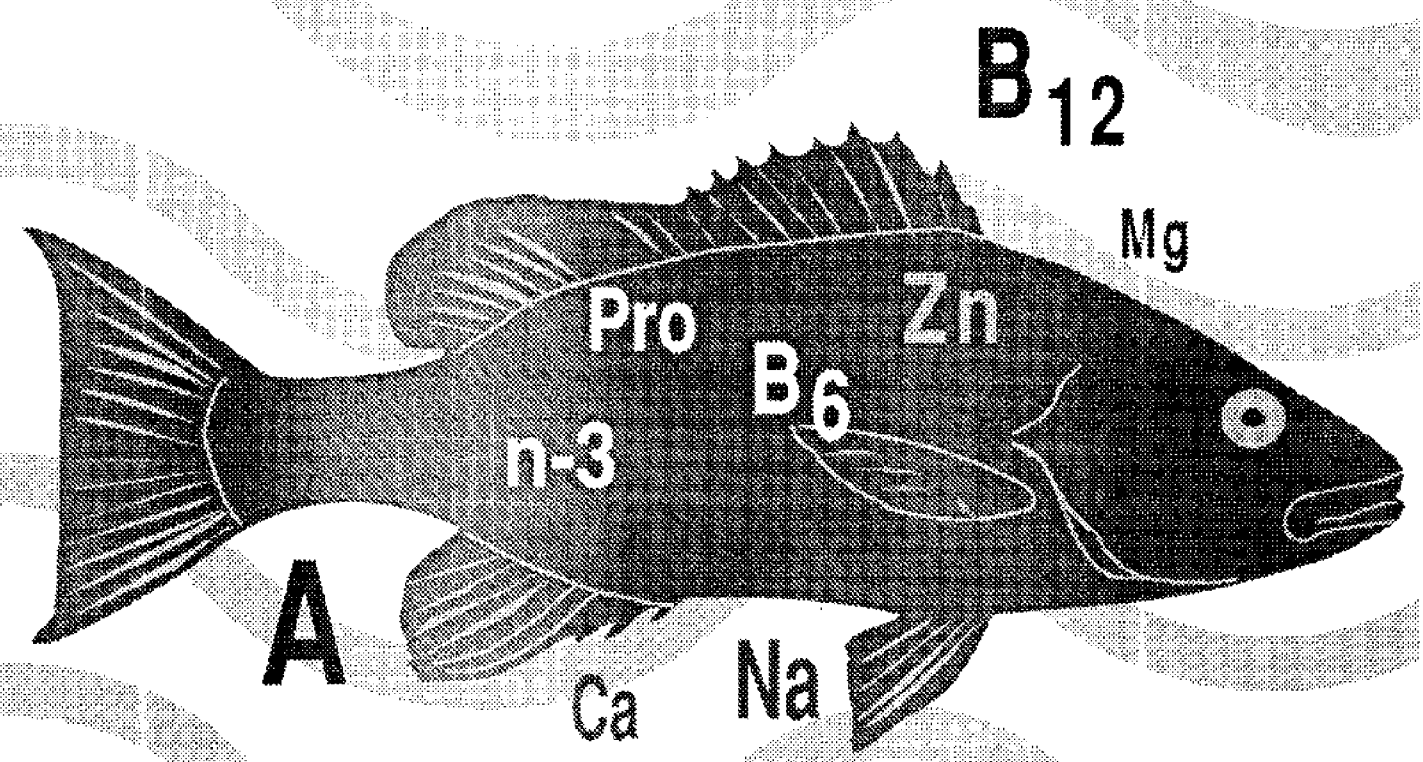
A NUTRIENT DATABASE FOR SOUTHEASTERN SEAFOODS



A Comprehensive Nutrient & Nomenclature Handbook for Selected Southern Species

Compiled by

Food Science and Human Nutrition Dept.
University of Florida, IFAS

Florida Department of Natural Resources
Bureau of Seafood Marketing

Florida Sea Grant College Program

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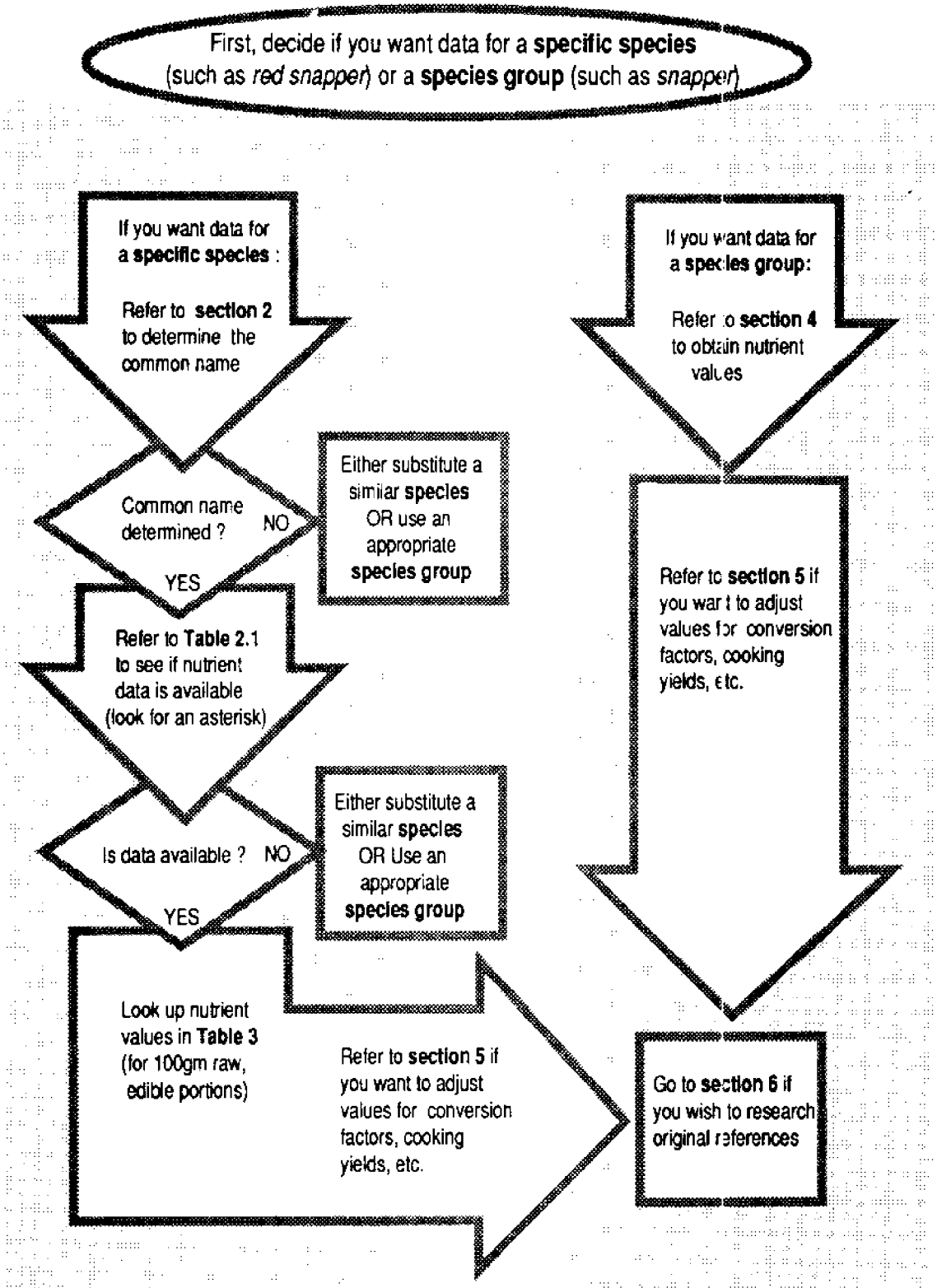

A Nutrient Database for Southeastern Seafoods

A Comprehensive Nutrient and Nomenclature Handbook for Selected Southeastern Species

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TABLE OF CONTENTS*

*(Footnotes appear on color coded pages at the end of each section)

LIST of TABLES

LIST of TABLES

INTRODUCTION

Previously available references on the nutrient composition of seafoods come from a variety of sources, including the National Marine Fisheries Service, the United States Department of Agriculture, the seafood industry, and numerous other researchers (1-15). While much of this data has been presented in comprehensive reviews and handbooks, individuals interested in southeastern species are often faced with the task of compiling, comparing and summarizing various publications. Likewise, they must devise methods to account for variability in the data which occurs as a result of natural and experimental factors. In view of these limitations, this handbook was developed as a more unified, accurate and readily available summary of nutrient data for 262 southeastern species.

Prior database formats and presentations have been somewhat incompatible with certain users' needs. For example, while Sidwell's 1981 comprehensive publication (7) offers a descriptive and detailed listing of analytical results for over 1500 species, the data for one particular species can appear in up to twenty-two different tables within the reference. On the other hand, some tables condense data to the extent that it is too general for certain users. Our intent was to meet the needs of a variety of users by providing a summary of the analytical data, as well as more detailed information, such as nomenclature listings, yield data and a cataloged list of reviewed publications.

