**Table S3**

The chemical analysis used in the experiment.

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| --- | --- | --- |
| Items | Methods | Assay Kits/Testing equipment |
| *Composition of diets/ingredients/whole-body* | | |
| Moisture | Drying method | Electric blast drying oven (Shanghai Yiheng Scientific Instrument Co., Ltd., Shanghai, China) |
| Protein | Kjeldahl method | Auto kieldahl apparatus: Hanon K1100 (Jinan Hanon Instruments Co., Ltd., Jinan, China) |
| Lipid | Soxhlet | Auto fat analy: Hanon SOX606 (Jinan Hanon Instruments Co., Ltd., Jinan, China) |
| Ash | Combustion | Intelligent muffle furnace: XL-2A (Hangzhou Zhuochi Instruments Co., Ltd., Hangzhou, China) |
| Gross energy | Combustion | oxygen bomb calorimeter: IKA C6000 (IKA WORKS GUANGZHOU, Guangzhou, China) |
| Amino acids(except tryptophan) | Acid hydrolysis | Amino acid analyzer: SYKAM S-433D (Sykam GmbH, Munich,Germany) |
| Tryptophan | Alkali hydrolysis |
| *Plasma biochemical* | | |
| GLUa | Hexokinase method | Assay kits purchased from Shenzhen Mindary Bio-medical Electronics Co., Ltd (Shenzhen, China); Mindray BS-400 automatic biochemical analyzer (Mindray Medical International Ltd., Shenzhen, China). |
| TPb | Biuret method |
| TGc | GPO-PAP method |
| TCd | Enzyme method |

a GLU, glucose; b TP, total protein; c TG, total triglyceride; d TC, total cholesterol.