provincial Key Laboratory of Pathological and Physiological Technology, Medical School of Ningbo University, Ningbo, Zhejiang 315211, China;

b The Affiliated hospital of medical School of Ningbo University, Ningbo, Zhejiang 315020, China

\*Corresponding Author: 818 Fenghua Road, Ningbo, Zhejiang Province, 315211, China

E-mail: [cHYPERLINK "mailto:chunlant@163.com"hunlant@163.com](mailto:chunlant@163.com) (Chunlan Tang)

Tel.: + 86-574-87609894; Fax: + 86-574-87608638

Table S1 Intra-day precision and one-day stability of gastrodin, gastrodigenin, parishin E, parishin B and parishin

|  |  |  |  |
| --- | --- | --- | --- |
| Peak number | Retention time | Intra-day precision (%) | One-day stability (%) |
| Gastrodin | 7.84 | 1.35 | 2.03 |
| Gastrodigenin | 8.22 | 1.69 | 2.28 |
| Parishin E | 22.82 | 3.39 | 3.16 |
| Parishin B | 27.59 | 2.25 | 3.71 |
| Parishin | 30.87 | 4.96 | 2.70 |

Table S2 Relative retention time of each peak versus the reference peak 3

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Relative retention time | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| A1 | 5.08 X10-1 | 5.43 X10-1 | 1.00 | 1.71 | 1.89 | 2.23 | 2.65 | 2.79 | 3.37 | 3.52 | 3.65 | 3.77 |
| A2 | 5.06 X10-1 | 5.43 X10-1 | 1.00 | 1.71 | 1.91 | 2.23 | 2.64 | 2.78 | 3.37 | 3.52 | 3.65 | 3.77 |
| A3 | 5.08 X10-1 | 5.43 X10-1 | 1.00 | 1.71 | 1.91 | 2.23 | 2.64 | 2.78 | 3.36 | 3.52 | 3.65 | 3.76 |
| A4 | 5.05 X10-1 | 5.43 X10-1 | 1.00 | 1.71 | 1.91 | 2.23 | 2.65 | 2.79 | 3.37 | 3.52 | 3.66 | 3.77 |
| A5 | 5.09 X10-1 | 5.43 X10-1 | 1.00 | 1.71 | 1.89 | 2.23 | 2.64 | 2.79 | 3.37 | 3.52 | 3.65 | 3.77 |
| A6 | 5.05 X10-1 | 5.43 X10-1 | 1.00 | 1.71 | 1.91 | 2.23 | 2.64 | 2.78 | 3.36 | 3.52 | 3.65 | 3.76 |
| A7 | 5.07 X10-1 | 5.43 X10-1 | 1.00 | 1.71 | 1.92 | 2.23 | 2.65 | 2.79 | 3.37 | 3.52 | 3.65 | 3.77 |
| B1 | 5.07 X10-1 | 5.43 X10-1 | 1.00 | 1.71 | 1.91 | 2.23 | 2.64 | 2.79 | 3.37 | 3.52 | 3.65 | 3.77 |
| B2 | 5.09 X10-1 | 5.43 X10-1 | 1.00 | 1.71 | 1.89 | 2.23 | 2.64 | 2.78 | 3.36 | 3.52 | 3.65 | 3.77 |