Through a systematic process of screening the literature, cataloging the information, and combining the data into a comprehensive and useful form, we have produced a qualified database for southeastern seafood species. Recommended publications are summarized for quick and convenient reference, while a species/reference table allows users to refer to background information and original articles. The continued plan of work involves completing a computerized version of the data.

This initial phase of the project focused on establishing a basic foundation which could receive future additions, yet always remain accessible and useful for the intended audiences. This project represents a benchmark in assembling and organizing the nutrient composition database for southeastern seafoods.

METHODS

1. Species Selection: Our work focused on marine and fresh water seafood species principally produced in the southeast. Species selection was based on the following criteria:

- a marine and/or fresh water species common to waters in the southeastern sector of the United States (Texas through North Carolina).
- a southeastern species with current or future commercial or recreational interest
- an edible southeastern species

(Note: we also included a limited number of non-southeastern species which we considered to be similar in terms of edibility, availability, nutrient profile, and consumer perception. For example, sea scallops, which are frequently marketed as "scallops" in the southeast are similar to bay and calico scallops, and were therefore included in the database.)

2. Compilation of nomenclature section (section 2): Scientific names, common names, market names and regional names were collected, reviewed and arranged into two separate tables designed to help users identify the correct common name of the species, and to serve as a general nomenclature reference. Tables 1.1 and 1.2 are excerpts from these tables. Seafood nomenclature appearing in the tables is based on lists published and reviewed by the American Fisheries Society (16,17), the National Marine Fisheries Service, the Food and Drug Administration (18), and other publications (see Section 2).

