

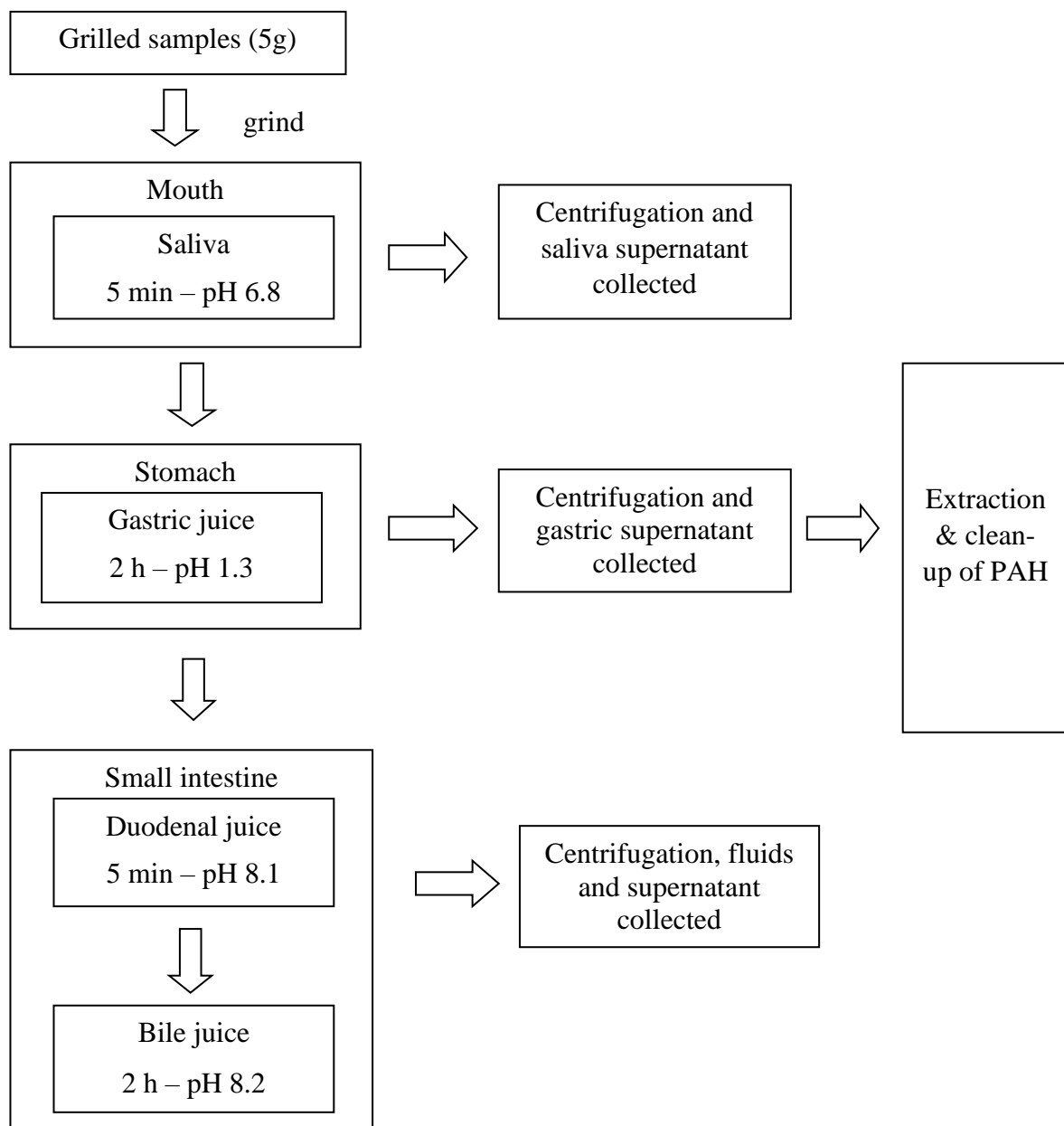
Supplementary Materials

Table S1.Cooking parameters for meat at three different degrees of doneness.

Samples	Degree of doneness	Cooking time (min)	Surface (browning/charring)
Chicken	Rare	4	Slight
	Medium	5	Moderate
	Well done	6	Well browned/Blackened
Beef	Rare	6	Slight
	Medium	7	Moderate
	Well done	8	Well browned/Blackened

**Table S2.** Composition of digestive juices used per 100 ml of ultrapure water.

Components	Digestive juices			
	Saliva (pH $6.8 \pm 0.2$ )	Gastric (pH $1.30 \pm 0.02$ )	Duodenal (pH $8.1 \pm 0.2$ )	Bile (pH $8.2 \pm 0.2$ )
Inorganic	- 90 mg KCl - 20 mg KSCN - 89 mg NaH <sub>2</sub> PO <sub>4</sub> - 58 mg Na <sub>2</sub> SO <sub>4</sub> - 30 mg NaCl - 170 mg NaHCO <sub>3</sub>	- 275 mg NaCl - 27 mg NaH <sub>2</sub> PO <sub>4</sub> - 82 mg KCl - 31 mg NH <sub>4</sub> Cl - HCl 1 M	- 700 mg NaCl - 339 mg NaHCO <sub>3</sub> - 8 mg KH <sub>2</sub> PO <sub>4</sub> - 56 mg KCl - HCl 1 M	- 526 mg NaCl - 579 mg NaHCO <sub>3</sub> - 38 mg KCl - HCl 1M
Organic	- 20 mg urea	- 65 mg glucose - 2 mg glucuronic acid - 8.5 mg urea - 33 mg glucosamine hydrochloride -100 mg BSA	- 100 mg urea - 100 mg BSA	- 25 mg urea - 180 mg BSA
Bioactive	- 29 mg $\alpha$ -amylase - 1.5 mg uric acid - 2.5 mg mucin	- 250 mg pepsin	- 900 mg pancreatin - 150 mg lipase	- 3g bile salt



**Figure S1.** Schematic diagram of the *in vitro* digestive procedure (Adapted from [17]).