| B3 | 5.06 X10-1 | 5.39 X10-1 | 1.00 | 1.70 | 1.88 | 2.21 | 2.62 | 2.76 | 3.34 | 3.49 | 3.62 | 3.73 |
| B4 | 5.07 X10-1 | 5.41 X10-1 | 1.00 | 1.71 | 1.89 | 2.23 | 2.64 | 2.78 | 3.36 | 3.51 | 3.64 | 3.75 |
| B5 | 5.05 X10-1 | 5.41 X10-1 | 1.00 | 1.71 | 1.91 | 2.22 | 2.63 | 2.78 | 3.35 | 3.51 | 3.64 | 3.75 |
| B6 | 5.06 X10-1 | 5.39 X10-1 | 1.00 | 1.70 | 1.91 | 2.21 | 2.62 | 2.76 | 3.34 | 3.49 | 3.62 | 3.73 |
| B7 | 5.05 X10-1 | 5.40 X10-1 | 1.00 | 1.70 | 1.91 | 2.21 | 2.62 | 2.76 | 3.34 | 3.49 | 3.62 | 3.73 |
| C1 | 5.03 X10-1 | 5.40 X10-1 | 1.00 | 1.70 | 1.91 | 2.22 | 2.62 | 2.77 | 3.34 | 3.49 | 3.63 | 3.74 |
| C2 | 5.06 X10-1 | 5.40 X10-1 | 1.00 | 1.70 | 1.91 | 2.21 | 2.62 | 2.76 | 3.34 | 3.49 | 3.62 | 3.74 |
| C3 | 5.06 X10-1 | 5.40 X10-1 | 1.00 | 1.70 | 1.91 | 2.22 | 2.63 | 2.77 | 3.35 | 3.50 | 3.63 | 3.74 |
| C4 | 5.05 X10-1 | 5.40 X10-1 | 1.00 | 1.70 | 1.91 | 2.21 | 2.62 | 2.76 | 3.34 | 3.49 | 3.62 | 3.74 |
| C5 | 5.05 X10-1 | 5.40 X10-1 | 1.00 | 1.71 | 1.91 | 2.22 | 2.64 | 2.78 | 3.36 | 3.51 | 3.64 | 3.76 |
| C6 | 5.07 X10-1 | 5.43 X10-1 | 1.00 | 1.71 | 1.91 | 2.23 | 2.64 | 2.79 | 3.37 | 3.52 | 3.65 | 3.77 |
| C7 | 5.06 X10-1 | 5.43 X10-1 | 1.00 | 1.71 | 1.91 | 2.23 | 2.64 | 2.79 | 3.37 | 3.52 | 3.65 | 3.77 |
| C8 | 5.06 X10-1 | 5.43 X10-1 | 1.00 | 1.71 | 1.91 | 2.23 | 2.64 | 2.78 | 3.36 | 3.52 | 3.65 | 3.76 |
| C9 | 5.08 X10-1 | 5.43 X10-1 | 1.00 | 1.71 | 1.91 | 2.23 | 2.64 | 2.78 | 3.37 | 3.52 | 3.65 | 3.77 |
| C10 | 5.05 X10-1 | 5.39 X10-1 | 1.00 | 1.70 | 1.91 | 2.22 | 2.63 | 2.77 | 3.34 | 3.49 | 3.63 | 3.74 |
| D1 | 5.07 X10-1 | 5.42 X10-1 | 1.00 | 1.71 | 1.91 | 2.22 | 2.64 | 2.78 | 3.36 | 3.51 | 3.65 | 3.76 |
| D2 | 5.07 X10-1 | 5.43 X10-1 | 1.00 | 1.71 | 1.91 | 2.23 | 2.64 | 2.78 | 3.37 | 3.52 | 3.65 | 3.77 |
| D3 | 5.06 X10-1 | 5.42 X10-1 | 1.00 | 1.71 | 1.91 | 2.23 | 2.64 | 2.78 | 3.37 | 3.52 | 3.65 | 3.77 |
| D4 | 5.06 X10-1 | 5.41 X10-1 | 1.00 | 1.71 | 1.91 | 2.23 | 2.64 | 2.78 | 3.37 | 3.52 | 3.65 | 3.77 |
| D5 | 5.07 X10-1 | 5.43 X10-1 | 1.00 | 1.71 | 1.91 | 2.23 | 2.65 | 2.79 | 3.37 | 3.53 | 3.66 | 3.77 |