Table 1.1 Nomenclature for Southeastern Finfish (Excerpt from Table 2.1)

Common Name	Scientific Name		Market Name
	Species	Family	
Grouper		Serranidae	grouper
Black	Mycteroperca bonaci		grouper
Coney	Epinephelus fulvus		grouper
Gag	Mycteroperca microlepis		grouper/gag
Graysby	Epinephelus cruentatus		grouper

Table 1.2 Regional Names for Southeastern Finfish (alphabetized by regional names) (Excerpt from Table 2.2)

Regional Name (alphabetical order)	Common Name
Big Eye	Tuna, Bigeye
Blackback	Flounder, Winter
Blackfish	Bass, Black Sea
Blacktip	Shark, Blacktip

3. Literature Review: As of April 1991, More than 1500 references were reviewed for content and methods relative to providing compositional data on selected southeastern species. The screening procedure classified each reference as a primary, background or nonacceptable reference, based on the following criteria:

primary references contained original data and provided proper species identification (based on American Fisheries Society publications and other lists), acceptable sample procurement and treatment (only data for raw edible muscle was used) and appropriate analytical methods. To strengthen the database, our literature review did include data collected from waters adjacent to the southeastern region. Inclusion of non-southeastern data is noted in Tables 6.1 and 6.2.

background references were considered questionable relative to methods for species identification, analytical methods, sampling techniques or sample preparation. Also, data that substantially deviated from other values (more that three standard deviations away from the mean of values reported in other references) was considered background. Publications reviewing other analyses were also designated as background references.

nonacceptable references had no useful data for species that were being reviewed, but they did include data for possible future reference. For example, some references containing data for certain non-regional species were retained for comparison with southeastern data.

The primary and background references were sequentially numbered and added to the seafood nutrition reference file (see Section 6). From the approximately 1500 references that were reviewed, we identified 92 primary and 174 background references. Any exceptions to the standard methods for screening and consolidating data from various references were documented and recorded as footnotes to the seafood nutrition reference file.

It would be appropriate to note here that USDA Agricultural Handbook 8-15 (Composition of Foods, Finfish and Shellfish Products) was utilized as both a primary and background reference in compiling this database. Although Handbook 8-15 represents a summary of data generated by different researchers using a variety of methods, it does provide unique information for certain species, and thus was used as a primary reference in those cases. Data reported for "mixed species" in Handbook 8-15 was noted as background information. (To determine if Handbook 8-15 was used as a source of data for a particular species, a user can refer to the species/reference tables in Section 6.)

4. Construction of Species/Reference Tables (Tables 6.1 and 6.2) - A set of species/reference tables was developed to catalog each primary and background reference, based on the species analyzed and nutrient values reported.

Table 1.3 illustrates the format of the species/reference tables. This example indicates that six references provide proximate data for swordfish: **247**, **250**, 7, 8, 68, and 138 (these numbers correlate with the numbers used in the reference file in Section 6). Numbers printed in bold type (**247** and **250**) are primary references, while the others are background references. With this information, a user could then refer to the reference file and obtain citations for all six references. (Table 6.2 is similar except that it lists references used for minerals.)

Table 1.3 Excerpt from Table 6.1 (Species/Reference Table)

Common Name	Proximates	Lipid/ Fatty Acids	Cholesterol	Amino Acids
Swordfish	**247**,**250**,7, 8,68,138	**12**,**247**,**250**, 1,8,10	**250**,1,7,8	**250**

5. Nutritional Analysis of Selected Southeastern Species - The initial literature review prompted additional laboratory analysis of twenty-five southeastern seafood species (listed in Table 1.4), for which there was little or no data available in the literature.

Table 1.4 Southeastern Species Analyzed by Otwell (19)	
Amberjack	Snapper Vermilion
Bluefish	Tilefish, Gray
Drum, Black	Tilefish, Golden
Grouper, Black	Triggerfish
Grouper, Gag	Tuna, Albacore
Grouper, Scamp	Tuna, Bigeye
Grouper, Yellowedge	Tuna, Yellowfin
Grouper, Yellowmouth	Crab, Blue, soft
Shark, Blacktip	Crab, Stone
Shark, Sandbar	Lobster, Bulldozer
Snapper, Lane	Shrimp, Rock
Snapper, Mangrove	Shrimp, Royal Red
Snapper, Silk	

6. Collection of Nutrient Data - Data from each primary reference was collected and transferred to spreadsheets. Only mean values and ranges were used from each reference (for example, if a reference reported six lipid values for red snapper, the mean and range of those six values were recorded). When certain conversions or adjustments were necessary, the following guidelines were used:

a. If fatty acid data was presented as percent fatty acids by weight (which was usually the case), the data was converted to grams/100 grams using the lipid conversion factors (13,20) noted below. These factors provide the estimated "weight of fatty acids in 1 gram of fat":

finfish = 0.933 - (0.143/TL)
crustaceans = 0.956 - (0.273/TL)
mollusks = 0.956 - (0.296/TL)

(TL = total lipid expressed as g/100 g food)

b. When a reference provided fatty acid data, but did not report a total fat value, an average fat value from other references was used.

c. Values for eicosapentaenoic acid (20:5) and docosahexaenoic acid (22:6) were added together to determine omega-3 fatty acid values.

d. If a reference reported individual fatty acids, they were added to get totals for fatty acid groups (saturated, monounsaturated and polyunsaturated). Data for "other" or "unidentified" fatty acids was not included in the fatty acid groupings.

e. Data given on a dry weight basis was converted to wet weight using the moisture value provided by the author. If a moisture value was not provided, then the average moisture value determined from other references was used to convert dry weight data.

f. If a product had been stored and sampled over different intervals, only data for the shortest storage period was used.

g. Any data that substantially deviated from other reported values (for the same nutrient and species) was reevaluated. If the value was more than three standard deviations away from the mean of values reported in other references, the reference was changed to background, and therefore not recorded on the spreadsheets.

h. Carbohydrate data was recorded if it represented analytical data, or if it was calculated based on proximate values for a particular sample. There were a limited number of carbohydrate values reported for several shellfish, and these are included as a footnote to Table 3.

(Note: Any exceptions to these guidelines were documented as endnotes to the Seafood Nutrition Reference File in Section 6.)

