

Preparation of simulated digestion mediums

First, simulated salivary, gastric and intestinal fluids were prepared for later step. The composition for simulated salivary fluid was 3.775 mL of KCl, 0.925 mL of KH_2PO_4 , 1.7 mL of NaHCO_3 , 0.125 mL of $\text{MgCl}_2 \cdot (\text{H}_2\text{O})_6$ and 0.015 mL of $(\text{NH}_4)_2\text{CO}_3$. The composition for simulated gastric fluid was 1.725 mL of KCl, 0.025 mL of KH_2PO_4 , 3.125 mL of NaHCO_3 , 7.375 mL of NaCl, 0.1 mL of $\text{MgCl}_2 \cdot (\text{H}_2\text{O})_6$ and 0.125 mL of $(\text{NH}_4)_2\text{CO}_3$. The composition for simulated intestinal fluid was 1.725 mL of KCl, 0.025 mL of KH_2PO_4 , 3.125 mL of NaHCO_3 , 7.375 mL of NaCl, 0.1 mL of $\text{MgCl}_2 \cdot (\text{H}_2\text{O})_6$ and 0.125 mL of $(\text{NH}_4)_2\text{CO}_3$.

For simulated salivary medium, the medium was prepared by mixing 14 mL of simulated salivary fluid, 0.25 mL of an α -amylase solution (1.3 mg/mL), 0.10 mL of 0.3M CaCl_2 and 5.65 mL of distilled water. And then the pH of mixture was adjusted to 6.8 ± 0.2 by addition of 0.1 mol/L HCl solution.

For simulated gastric medium, the medium was prepared by mixing 15 mL of simulated gastric fluid, 3.2 mL of a pepsin solution, 0.01 mL of 0.3M CaCl_2 and 1.8 mL of distilled water. And then the pH of mixture was adjusted to 1.50 ± 0.02 by addition of 0.1 mol/L HCl solution.

For simulated intestinal medium the medium was prepared by mixing 11 mL of simulated intestinal fluid, 5 mL of a pancreatin solution, 0.04 mL of 0.3M CaCl_2 , and water up to 20 mL. The pH of mixture was adjusted to 7.0 ± 0.2 with 0.1 mol/L NaHCO_3 solution. The above prepared mediums were stored at 4 °C before subsequent experiments.

Table S 1. The composition of AIN-93G.

Ingredient		Content (g/100g)	kcal
Protein	Casein, 30 mesh	20.0	800
	L-Cystine	0.3	12
Carbohydrate	Corn Starch	39.7	1590
	Maltodextrin	13.2	528
	Sucrose	10.0	400
	Cellulose	5.0	0
Fat	Soybean Oil	7.0	630
	t-Butylhydroquinone	0.05	0
Mineral Mix S10022G		3.5	0
Vitamin Mix V10037		1.0	40
Choline Bitartrate		0.25	0
Total		100	4000