| E1 | 5.06 X10-1 | 5.40 X10-1 | 1.00 | 1.71 | 1.91 | 2.22 | 2.62 | 2.77 | 3.34 | 3.49 | 3.63 | 3.74 |
| E2 | 5.02 X10-1 | 5.39 X10-1 | 1.00 | 1.70 | 1.90 | 2.21 | 2.62 | 2.76 | 3.33 | 3.48 | 3.62 | 3.73 |
| E3 | 5.05 X10-1 | 5.39 X10-1 | 1.00 | 1.70 | 1.90 | 2.21 | 2.62 | 2.76 | 3.33 | 3.48 | 3.61 | 3.73 |
| E4 | 5.06 X10-1 | 5.38 X10-1 | 1.00 | 1.70 | 1.91 | 2.21 | 2.62 | 2.76 | 3.34 | 3.49 | 3.62 | 3.73 |
| E5 | 5.04 X10-1 | 5.40 X10-1 | 1.00 | 1.70 | 1.91 | 2.21 | 2.62 | 2.76 | 3.34 | 3.49 | 3.62 | 3.73 |
| F1 | 5.06 X10-1 | 5.40 X10-1 | 1.00 | 1.70 | 1.91 | 2.21 | 2.62 | 2.76 | 3.34 | 3.49 | 3.62 | 3.73 |
| F2 | 5.05 X10-1 | 5.39 X10-1 | 1.00 | 1.70 | 1.91 | 2.21 | 2.62 | 2.76 | 3.34 | 3.49 | 3.62 | 3.74 |
| F3 | 5.05 X10-1 | 5.40 X10-1 | 1.00 | 1.70 | 1.91 | 2.22 | 2.62 | 2.77 | 3.34 | 3.49 | 3.62 | 3.74 |
| F4 | 5.03 X10-1 | 5.39 X10-1 | 1.00 | 1.70 | 1.91 | 2.22 | 2.63 | 2.77 | 3.35 | 3.50 | 3.63 | 3.74 |
| F5 | 5.05 X10-1 | 5.40 X10-1 | 1.00 | 1.70 | 1.91 | 2.21 | 2.62 | 2.76 | 3.34 | 3.49 | 3.62 | 3.74 |
| F6 | 5.07 X10-1 | 5.48 X10-1 | 1.00 | 1.71 | 1.92 | 2.23 | 2.65 | 2.79 | 3.38 | 3.53 | 3.66 | 3.78 |
| H1 | 5.05 X10-1 | 5.39 X10-1 | 1.00 | 1.70 | 1.91 | 2.22 | 2.63 | 2.77 | 3.35 | 3.50 | 3.63 | 3.74 |
| H2 | 5.05 X10-1 | 5.39 X10-1 | 1.00 | 1.70 | 1.91 | 2.21 | 2.62 | 2.76 | 3.34 | 3.49 | 3.62 | 3.74 |
| H3 | 5.05 X10-1 | 5.39 X10-1 | 1.00 | 1.70 | 1.91 | 2.22 | 2.62 | 2.76 | 3.34 | 3.49 | 3.62 | 3.74 |
| G1 | 5.08 X10-1 | 5.46 X10-1 | 1.00 | 1.71 | 1.92 | 2.24 | 2.66 | 2.80 | 3.39 | 3.54 | 3.68 | 3.79 |
| G2 | 5.05 X10-1 | 5.37 X10-1 | 1.00 | 1.70 | 1.91 | 2.22 | 2.63 | 2.77 | 3.35 | 3.50 | 3.64 | 3.75 |
| G3 | 5.06 X10-1 | 5.40 X10-1 | 1.00 | 1.71 | 1.91 | 2.22 | 2.62 | 2.77 | 3.34 | 3.49 | 3.63 | 3.74 |
| G4 | 5.05 X10-1 | 5.39 X10-1 | 1.00 | 1.71 | 1.91 | 2.22 | 2.63 | 2.78 | 3.35 | 3.50 | 3.64 | 3.75 |
| Relative standard deviation (%) | 0.28 | 0.41 | 0.00 | 0.19 | 0.42 | 0.32 | 0.40 | 0.40 | 0.43 | 0.44 | 0.44 | 0.44 |