7. Summary of Nutrient Data: Data from each individual reference was summarized in Table 3 (see page 7).

The mean values from each reference were averaged together to produce a single **average nutrient value** for each species/nutrient. For example, after collecting three lipid values for silver hake from three different publications, we averaged those values together to generate a single fat value (2.5 g/100gm), as shown in on page 7. Also, we recorded the **number of references** used to determine each average nutrient value, plus we provided an **overall range** (the highest and lowest observed values reported in the primary references for that particular nutrient and species). The schematic also illustrates how missing data is indicated in the table, as well as values estimated from background data.

Average nutrient values and ranges were rounded off, depending on the RDA for each nutrient. Values reported as "trace" were noted but not used in obtaining average values.

Calorie values were calculated using the factors described by Exler (10): protein, 4.27 cal/gm; fat, 9.02 cal/gm and carbohydrate in shellfish, 4.11 cal/gm. For finfish, these factors were multiplied with their average nutrient values for protein and fat. For shellfish, carbohydrate was also included in the calculation, if a value was available.

Figure 1. HOW TO READ TABLE 3
Approximate Nutrient Data for Southeastern Seafood **Species**

SPECIES are listed alphabetically according to common name; finfish, mollusks, and crustaceans are listed separately.

NUMBERS IN BRACKETS "[ ]"- indicate estimated values obtained from a similar species and/or background data. These values are FOR GENERAL REFERENCE ONLY, as they do not represent an actual analysis of the species.

AVERAGE NUTRIENT VALUE- indicates average of the means obtained from primary references.

RANGE- indicates lowest and highest values reported in primary references.

NUMBER OF REFERENCES- indicates number of primary references used to determine the average nutrient value.

DASHES- indicate data not available.

Species Common Name[1]	Amberjack, Greater	Anchovy, Bay	Barracuda, Great[2]	Bass, Black Sea	Bass, Large-mouth	Bass, Rock (F)
Calories[3]	[106]	-	104	93	89	82
Pro (g)	[21]	-	22.2 20.4-23.9 (1)	18.5 17.8-19.3 (5)	[18]	17.8 17.3-18.6 (1)
Fat[4,5] (g)	1.8 1.5-20 (1)	-	1.0 0.8-1.3 (1)	1.5 0.6-3.0 (5)	1.3 - - (1)	0.7 0.5-0.9 (1)
Sat'd[5] (g)	-	-	0.29 - - (1)	0.14 - - (2)	0.25 - - (1)	0.13 - - (1)

Pro ..... Protein
Sat'd ..... Saturated fat
Mono .... Monounsaturated fat
Poly ..... Polyunsaturated fat
n-3 ..... Omega-3 fatty acids
Na ..... Sodium
K ..... Potassium
P ..... Phosphorous
Ca ..... Calcium
Mg ..... Magnesium
I ..... Iodine
Mn ..... Manganese
Zn ..... Zinc
Cu ..... Copper
Fe ..... Iron
Thia ..... Thiamin
Ribo ..... Riboflavin
Nia ..... Niacin
Panto .... Pantothenic acid
B_6 ..... Vitamin B_6
B_{12} ..... Vitamin B_{12}
Vit A ..... Vitamin A

8. Construction of **Species Groups:** In addition to species specific data, nutrient profiles were created for groups of species (see Section 4). These species groups were developed for practical applications, such as nutrient analysis of recipes, calculation of dietary recall information, and other situations where the user has only a general name to refer to, such as "grouper" or "snapper". Species groups are based on nomenclature similarities (similar common and/or market names) that consumers, dietitians and home economists generally encounter in the southeast.

These nutrient profiles were established by first identifying the species to be included in each group, and then eliminating species that had no available data. Next, by combining average nutrient values and ranges (obtained in step 7), we compiled an estimated nutrient profile for the following twenty-two **species groups** (see Table 1.5).

Table 1.5 Species Groups Listed in Section 4

Bass, freshwater	Shark
Bass, saltwater	Snapper
Catfish, freshwater	Sunfish
Drum	Tilefish
Eel	Trout
Flounder	Tuna
Grouper	Crab
Herring	Lobster
Perch	Shrimp
Porgy	Scallop
Seatrout	Squid

9. Summary of yield and measurement data: It is often necessary for users to account for changes related to cooking, yields, refuse, etc. Therefore, we collected data on cooking yields, nutrient retention, processing yields and weight/size relationships for southeastern seafoods, which can be applied to data given on the basis of 100 gram, raw, edible portions. This information is presented in Section 5.

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SECTION 2:
NOMENCLATURE FOR SOUTHEASTERN SEAFOODS

Nutrient data in this handbook is listed in accordance with **common names** for seafoods, based on publications of the American Fisheries Society, the National Marine Fisheries Service, the Food and Drug Administration and others (see section 2 references). This section serves as a guide for identifying and verifying proper nomenclature for southeastern seafoods.

The tables in this section list both marine and fresh water species from the southeast. However, many known species were not included due to either limited occurence, no commercial or recreational potential, or the fact that they are not considered edible.

*Regional names are given only to help determine the correct common and scientific names. These local vernaculars for seafoods are generally discouraged since they are inconsistent with official nomenclature.

UNDERSTANDING SEAFOOD NOMENCLATURE

Seafood nomenclature can be confusing, as there are hundreds of species that exist, each with its own series of formal names. Adding to the confusion are the numerous regional names which are informally used to describe various seafoods. This section helps to verify proper nomenclature by listing the scientific, common, market and regional names of each species. The examples below represent various names for black grouper.

