

**Table S1.** The formula for cream soup preparation added with ginseng powder

(unit : g)

Ingredients	Control	GS3	GS5	GS7	GS10
Onion powder	2.7	2.7	2.7	2.7	2.7
Garlic powder	1.8	1.8	1.8	1.8	1.8
Cheeze powder	5	5	5	5	5
Roux powder <sup>1</sup>	55	52	50	48	45
Beef powder	3	3	3	3	3
Milk powder	30	30	30	30	30
Salt	1	1	1	1	1
White pepper	1	1	1	1	1
Xanthan gum	0.5	0.5	0.5	0.5	0.5
Ginseng powder	0	3	5	7	10
Total	100	100	100	100	100
Water(mL)	300	300	300	300	300

Control: soup without ginseng powder, GS3: Soup with 3% ginseng powder, GS5: Soup with 5% ginseng powder, GS7: Soup with 7% ginseng powder, GS10: Soup with 10% ginseng powder.

**Table S2.** Proximate composition, quality, and antioxidant properties of ginseng powder

Variables	Ginseng powder	
Moisture contents (%)	8.66±0.07	
Crude protein contents (%)	12.25±0.04	
Crude fat contents (%)	2.23±0.05	
Crude ash contents (%)	3.66±0.01	
Carbohydrate contents (%)	73.19±0.03	
DPPH Radical scavenging ability (%)	40.82±1.43	
ABTS Radical scavenging ability (%)	48.34±2.72	
Total polyphenol contents (mg Gallic acid Equiv./ g, DW)	0.312±0.036	
Total flavonoid contents (mg Catechin Equiv./g, DW)	0.071±0.000	
pH	5.46±0.01	
Total acidity (CA eq %)	3.737±0.185	
Total saponin (mg Diosgenin Equiv./g, DW)	43.045±5.141	
Chromaticity	L* value	86.37±0.30
	a* value	-0.08±0.01
	b* value	-14.66±0.13

All data are mean±SD of triplicate analyses. L\* value (lightness), ranges from black to white, a\* value (redness), ranges from green (negative) to red (positive), b\* value (yellowness), ranges from blue (negative) to yellow (positive).