Table S3 Relative area of each peak versus the reference peak 3

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Relative area | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| A1 | 2.80X10-3 | 3.45X10-2 | 1.00 | 1.46X10-1 | 8.90X10-3 | 1.21X10-2 | 2.30X10-3 | 1.22X10-1 | 2.55X10-1 | 3.84X10-2 | 1.35X10-2 | 7.19X10-1 |
| A2 | 6.80X10-3 | 1.11X10-1 | 1.00 | 5.35X10-1 | 5.00X10-3 | 5.60X10-3 | 4.10X10-3 | 2.00X10-1 | 4.40X10-1 | 5.43X10-2 | 3.46X10-2 | 6.97X10-1 |
| A3 | 6.70X10-3 | 4.38X10-2 | 1.00 | 4.10X10-2 | 1.69X10-2 | 2.90X10-3 | 1.78X10-2 | 8.66X10-2 | 2.66X10-1 | 3.38X10-2 | 8.70X10-3 | 6.73X10-1 |
| A4 | 1.07X10-2 | 3.13X10-2 | 1.00 | 4.78X10-1 | 1.77X10-2 | 1.34X10-2 | 5.50X10-3 | 1.77X10-1 | 4.06X10-1 | 5.52X10-2 | 1.04X10-1 | 9.47X10-1 |
| A5 | 9.40X10-3 | 2.61X10-2 | 1.00 | 2.02 | 2.69X10-2 | 9.00X10-3 | 1.13X10-2 | 3.91X10-1 | 5.37X10-1 | 7.30X10-2 | 4.14X10-2 | 1.08 |
| A6 | 2.12X10-2 | 8.72X10-2 | 1.00 | 9.75X10-2 | 1.07X10-2 | 4.70X10-3 | 1.00X10-3 | 2.06X10-1 | 2.80X10-1 | 1.03X10-1 | 1.88X10-2 | 4.19X10-1 |
| A7 | 1.76X10-2 | 5.86X10-2 | 1.00 | 1.30 | 2.90X10-2 | 2.30X10-1 | 1.72X10-2 | 4.37X10-1 | 5.22X10-1 | 9.04X10-2 | 4.09X10-2 | 1.34 |
| B1 | 5.80X10-3 | 6.28X10-2 | 1.00 | 1.68X10-2 | 1.08X10-2 | 3.00X10-4 | 1.68X10-2 | 5.35X10-2 | 1.20X10-1 | 2.93X10-2 | 7.90X10-3 | 1.37X10-1 |
| B2 | 7.40X10-3 | 2.82X10-2 | 1.00 | 4.42X10-1 | 1.45X10-2 | 1.41X10-2 | 1.60X10-3 | 9.91X10-2 | 1.82X10-1 | 4.79X10-2 | 8.80X10-3 | 3.60X10-1 |
| B3 | 1.79X10-2 | 4.28X10-2 | 1.00 | 2.84 | 1.52X10-2 | 1.31X10-1 | 5.20X10-3 | 2.09X10-1 | 3.48X10-1 | 5.35X10-2 | 1.19X10-2 | 6.02X10-1 |
| B4 | 7.50X10-3 | 5.14X10-2 | 1.00 | 5.65X10-1 | 1.72X10-2 | 3.58X10-2 | 5.70X10-3 | 2.50X10-1 | 2.79X10-1 | 5.02X10-2 | 9.80X10-3 | 6.00X10-1 |
| B5 | 8.10X10-3 | 5.96X10-2 | 1.00 | 6.07X10-1 | 1.44X10-2 | 1.72X10-2 | 5.10X10-3 | 1.69X10-1 | 3.65X10-1 | 9.09X10-2 | 6.32X10-2 | 9.21X10-1 |
| B6 | 1.71X10-2 | 1.06X10-1 | 1.00 | 3.41X10-1 | 2.65X10-2 | 1.45X10-2 | 6.60X10-3 | 1.71X10-1 | 3.14X10-1 | 6.65X10-2 | 9.30X10-3 | 6.32X10-1 |
| B7 | 3.10X10-3 | 2.70X10-2 | 1.00 | 2.53X10-2 | 1.37X10-2 | 2.00X10-3 | 3.18X10-2 | 6.87X10-2 | 2.14X10-1 | 3.29X10-2 | 2.22X10-2 | 3.12X10-1 |
| C1 | 5.30X10-3 | 3.12X10-2 | 1.00 | 1.08X10-2 | 1.13X10-2 | 1.10X10-3 | 1.59X10-2 | 4.95X10-2 | 1.54X10-1 | 3.61X10-2 | 6.90X10-3 | 2.32X10-1 |