Mycteroperca bonaci	The **scientific name** is the Latin name based on the taxonomic classification of the animal. Scientific names are officially recognized by scientific organizations, such as the American Fisheries Society.
black grouper	The **common name** is the primary name formally chosen for general use by scientific organizations. Each species has only one common name.
grouper	The **acceptable market name** is the name designated by the Food and Drug Administration for use in labeling fish products. The market name is usually similar (and sometimes identical) to the common name.
rockfish, marbled rockfish, springer, runner	The **regional names** tend to be colorful and descriptive and their usage varies from one part of the country country to another. They are not officially recognized by scientific or regulatory agencies and their use in labeling fishery products is discouraged, since it can lead to misbranding.

Note: The Food and Drug Administration advises using either the acceptable market name or the common name for labeling seafood products to help "assure that identity labeling of the fish will comply with FDA and National Marine Fisheries Service regulations" (21). To obtain a copy of "The Fish List, FDA Guide to Acceptable Market Names For Food Fish Sold in Interstate Commerce, 1988," contact the Superintendent of Documents, US Govt Printing Office, Washington D.C. 20402.

TABLE 2.1 NOMENCLATURE FOR SOUTHEASTERN SEAFOOD SPECIES

The following table is divided into three sections: finfish, crustaceans and mollusks. Species are listed alphabetically by common name, along with the corresponding scientific name and FDA designated market name. This list serves as a nomenclature reference, and also indicates which species have available nutrient data (nutrient profiles for those species marked with an asterisk are presented in Table 3).

Table 2.1 Nomenclature for Southeastern Seafood Species

(* = nutrient data available, Table 3)

Common Name[1]	Scientific Name		Market Name
	Species	Family	
Albacore	(see Tuna)		
Alewife (F+S)[2]	(see Herrings)		
Amberjack,		Carangidae	
Almaco Jack	Seriola rivoliana		jack
Banded Rudderfish	Seriola zonata		amberjack
Lesser	Seriola fasciata		amberjack/yellowtail
*Greater	Seriola dumerili		amberjack
Anchovy[3],		Engraulidae	
*Bay	Anchoa mitchelli		anchovy
Dusky	Anchoa lyolepis		anchovy
Silver	Engraulis eurystole		anchovy
Striped	Anchoa hepsetus		anchovy
Barracuda,		Sphyraenidae	
*Great	Sphyraena barracuda		barracuda
Bass (F),			
*Largemouth	Micropterus salmoides	Centrarchidae	bass
*Rock	Ambloplites rupestris	Centrarchidae	bass

Table 2.1 (continued)

(* = nutrient data available, Table 3)

Common Name[1]	Scientific Name: Species	Scientific Name: Family	Market Name
Bass (F) (cont'd),			
Smallmouth	Micropterus dolomieui	Centrarchidae	bass
Spotted	Micropterus punctulatus	Centrarchidae	
Striped (F+S)	(See Bass - below)		
Sunshine	Morone chrysops x saxatilis	Centrarchidae	bass
Suwannee	Micropterus notius	Centrarchidae	bass
*White	Morone chrysops	Percichthyidae	bass
Yellow	Morone mississippiensis	Percichthyidae	bass
Bass			
Bank Sea	Centropristis ocyurus	Serranidae	bass, sea
*Black Sea	Centropristis striata	Serranidae	bass, sea
Rock Sea	Centropristis philadelphica	Serranidae	bass, sea
*Striped (F+S)	Morone saxatilis	Percichthyidae	bass
*Bluefish	Pomatomus saltatrix	Pomatomidae	bluefish
Bluegill (F)	(see Sunfish)		
Bonefish	Albula vulpes	Albulidae	bonefish
Bonito,		Scombridae	
*Atlantic	Sarda sarda		bonito
Striped	Sarda orientalis		bonito
*Bowfin (F)	Amia calva	Amiidae	bowfin
Buffalo (F),		Catostomidae	
*Bigmouth	Ictiobus cyprinellus		buffalo
*Smallmouth	Ictiobus bubalus		buffalo
Bullhead	(see Catfish)		

Bumper, Atlantic	Chloroscombrus chrysurus	Carangidae	bumper
Butterfish,		Stromateidae	
*Butterfish	Peprilus triacanthus		butterfish
Gulf	Peprilus burti		butterfish
*Harvestfish	Peprilus alepidotus		butterfish
*Carp (F)	Cyprinus carpio	Cyprinidae	carp
Catfish (F)[1],		Ictaluridae	
Blue	Ictalurus furcatus		catfish
*Bullhead,Brown	Ictalurus nebulosus		bullhead/catfish
*Channel	Ictalurus punctatus		catfish
*White	Ictalurus catus		catfish
Catfish,		Ariidae	
*Gafftopsail	Bagre marinus		catfish, sea
*Hardhead	Arius felis[4]		catfish, ocean
Cero	(see Mackerel)		
Cobia	Rachycentron canadum	Rachycentridae	cobia
Coney	(see Grouper)		
Crappie (F),	(see Sunfish)		
Black			
White			
Croaker (F+S),			
*Atlantic	Micropogonias undulatus	Sciaenidae	croaker
Cutlassfish,			
Atlantic	Trichiurus lepturus	Trichiuridae	cutlassfish
Dogfish,	(see Shark)		
Smooth			
Spiny			

Table 2.1 (continued)

(* = nutrient data available, Table 3)

