## Supplemental table 3: quality score assessment

### 1. Study design
- **0** for studies with cross-sectional data analysis
- **1** for studies with longitudinal data analysis (retrospective or prospective) or non-randomized Chronic intervention studies or acute intervention studies without crossover
- **2** for randomized chronic intervention studies or acute intervention studies with crossover

### 2. Population
- **Observational studies**
  - **0** if \( n < 500 \)
  - **1** if \( n \geq 500 \) and \( < 1000 \)
  - **2** if \( n \geq 1000 \)
- **Chronic Intervention studies**
  - **0** if \( n < 50 \)
  - **1** if \( n \geq 50 \) and \( < 100 \)
  - **2** if \( n \geq 100 \)
- **Acute intervention studies**
  - **0** if \( n < 10 \)
  - **1** if \( n \geq 10 \) and \( < 20 \)
  - **2** if \( n \geq 20 \)

### 3. Exposure
- **Observational studies**
  - **0** if the study used no appropriate standard dietary assessment method (see below) or if not reported
  - **1** if the study used a one-day food record, one 24h recall, or a short food frequency questionnaire that did not cover the full diet
  - **2** if the study used multiple-day food records, multiple 24h recalls, or a full-diet food frequency questionnaire
- **Chronic and acute Intervention studies**
  - **0** if the intervention diets were not described or not adequately blinded
  - **1** if the intervention diets were adequately single-blinded
  - **2** if the intervention diets were adequately double-blinded
4. Outcome

Observational and chronic intervention studies

0 if the study used no appropriate outcome measurement method (see below) or if not reported

1 if the study used moderate quality outcome measurement methods:

- Blood pressure: only one measurement, in resting position, by a trained observer
- Insulin sensitivity: only either glucose or insulin measures, blood sampling after 12h or overnight fast
- Blood lipids: non-fasting blood sampling
- Body composition: one measurement by a trained observer not using accurate tools (Bioimpedance, body composition analyzer)

2 if the study used adequate outcome measurement methods*:

- Blood pressure: at least two measurements, in resting position, by a trained observer
- Insulin sensitivity: both glucose and insulin or a composite measure, with blood sampling after 12h or overnight fast, or an appropriate glucose or insulin tolerance test
- Blood lipids: blood sampling after 12h or overnight fast
- Body composition: one measurement by a trained observer using accurate tools (DEXA)

Acute intervention studies

0 if the study used no appropriate outcome measurement method (see below)

1 if the study used moderate quality outcome measurement methods:

- Metabolites and hormones response: response was assessed up to two hours following the ingestion of the test-meal and at least every thirty minutes

2 if the study used adequate outcome measurement methods*:

- Metabolites and hormones response: response was assessed for more than two hours following the ingestion of the test-meal and at least every thirty minutes during the first 2 hours

5. Adjustments/subject characteristics

Observational and Chronic intervention studies

0 if a study was not randomized (for intervention studies) or if findings were not controlled for at least the four key covariates mentioned below

1 if findings were controlled for:

- age or Tanner stage,
- sex,
- energy intake (including E%), and
- at least one measure of body weight (e.g., BMI, body weight, or body fat).
2 if a study was adequately randomized (for intervention studies) or if findings were additionally controlled for at least two of the following covariates:

- intake of other macronutrients, micronutrients,
- physical activity,
- growth,
- birth characteristics (e.g. birth weight, gestational age),
- maternal characteristics (e.g. maternal BMI),
- socioeconomic status or ethnicity.

• Acute Intervention studies

0 if the characteristics (sex, age, cholesterolemia, fasting glycaemia, health status) of the subjects involved in the study were not described or heterogeneous

1 if the characteristics (sex, age, cholesterolemia, fasting glycaemia, health status) of the subjects involved in the study were controlled for at least two characteristics out of five

2 if the characteristics (sex, age, cholesterolemia, fasting glycaemia, health status) of the subjects involved in the study were controlled for at least four characteristics out of five