

Data Quality determination Score.

Questions	Answer	Score
Source Quality Index (SQI) – Part 1		
1. Is the value analyzed ¹ ?		
Assurance Quality Index (AQI)		
2. Is the value analyzed with an internationally recognized method ² and quality assurance system was applied ³ ?		
3. Is the value analyzed with an internationally recognized method ² only?		
4. Is the value analyzed with an internationally unrecognized method ⁴ ?		
5. Is the value analyzed without a clearly stated method ⁵ ?		
Source Quality Index (SQI) – Part 2		
6. Is the value originally calculated ⁶ ?		
7. is the value imputed ⁷ ?		
8. Is the value calculated from a recipe ⁸ ?		
9. Is the value borrowed ⁹ from another source?		
10. Is the value presumed ¹⁰ according to standard rules or presumed as zero values?		
11. Is the value not determined ¹¹ ?	-	
Total Quality Index Score (TQI)		

- For more definition for the source types, please check the **Table 1** below.
- In order to define the score, please back to **Table 2**
- After calculate the total score, define level of confidence from **Table 3**.

Table 1: Definition of Data Source Types.

<p>¹Analyzed: Refer to original analytical values which are values taken from the published literature or unpublished laboratory reports, whether or not they were from analyses carried out explicitly for the purpose of compiling the database. They may be assimilated into the database unmodified, or as a selection or average of analytical values, or as combinations weighted to ensure that the final values are representative.</p>
<p>²Internationally recognized method: Refer to method used for the component analysis is recognized by international bodies such as, Association of Analytical Communities (AOAC international), Food Standard Agency in the United Kingdom, etc...</p>
<p>³Quality assurance: “The assembly of all planned and systematic actions necessary to provide adequate confidence that a product, process or service will satisfy given quality requirements”.</p>
<p>⁴Internationally unrecognized method: Refer to method used for the component analysis is not recognized by international bodies such as, Association of Analytical Communities (AOAC international), Food Standard Agency in the United Kingdom, etc...</p>
<p>⁵Without clearly stated method: Refer to method used for component analysis is not stated clearly.</p>
<p>⁶Calculated value: “Original calculated values (e.g. protein values calculated by multiplying the nitrogen content by the appropriate factor, or fatty acids per 100 g food calculated from fatty acid values per 100 g total fatty acids)”.</p>
<p>⁷Imputed: “These data are estimates derived from analytical values obtained for a similar food (e.g. values for peas used for green beans) or for another form of the same food (e.g. values for “boiled” used for “steamed”). They may also be derived by calculation from incomplete or partial analyses of a food (e.g. carbohydrate or moisture by difference, sodium derived from chloride values or, more commonly, chloride calculated from the value for sodium). Similar calculations can be made by comparing data for different forms of the same food (e.g. “dried” versus “fresh” or “defatted” versus “fresh”)”.</p>
<p>⁸Calculated recipe: “These are values derived from recipes, calculated from the nutrient contents of the ingredients and corrected for preparation factors: loss or gain in weight, usually referred to as yields, and micronutrient changes, usually referred to as retention factors. Such values are only rough</p>

estimates, because the preparation conditions for recipes vary dramatically, such as cooking temperature and duration, which will significantly affect yield and retention. Another calculation method is the calculation of the nutrient values of cooked foods based on those of raw foods or foods cooked in a different way, using specific algorithms, retention and yield factors”.

⁹**Borrowed:** “These are values taken from other tables and databases where reference back to the original source may or may not be possible. Adequate reference to original sources is necessary to justify a borrowed value. In some cases, the borrowed values should be adapted to the different water and/or fat contents”.

¹⁰**Presumed:** “These are values presumed as being at a certain level or as zero, according to regulations”.

¹¹**Not determined:** Refer to values that their sources are unknown.

Table 2: Quality Index (QI) score system.

Source type	SQI score	Analytical assurance	AQI score	TQI score
Analyzed	60	Analyzed with an internationally recognized method, and a quality assurance procedure was applied	40	100
		Analyzed with an internationally recognized method only	30	90
		Analyzed with an internationally unrecognized method	20	80
		Analyzed without a clearly stated method	10	70
Calculated value	50	0		50
Imputed	40	0		40
Calculated recipe	30	0		30
Borrowed from another source	20	0		10-20
Presumed according to standard rules or presumed as zero values	10			
Not determined	0	0		0

Table 3: Level of Confidence.

Total score	Level of confidence
60-100	High confidence
40	Good confidence
30	Medium confidence
10-20	Low confidence
0	No confidence