Common Name[1]	Scientific Name: Species	Scientific Name: Family	Market Name
*Dolphin (fish)	Coryphaena hippurus	Coryphaenidae	mahi-mahi
Drum,		Sciaenidae	
*Black	Pogonias cromis		drum
*Freshwater (F)	Aplodinotus grunniens		drum, freshwater
*Red (F+S)	Sciaenops ocellatus		drum/redfish
Eel[1],			
*American (F+S)	Anguilla rostrata	Anguillidae	eel, American
*Conger	Conger oceanicus	Congridae	eel, conger
*Rex[5]	Ophichthus rex	Ophichthidae	eel snake/ keoghfish
Escolar	Lepidocybium flavobrunneum	Gempylidae	gemfish
Filefish[6]	(see Triggerfish)		
Flounder[1],			
*Gulf	Paralichthys albigutta	Bothidae	flounder
*Southern (F+S)	Paralichthys lethostigma	Bothidae	flounder/fluke
*Summer	Paralichthys dentatus	Bothidae	flounder/fluke
*Winter	Pseudopleuronectes americanus	Pleuronectidae	flounder/sole
Fluke	(see Flounder)		
Gag	(see Grouper)		
Gar,		Lepisosteidae	
Alligator	Lepisosteus spatula		gar
Longnose	Lepisosteus osseus		gar
Graysby	(see Grouper)		

Grouper,		Serranidae	
*Black	Mycteroperca bonaci		grouper
Coney	Epinephelus fulvus		grouper
*Gag	Mycteroperca microlepis		grouper/gag
Graysby	Epinephelus cruentatus		grouper
Hamlet, Mutton	Epinephelus afer		hamlet
Hind, Red	Epinephelus guttatus		grouper/hind
Hind, Rock	Epinephelus adscensionis		hind
*Hind, Speckled	Epinephelus drummondhayi		hind
*Jewfish	Epinephelus itajara		grouper/jewfish
Marbeled	Epinephelus inermis		grouper
Misty	Epinephelus mystacinus		grouper
Nassau	Epinephelus striatus		grouper
*Red	Epinephelus morio		grouper
*Scamp	Mycteroperca phenax		scamp
*Snowy	Epinephelus niveatus		grouper
Tiger	Mycteroperca tigris		grouper
Warsaw	Epinephelus nigritus		grouper
*Yellowedge	Epinephelus flavolimbatus		grouper
Yellowfin	Mycteroperca venenosa		grouper
*Yellowmouth	Mycteroperca interstitialis		grouper
Grunt[1],		Haemulidae	
*Bluestriped	Haemulon sciurus		grunt
Margate	Haemulon album		margate/grunt
*Pigfish	Orthopristis chrysoptera		grunt
Sailors Choice	Haemulon parrai		grunt
*White	Haemulon plumieri		grunt
Hake[1],		Gadidae	
Gulf	Urophycis cirrata		hake
*Silver	Merluccius bilinearis		whiting
Southern	Urophycis floridana		hake
*Spotted	Urophycis regia		hake
Hamlet,			
Mutton	(see Grouper)		
Harvestfish	(see Butterfish)		

Table 2.1 (continued)

(* = nutrient data available, Table 3)

Common Name[1]	Scientific Name		Market Name
	Species	Family	
Herring,		Clupeidae	
*Alewife (F+S)	Alosa pseudoharengus		alewife
*Atlantic	Clupea harengus harengus		herring/herring, sea/sild
Blueback (F+S)	Alosa aestivalis		herring/river herring
*Round	Etrumeus teres		herring
*Thread (F+S)	Opisthonema oglinum		herring, thread
Hind,			
Red Rock	(see Grouper)		
Speckled			
*Hogfish	Lachnolaimus maximus	Labridae	hogfish
Jack[1],		Carangidae	
Almaco	(see Amberjack)		jack
Bar	Caranx ruber		jack
Black	Caranx lugubris		jack
Blue runner	Caranx crysos		jack/blue runner
*Crevalle	Caranx hippos		jack
Horse-eye	Caranx latus		jack
Rainbow runner	Elagatis bipinnulata		jack/rainbow runner
Jewfish	(see Grouper)		
Kingfish,		Sciaenidae	
Gulf	Menticirrhus littoralis		kingfish
*Northern	Menticirrhus saxatilis		kingfish
*Southern	Menticirrhus americanus		kingfish
*Ladyfish (F+S)	Elops saurus	Elopidae	ladyfish

Leatherjacket[6]	(see Triggerfish)		
Mackerel[1],		Scombridae	
*Atlantic	Scomber scombrus		mackerel
Cero	Scomberomorus regalis		mackerel
*Chub	Scomber japonicus		mackerel
*King	Scomberomorus cavalla		mackerel, king
Snake	(see Oilfish)		
*Spanish	Scomberomorus maculatus		mackerel
*Wahoo	Acanthocybium solanderi		wahoo
Marlin,		Istiophoridae	
Blue	Makaira nigricans		marlin
White	Tetrapturus albidus		marlin
Margate	(see Grunt)		
Menhaden,		Clupeidae	
*Atlantic	Brevoortia tyrannus		menhaden
Finescale	Brevoortia gunteri		menhaden
*Gulf	Brevoortia patronus		menhaden
Yellowfin	Brevoortia smithi		menhaden
Mullet,		Mugilidae	
Fantail	Mugil trichodon		mullet
Liza	Mugil liza		mullet
Redeye	Mugil gaimardianus		mullet
*Striped (F+S)	Mugil cephalus		mullet
*White (F+S)	Mugil curema		mullet
*Oilfish	Ruvettus pretiosus	Gempylidae	mackerel, snake
Paddlefish (F)	Polyodon spathula	Polyodontidae	paddlefish
Perch,			
*Sand	Diplectrum formosum	Serranidae	grouper/sand perch
*Silver (F+S)	Bairdiella chrysoura	Sciaenidae	perch
*White (F+S)	Morone americana	Percichthyidae	perch, white
*Yellow (F)	Perca flavescens	Percichthyidae	perch, yellow

Table 2.1 (continued)

(* = nutrient data available, Table 3)

