



**Figure S1.** The fingerprint of eight individual ginsenoside in five-year-old ginseng of various parts. (1: Rg<sub>1</sub>; 2: Re; 3: Rf; 4: Rb<sub>1</sub>; 5: Rc; 6: Rb<sub>2</sub>; 7: Rb<sub>3</sub>; 8: Rd).

## 1. Results

### 1.1 The content of eight individual ginsenoside in five-year-old ginseng of various parts (Table S1).

The content of ginsenosides has significant difference of various parts ginseng. The total content of eight individual ginsenoside of ginseng were 25.65, 5.35, 89.30, 105.55 and 7.15 mg/g, respectively and all of them had significant difference ( $P < 0.05$ ).

Table S1 The content of ginsenosides in five-year-old ginseng of various parts

Samples	content of ginsenosides (mg/g)								Total
	Rg <sub>1</sub>	Re	Rf	Rb <sub>1</sub>	Rc	Rb <sub>2</sub>	Rb <sub>3</sub>	Rd	
GRT	9.05±0.15	4.85±0.13	1.35±0.05	6.15±0.08	1.95±0.12	1.40±0.03	0.20±0.01	0.70±0.01	25.65±0.58 <sup>c</sup>
GSM	1.25±0.07	2.10±0.06	0.35±0.02	0.45±0.01	0.25±0.01	0.45±0.01	0.15±0.01	0.35±0.01	5.35±0.19 <sup>d</sup>
GLF	15.30±0.27	32.55±0.25	2.55±0.08	8.50±0.14	1.70±0.01	10.05±0.18	5.70±0.09	12.95±0.13	89.30±1.15 <sup>b</sup>
GFR	19.00±0.31	39.70±0.29	1.80±0.04	7.35±0.23	8.50±0.25	8.50±0.18	0.90±0.06	19.80±0.34	105.55±1.70 <sup>a</sup>
GSD	1.30±0.05	3.70±0.09	0.33±0.03	0.35±0.01	0.28±0.01	0.50±0.02	0.19±0.02	0.50±0.02	7.15±0.25 <sup>d</sup>

There is no significant difference between the upper standard and the same letter, otherwise there is significant difference ( $P < 0.05$ )

### 1.2 The content of seventeen amino acids in five-year-old ginseng of various parts (Table S2).

The content of amino acids of five-year-old ginseng of various parts were 65.77, 50.23, 97.74, 137.53 and 47.96 mg/g, respectively, which had significant difference ( $P < 0.05$ ).

Table S2 The content of amino acids in five-year-old ginseng of various parts

samples	The content of amino acids (mg/g)								
	Asp	Thr	Ser	Glu	Gly	Ala	Cys	Val	Met
GRT	6.13±0.11	2.18±0.06	1.58±0.02	6.62±0.12	1.42±0.04	4.34±0.09	0.50±0.01	3.07±0.04	0.11±0.00
GSM	6.07±0.17	2.43±0.02	2.41±0.05	8.28±0.12	4.86±0.08	3.52±0.11	0.36±0.01	3.35±0.06	0.20±0.01
GLF	11.29±0.14	5.13±0.09	4.79±0.09	15.65±0.26	10.04±0.16	6.85±0.06	0.49±0.02	6.93±0.13	0.21±0.2
GFR	12.63±0.18	6.37±0.14	5.76±0.08	14.50±0.16	9.30±0.07	11.13±0.12	1.07±0.03	11.05±0.15	0.33±0.01
GSD	6.02±0.14	2.32±0.02	2.48±0.06	7.79±0.10	3.88±0.06	4.13±0.13	0.29±0.01	3.21±0.05	0.11±0.01

  

samples	The content of amino acids (mg/g)								Total
	Ile	Leu	Tyr	Phe	Lys	His	Arg	Pro	
GRT	6.13±0.11	2.18±0.06	1.58±0.02	6.62±0.12	1.42±0.04	4.34±0.09	0.50±0.01	3.07±0.04	0.11±0.00
GSM	6.07±0.17	2.43±0.02	2.41±0.05	8.28±0.12	4.86±0.08	3.52±0.11	0.36±0.01	3.35±0.06	0.20±0.01
GLF	11.29±0.14	5.13±0.09	4.79±0.09	15.65±0.26	10.04±0.16	6.85±0.06	0.49±0.02	6.93±0.13	0.21±0.2
GFR	12.63±0.18	6.37±0.14	5.76±0.08	14.50±0.16	9.30±0.07	11.13±0.12	1.07±0.03	11.05±0.15	0.33±0.01
GSD	6.02±0.14	2.32±0.02	2.48±0.06	7.79±0.10	3.88±0.06	4.13±0.13	0.29±0.01	3.21±0.05	0.11±0.01

GRT	4.37±0.09	1.84±0.06	2.43±0.12	2.78±0.04	0.25±0.01	1.39±0.04	21.59±0.12	5.16±0.06	65.77±1.03 <sup>c</sup>
GSM	4.80±0.14	1.72±0.08	2.37±0.06	2.23±0.08	0.28±0.03	1.35±0.07	3.41±0.13	2.60±0.10	50.23±1.32 <sup>d</sup>
GLF	10.11±0.18	3.93±0.07	5.14±0.20	2.97±0.04	0.29±0.02	2.97±0.10	5.83±0.07	5.13±0.07	97.74±1.90 <sup>b</sup>
GFR	15.73±0.16	6.10±0.11	7.56±0.08	4.58±0.09	0.49±0.02	3.45±0.07	18.57±0.37	8.91±0.25	137.53±2.09 <sup>a</sup>
GSD	4.27±0.12	1.43±0.05	2.19±0.03	2.45±0.08	0.25±0.03	1.24±0.06	3.66±0.12	2.24±0.08	47.96±1.15 <sup>d</sup>

There is no significant difference between the upper standard and the same letter, otherwise there is significant difference ( $P<0.05$ )

### 1.3 The content of saponins and total polysaccharides in five-year-old ginseng of various parts (Table S3)

The total saponins content of various parts ginseng were 51.39, 23.69, 100.65, 113.78 and 14.12 mg/g, respectively. The trend of saponin content and individual ginsenoside content in different parts of five-year-old ginseng is consistent.

The content of total polysaccharides of various parts ginseng were 22.79, 13.45, 25.09, 31.44 and 29.84 mg/g, respectively.

Table S3 The content of total saponins and total polysaccharide in various parts ginseng

samples	The content of saponins (mg/g)	The content of total polysaccharides (mg/g)
GRT	51.39±2.92 <sup>b</sup>	22.79±2.35 <sup>b</sup>
GSM	23.69±2.70 <sup>c</sup>	13.45±2.22 <sup>c</sup>
GLF	100.65±4.46 <sup>a</sup>	35.09±2.18 <sup>a</sup>
GFR	113.78±4.19 <sup>a</sup>	31.44±2.41 <sup>a</sup>
GSD	14.12±0.12 <sup>d</sup>	29.84±2.16 <sup>a</sup>

There is no significant difference between the upper standard and the same letter, otherwise there is significant difference ( $P<0.05$ )