Chapter 3 References (Notes on Foods)

See "Chapter 3 1 Notes on Foods" in Food Composition Tables 2015 for detailed descriptions of each food. The following describes notes related to amino acids.

The component values of the current Composition Tables were generally determined based on new analytical values as well as analytical values collected during the compiling of the Revised Amino Acid Composition Tables and Amino Acid Composition Tables 2010. In addition, to increase the list of foods as much as possible, the component values of some unanalyzed foods were estimated using the following methods and tabulated:

[1] For foods with analytical values for "Raw", the component values of "Boiled", "Baked", and other cooked foods are imputed based on the analytical values of "Raw".

[2] Among unanalyzed foods, for foods which cannot be estimated by [1] above and with similar foods in food composition tables of foreign countries and other sources, the component values are estimated using the data for the similar foods;

[3] Among unanalyzed foods, for processed foods with known recipe and amino acid component data, the component values are calculated using such data.

These estimated values do not reflect changes to the amino acid composition by cooking nor differences between the foods available in Japan and overseas, and therefore are shown in parenthesis ( ). It is also described in the Remarks that the value is an estimated value. (See Chapter 1 2 1) (2) "Outline of listed foods of the current Composition Tables for the method of calculating the estimated values.)

For foods whose component values were estimated using the [1] and [2] methods and referring to other foods, the referenced foods for estimations are shown in the Remarks or in Table 12 at the end of this chapter.

For foods whose component values were calculated using the [3] method based on the recipe, the ratios described in Chapter 3 of Standard Tables of Food Composition in Japan - 2015 - (Seventh Revised Edition) were generally used for the calculation.

6   Vegetables

For "06095, 06096 Perilla, Shiso", because amino acids are estimated based on analytical values in NILS Amino Acid Composition Table of Food (2010) (conforms to Standard Tables of Food Composition in Japan - 2010 -) compiled by the National Center for Geriatrics and Gerontology (hereafter called "NILS Food Amino Acid Composition Tables"), the component values of amino acids were borrowed from this table.

10   Fish, mollusks and crustaceans

For fish, mollusks and crustaceans, because variation in the component values of amino acids per g of reference nitrogen is comparatively small among the types of fish and because fish, mollusks and crustaceans are important sources of protein, these foods are classified into several groups as shown in Table 11 at the end of this chapter, and the component values of unanalyzed foods were estimated as identical to the averaged values of amino acids per g of the reference nitrogen of each group.

Fish, mollusks and crustaceans were grouped base on the results of the principal component analysis of the

analytical data. "Flounder", "halibut", "shark", "freshwater clam", and fish roe and viscera showed different tendencies from other foods and were thus not included in groups. Farmed fish was also not included in the groups as they may be affected by feed.

Regarding cooked (boiled, baked, and others) foods, when analytical values for "raw" of the same species were available, component values were imputed from the analytical values of the "raw" and not the averaged value of the group.

Component values were not estimated for processed foods for which considerable amounts of secondary ingredients containing amino acids, such as soy sauce and amino acid liquid seasoning, are used.

In past analyses, there were many foods for which hydroxyproline was not quantified. For this reason, data was interpolated using the averaged values of the hydroxyproline of each group as estimated values. In such cases, only the hydroxyproline values are enclosed in parenthesis ( ).

For "10207 Pacific cod, milt", "10222

10244 Pacific herring, roe", because amino acid contents are estimated based on analytical values in the NILS Food Amino Acid Composition Tables", the component values of amino acids were estimated using this data.

11　Meat

Of meats, some samples with high fat content composed mainly of adipose tissues, such as fat, duck skin, and others, showed that the amount of nitrogen derived from amino acid exceeding the reference nitrogen amount.

17 Seasonings and spices

For "17027 Stock cubes, meat and vegetable", "17028 Stock powder, Katsuo-bushi", "17029, 17030 Japanese noodle soup", "17031 Seasoning sauce, oyster sauce", "17051 Roux, Japanese curry roux, instant", "17053 Sakekasu (sake lees)", "17064, 17065 Spices, pepper (white, mix)", "17080, 17081 Spices, Wasabi", because their amino acids are estimated based on analytical values in NILS Food Amino Acid Composition Tables, their data was borrowed to estimate the component values of amino acids.

Table 11　Fish, mollusk, and crustacean groups used for estimation

Group	Referenced (The average values of the "raw" component values of the following species)	Estimated (Excluded processed foods using secondary ingredients including amino acids)
Highly migratory species	Blue marlin, swordfish, skipjack tuna, mackerel pike, yellowfin tuna, Pacific bluefin tuna	Swordfish, frigate tuna, albacore, southern bluefin tuna, young tuna, big eye tuna Cooked foods and processed foods of the above.
Horse mackerel, sardine, mackerel, herring, yellowtail	Japanese jack mackerel, amberfish, round herring, Japanese anchovy, Japanese sardine, barracuda, gizzard shad, chub mackerel, blue mackerel, Spanish mackerel, herring, Japanese amberjack	Horse mackerel, brownstriped mackerel scad, greater amberjack, Atlantic mackerel, yellowtail amberjack Cooked foods and processed foods of the above.
Other fish species	Matsubara's red rockfish, Conger eel, tilefish, sweetfish (Natural), Japanese sand lance, black scraper fish, sillaginoid, black cod, red snapper, white croaker, chum salmon, capelin, red seabream (natural), largehead hairtail, Alaska Pollack, Pacific cod, flying fish, Nile tilapia, goby, sailfin sandfish conger pike, purples puffer, Atka mackerel, striped mullet, Japanese bluefish, black rockfish, common hake, Japanese pond smelt	Greenling, Pacific ocean perch, angler fish, grunt, striped beakfish, golden threadfin bream, Japanese butterfish, Japanese dace, lizardfish, rockfish, stonefish, scorpionfish, sculpin, thread-sail filefish, broadbanded thornyhead, silver-stripe round herring, Pink cusk-eel, white croaker, flathead, pink salmon, masu salmon, red salmon, chinook salmon, garfish, mahimahi, smelt, whitebait, silver fish, Japanese sea perch, yellowback sea bream , black sea bream, crimson sea bream, double-lined fusilier , knifefish, Japanese smelt, Argentinidae, red gurnard, hoki, Patagonian toothfish, Barracouta, southern blue whiting, largescale blackfish Cooked foods and processed foods of the above.
Mollusk	Ark shell, clam, abalone, oyster, turban shell, whelk, Japanese egg cockle, surf clam, common orient clam, scallop, golden cuttlefish, Pacific flying squid, firefly squid, spear squid, common octopus	Razor shell, mussel, Japanese bay scallop , escargot, pen shell, pond snail, abalone, whelk, Sakhalin surf clam, mirugai clam, neon flying squid, Southern squid, ocellated octopus Cooked foods and processed foods of the above.
Shrimp	Lobster, prawn, shiba shrimp, whiteleg shrimp	Northern shrimp, Taisho shrimp, Black Tiger prawn Cooked foods of the above.
Crab	Hairy crab, snow crab	Swimming crab, red king crab Cooked foods and processed foods of the above.