Common Name[1]	Scientific Name: Species	Scientific Name: Family	Market Name
*Permit	Trachinotus falcatus	Carangidae	pompano/permit
Pickerel (F)		Esocidae	
Chain	Esox niger		pickerel
Redfin	Esox americanus americanus		pickerel
Pigfish	(see Grunt)		
Pinfish (F+S)	(see Porgies)		
Pomfret	Brama brama	Bramidae	pomfret, Atlantic
*Pompano, Florida	Trachinotus carolinus	Carangidae	pompano
Porgy[1],		Sparidae	
Jolthead	Calamus bajonado		porgy
*Knobbed	Calamus nodosus		porgy
Pinfish (F+S)	Lagodon rhomboides		porgy
*Red	Pagrus pagrus		porgy
*Scup	Stenotomus chrysops		porgy/scup
*Sheepshead (F+S)	Archosargus probatocephalus		sheepshead
Puffer[7],		Tetraodontidae	
Northern	Sphoeroides maculatus		puffer
Southern	Sphoeroides nephelus		puffer
Pumpkinseed (F)	(see Sunfish)		
Ray[1],			
Atlantic Stingray	Dasyatis sabina	Dasyatidae	(stingray)[8]
*Cownose	Rhinoptera bonasus	Myliobatidae	ray

Redfish	(see Drum)		
Rex Eel	(see Eel)		
Rudderfish, Banded	(see Amberjack)		
Runner,			
*Blue	(see Jack)		
Rainbow	(see Jack)		
Sailors Choice	(see Grunt)		
*Sailfish	Istiophorus platypterus	Istiophoridae	sailfish
Sardine[3],		Clupeidae	
False pilchard	Harengula clupeola		sardine
Redear	Harengula humeralis		sardine
Scaled	Harengula jaguana		sardine
*Spanish	Sardinella aurita		sardine
Scad[1],		Carangidae	
Bigeye	Selar crumenophthalmus		scad
Rough	Trachurus lathami		jack mackerel
*Round	Decapterus punctatus		scad
Scamp	(see Grouper)		
Schoolmaster	(see Snapper)		
Scup	(see Porgy)		
Sea Bass	(see Bass)		
Searobins[1],		Triglidae	
Bighead	Prionotus tribulus		searobin
*Northern	Prionotus carolinus		searobin

Table 2.1 (continued)

(* = nutrient data available, Table 3)

Common Name[1]	Scientific Name: Species	Scientific Name: Family	Market Name
Seatrout,		Sciaenidae	
*Sand	Cynoscion arenarius		seatrout
*Silver	Cynoscion nothus		seatrout
*Spotted (F+S)	Cynoscion nebulosus		seatrout
*Weakfish/Gray	Cynoscion regalis		seatrout/weakfish
Shad (F+S),		Clupeidae	
*American	Alosa sapidissima		shad
*Gizzard	Dorosoma cepedianum		shad
Hickory	Alosa mediocris		shad
Threadfin	Dorosoma petenense		shad
Shark[1],			
*Blacktip	Carcharhinus limbatus	Carcharhinidae	shark
*Bull	Carcharhinus leucas	Carcharinidae	shark
*Dusky	Carcharhinus obscurus	Carcharhinidae	shark
Hammerhead, great	Sphyrna mokarran	Sphyrnidae	shark/hammerhead
*Lemon	Negaprion brevirostris	Carcharhinidae	shark
Mako, longfin	Isurus paucus	Lamnidae	shark, mako
*Mako, shortfin	Isurus oxyrinchus	Lamnidae	shark, mako
Night	Carcharhinus signatus	Carcharhinidae	shark
Reef	Carcharhinus perezi	Carcharhinidae	shark
*Sandbar	Carcharhinus plumbeus	Carcharhinidae	shark
*Silky	Carcharhinus falciformis	Carcharhinidae	shark
*Smooth dogfish	Mustelus canis	Carcharhinidae	dogfish
Spinner	Carcharhinus brevipinna	Carcharhinidae	shark
*Spiny dogfish	Squalus acanthias	Squalidae	dogfish
Thresher	Alopias vulpinus	Alopiidae	shark,thresher
Sheepshead (F+S)	(see Porgy)		
Skate[1],			
*Clearnose	Raja eglanteria	Rajidae	skate, clearnose

Snapper[1],		Lutjanidae	
Black	Apsilus dentatus		snapper, black
*Blackfin	Lutjanus buccanella		snapper, blackfin
Cardinal	Pristipomoides macrophthalmus		snapper, cardinal
Cubera	Lutjanus cyanopterus		snapper, cubera
Dog	Lutjanua jocu		snapper, dog
*Gray	Lutjanus griseus		snapper, gray
*Lane	Lutjanus synagris		snapper, lane
Mahogany	Lutjanus mahogoni		snapper, mahogany
Mutton	Lutjanus analis		snapper, mutton
Queen	Etelis oculatus		snapper, queen
*Red	Lutjanus campechanus		snapper, red
Red (Southern)[9]	Lutjanus purpureus		snapper, carribbean
Schoolmaster	Lutjanus apodus		schoolmaster
*Silk	Lutjanus vivanus		snapper, silk
*Vermilion	Rhomboplites aurorubens		snapper, vermilion
Wenchman	Pristipomoides aquilonaris		snapper, wenchman
*Yellowtail	Ocyurus chrysurus		snapper, yellowtail
*Snook (F+S)[1]	Centropomus undecimalis	Centropomidae	snook
Sole,	(see Flounder)		
Lemon	(see Flounder, Winter)		
Spadefish,		Ephippidae	
Atlantic	Chaetodipterus faber		spadefish
*Spot (F+S)	Leiostomus xanthurus	Sciaenidae	spot
Sturgeon (F+S),		Acipenseridae	
*Atlantic[1]	Acipenser oxyrhynchus		sturgeon
Sunfish (F),		Centrarchidae	
*Bluegill	Lepomis macrochirus		blue gill
*Crappie, Black	Pomoxis nigromaculatus		crappie
*Crappie, White	Pomoxis annularis		crappie
*Pumpkinseed	Lepomis gibbosus		sunfish
Redbreast	Lepomis auritus		sunfish
Redear	Lepomis microlophus		sunfish