| C2 | 1.51X10-2 | 1.86X10-2 | 1.00 | 6.65X10-2 | 2.12X10-2 | 8.00X10-3 | 8.20X10-3 | 9.24X10-2 | 1.71X10-1 | 6.26X10-2 | 4.80X10-3 | 5.73X10-1 |
| C3 | 1.18X10-2 | 4.24X10-2 | 1.00 | 3.17X10-1 | 2.20X10-2 | 1.07X10-2 | 4.70X10-3 | 1.21X10-1 | 2.26X10-1 | 5.98X10-2 | 4.45X10-2 | 4.63X10-1 |
| C4 | 3.70X10-3 | 2.24X10-2 | 1.00 | 9.60X10-3 | 1.39X10-2 | 5.00X10-4 | 2.69X10-2 | 4.49X10-2 | 1.24X10-1 | 1.56X10-2 | 1.13X10-2 | 1.40X10-1 |
| C5 | 8.70X10-3 | 5.10X10-2 | 1.00 | 5.72X10-1 | 2.11X10-2 | 1.19X10-2 | 8.20X10-3 | 1.59X10-1 | 3.37X10-1 | 8.54X10-2 | 1.24X10-1 | 8.70X10-1 |
| C6 | 6.60X10-3 | 3.39X10-2 | 1.00 | 4.62X10-2 | 1.85X10-2 | 6.80X10-3 | 1.49X10-2 | 8.34X10-2 | 1.64X10-1 | 3.92X10-2 | 2.70X10-3 | 2.47X10-1 |
| C7 | 4.80X10-3 | 3.41X10-2 | 1.00 | 1.18X10-1 | 1.71X10-2 | 5.10X10-3 | 1.15X10-2 | 8.37X10-2 | 1.92X10-1 | 4.91X10-2 | 2.90X10-3 | 4.97X10-1 |
| C8 | 3.80X10-3 | 2.84X10-2 | 1.00 | 7.20X10-3 | 2.16X10-2 | 1.40X10-3 | 2.60X10-3 | 7.60X10-2 | 1.01X10-1 | 2.44X10-2 | 2.90X10-3 | 1.85X10-1 |
| C9 | 4.70X10-3 | 2.34X10-2 | 1.00 | 1.47X10-2 | 1.98X10-2 | 1.00X10-3 | 2.79X10-2 | 4.14X10-2 | 1.42X10-1 | 1.84X10-2 | 1.21X10-2 | 1.67X10-1 |
| C10 | 8.60X10-3 | 4.51X10-2 | 1.00 | 7.26X10-1 | 1.72X10-2 | 2.92X10-2 | 9.20X10-3 | 1.77X10-1 | 3.38X10-1 | 7.47X10-2 | 8.78X10-2 | 8.77X10-1 |
| D1 | 2.70X10-3 | 1.63X10-2 | 1.00 | 5.50X10-3 | 1.39X10-2 | 5.00X10-4 | 2.43X10-2 | 1.62X10-2 | 4.27X10-2 | 6.30X10-3 | 5.00X10-3 | 2.67X10-2 |
| D2 | 1.24X10-2 | 9.94X10-2 | 1.00 | 6.63X10-1 | 2.67X10-2 | 1.73X10-2 | 1.07X10-2 | 1.81X10-1 | 3.48X10-1 | 7.14X10-2 | 9.27X10-2 | 8.95X10-1 |
| D3 | 5.70X10-3 | 2.87X10-2 | 1.00 | 4.45X10-1 | 1.76X10-2 | 1.13X10-2 | 5.10X10-3 | 1.42X10-1 | 3.10X10-1 | 7.96X10-2 | 5.50X10-2 | 7.10X10-1 |
| D4 | 7.50X10-3 | 4.18X10-2 | 1.00 | 2.23X10-1 | 1.72X10-2 | 8.00X10-3 | 6.00X10-3 | 1.48X10-1 | 2.59X10-1 | 6.45X10-2 | 7.30X10-3 | 5.21X10-1 |
| D5 | 1.20X10-2 | 8.90X10-2 | 1.00 | 5.53X10-1 | 2.47X10-2 | 2.51X10-2 | 1.00X10-2 | 1.89X10-1 | 3.81X10-1 | 7.81X10-2 | 7.72X10-2 | 1.09 |
| E1 | 1.35X10-2 | 9.11X10-2 | 1.00 | 4.40X10-2 | 2.42X10-2 | 7.30X10-3 | 2.50X10-3 | 1.26X10-1 | 1.35X10-1 | 6.83X10-2 | 1.80X10-3 | 4.06X10-1 |
| E2 | 2.09X10-2 | 2.64X10-2 | 1.00 | 3.00X10-1 | 1.34X10-2 | 2.56X10-2 | 3.80X10-3 | 1.70X10-1 | 3.34X10-1 | 1.09X10-1 | 4.29X10-2 | 7.08X10-1 |
| E3 | 5.60X10-3 | 2.63X10-2 | 1.00 | 4.54X10-2 | 2.01X10-2 | 1.40X10-3 | 1.50X10-2 | 3.95X10-2 | 8.93X10-2 | 1.82X10-2 | 4.00X10-3 | 9.37X10-2 |
| E4 | 1.40X10-2 | 1.42X10-2 | 1.00 | 2.32X10-1 | 1.90X10-2 | 8.10X10-3 | 3.40X10-3 | 1.64X10-1 | 2.50X10-1 | 6.34X10-2 | 6.37X10-2 | 3.96X10-1 |
| E5 | 7.30X10-3 | 8.11X10-2 | 1.00 | 8.69X10-2 | 1.65X10-2 | 7.90X10-3 | 2.23X10-2 | 1.41X10-1 | 2.98X10-1 | 6.45X10-2 | 7.50X10-3 | 6.63X10-1 |
| F1 | 3.40X10-3 | 1.92X10-2 | 1.00 | 4.89X10-2 | 2.26X10-2 | 4.40X10-3 | 1.15X10-2 | 7.11X10-2 | 1.80X10-1 | 3.92X10-2 | 6.00X10-3 | 4.37X10-1 |
| F2 | 1.71X10-2 | 2.14X10-2 | 1.00 | 7.78X10-1 | 2.29X10-2 | 4.80X10-3 | 7.90X10-3 | 2.50X10-1 | 2.39X10-1 | 6.96X10-2 | 3.38X10-2 | 1.84X10-1 |
| F3 | 1.15X10-2 | 2.62X10-2 | 1.00 | 6.05X10-1 | 1.37X10-2 | 2.09X10-2 | 7.10X10-3 | 2.02X10-1 | 4.09X10-1 | 8.42X10-2 | 7.44X10-2 | 8.28X10-1 |
| F4 | 1.48X10-2 | 4.23X10-2 | 1.00 | 4.01X10-1 | 1.67X10-2 | 5.00X10-3 | 9.40X10-3 | 4.03X10-1 | 3.09X10-1 | 6.66X10-2 | 6.28X10-2 | 2.03X10-1 |
| F5 | 2.70X10-3 | 3.90X10-2 | 1.00 | 1.24 | 1.73X10-2 | 1.80X10-2 | 2.28X10-2 | 3.57X10-1 | 4.12X10-1 | 5.73X10-2 | 1.07X10-1 | 4.45X10-1 |
| F6 | 7.10X10-3 | 4.81X10-2 | 1.00 | 3.96X10-1 | 2.23X10-2 | 2.65X10-2 | 7.20X10-3 | 1.71X10-1 | 3.53X10-1 | 9.52X10-2 | 1.12X10-2 | 9.77X10-1 |
| H1 | 4.80X10-3 | 2.52X10-2 | 1.00 | 3.90X10-1 | 1.71X10-2 | 1.51X10-2 | 1.68X10-2 | 1.83X10-1 | 3.00X10-1 | 4.87X10-2 | 7.40X10-3 | 7.09X10-1 |
| H2 | 2.10X10-3 | 2.41X10-2 | 1.00 | 5.86X10-2 | 1.37X10-2 | 4.90X10-3 | 2.06X10-2 | 7.83X10-2 | 1.63X10-1 | 3.13X10-2 | 3.90X10-3 | 2.82X10-1 |
| H3 | 4.00X10-3 | 2.86X10-2 | 1.00 | 1.14X10-1 | 1.96X10-2 | 8.80X10-3 | 1.56X10-2 | 1.55X10-1 | 2.68X10-1 | 5.69X10-2 | 4.80X10-3 | 5.76X10-1 |
| G1 | 1.24X10-2 | 7.50X10-2 | 1.00 | 3.66X10-1 | 2.18X10-2 | 1.26X10-2 | 3.50X10-3 | 1.16X10-1 | 2.82X10-1 | 8.50X10-2 | 2.40X10-2 | 6.58X10-1 |
| G2 | 1.28X10-2 | 9.13X10-2 | 1.00 | 3.80X10-1 | 2.61X10-2 | 1.22X10-2 | 3.80X10-3 | 1.77X10-1 | 2.95X10-1 | 7.89X10-2 | 3.42X10-2 | 6.24X10-1 |
| G3 | 6.50X10-3 | 5.97X10-2 | 1.00 | 7.20X10-2 | 1.30X10-2 | 2.43X10-2 | 1.25X10-2 | 1.70X10-1 | 3.73X10-1 | 7.88X10-2 | 6.80X10-3 | 7.97X10-1 |
| G4 | 2.90X10-3 | 1.93X10-2 | 1.00 | 2.46X10-2 | 1.64X10-2 | 4.10X10-3 | 2.94X10-2 | 7.23X10-2 | 1.58X10-1 | 1.97X10-2 | 1.26X10-2 | 2.99X10-1 |
| Relative standard deviation (%) | 58.14 | 58.09 | 0.00 | 134.11 | 28.54 | 207.33 | 71.75 | 60.85 | 41.40 | 42.80 | 107.72 | 54.12 |

Figure S1 Curve of antioxidation activity versus concentration of Gastrodigenin (HBA)