Table 2.1 (continued)

(* = nutrient data available, Table 3)

Common Name[1]	Scientific Name: Species	Scientific Name: Family	Market Name
*Swordfish	Xiphias gladius	Xiphiidae	swordfish
Tilapia (F)[10]		Cichlidae	
Blue	Tilapia aurea		tilapia
Mozambique	Tilapia mossambica		tilapia
Tilefish,		Malacanthidae	
*Blackline	Caulolatilus cyanops		(tilefish)[8]
*Blueline	Caulolatilus microps		tilefish
Goldface	Caulolatilus chrysops		tilefish
*Golden	Lopholatilus chamaeleonticeps		tilefish
Sand	Malacanthus plumieri		tilefish
Triggerfish[6],		Balistidae	
*Gray	Balistes capriscus		triggerfish
Queen	Balistes vetula		triggerfish
Tripletail	Lobotes surinamensis	Lobotidae	tripletail
Trout (F)[1],		Salmonidae	
*Brook	Salvelinus fontinalis		trout, brook
Brown	Salmo trutta		trout
*Rainbow	Salmo gairdneri		trout, rainbow/ steelhead
Trout,			
Sea	(see Seatrout)		
Tuna[1],		Scombridae	
*Albacore	Thunnus alalunga		tuna/albacore
*Bigeye	Thunnus obesus		tuna
*Blackfin	Thunnus atlanticus		tuna
*Bluefin	Thunnus thynnus		tuna
*Little tunny	Euthynnus alletteratus		tuna

Tuna[1] (cont'd),			
*Skipjack	Euthynnus pelamis		tuna (canned)
*Yellowfin	Thunnus albacares		tuna
Wahoo	(see Mackerel)		
Weakfish	(see Seatrout)		
Wenchman	(see Snapper)		
Whiting	(see Hake)		
Wreckfish	Polyprion americanus	Percichthyidae	sea bass
CRUSTACEANS----------			
Crab,			
*Blue (F+S)	Callinectes sapidus	Portunidae	blue crab
*Blue (soft)	Callinectes sapidus	Portunidae	blue crab
*Golden, deepwater	Chaceon fenneri[12]	Geryonidae	golden crab
*Jonah	Cancer borealis	Canceridae	jonah crab
*Red, deepwater	Chaceon quinquedens[12]	Geryonidae	red crab
*Rock, Atlantic	Cancer irroratus	Canceridae	rock crab
*Stone, Florida	Menippi mercenaria	Xanthidae	stone crab
Stone, Gulf	Menippi adina	Xanthidae	stone crab
Crayfish (F),		Astacidae	
*Red Swamp	Procambarus clarkii		crawfish
White River	Procambarus acutus		crawfish
Lobster,			
*American	Homarus americanus	Nephropidae	lobster
*Slipper	Scyllarides spp.	Scyllaridae	slipper lobster
Spanish/Slipper	Scyllarides aequinoctialis	Scyllaridae	spanish/slipper
Spanish/Slipper	Scyllarides brasiliensis	Scyllaridae	spanish/slipper
Spanish/Slipper	Scyllarides nodifer	Scyllaridae	spanish/slipper
*Spiny, Caribbean	Panulirus argus	Palinuridae	spiny lobster

Table 2.1 (continued)[13]

(* = nutrient data available, Table 3)

Common Name	Scientific Name		Market Name
	Species	Family	
Shrimp,			
*Brown	Penaeus aztecus	Penaeidae	brown shrimp
*Pink	Penaeus duorarum	Penaeidae	pink shrimp
*Rock	Sicyonia brevirostris	Sicyoniidae	rock shrimp
*Royal Red	Pleoticus robustus	(not distinct)	royal red shrimp
*White	Penaeus setiferus	Penaeidae	white shrimp
MOLLUSKS			
Clam,			
Hard	(see quahog)		
Rangia	Rangia cuneata	Mactridae	freshwater rangia clam
*Softshell	Mya arenaria	Myidae	softshell clam
Sunray, Venus	Macrocallista nimbosa	Veneridae	venus clam
*Surfclam, Atlantic	Spisula solidissima	Mactridae	surfclam
Conch,			
Fighting, Florida	Strombus alatus	Strombidae	fighting conch
Fighting	Strombus pugilius	Strombidae	fighting conch
Horse	Pleuroploca gigartea	Fasciolaniidae	horse conch
Milk	Strombus costatus	Strombidae	milk conch
Queen	Strombus gigas	Strombidae	conch
*Octopus	Octopus spp.[14]	Octopodidae	octopus
Oyster,			
*Eastern	Crassostrea virginica	Ostreidae	oyster
Quahog,		Veneridae	
*Northern	Mercenaria mercenaria		quahog
Southern	Mercenaria campechiensis		quahog

Scallop,		Pectinidae	
*Bay	Argopecten irradians		bay scallops
*Calico, Atlantic	Argopecten gibbus		calico scallops
*Sea	Placopecten magellanicus		sea scallop
Squid,			
Arrow	Loligo pleii	Loliginidae	arrow squid
Brief, Atlantic	Loliguncula brevis	Loliginidae	brief squid
*Longfin	Loligo pealeii	Loliginidae	longfin squid
*Shortfin, Northern	Illex illecebrosus	Ommastrephidae	shortfin squid
*Whelk	Busycon spp.[14]	Melongenidae	whelks

TABLE 2.1 ENDNOTES

Note: Reference numbers in parenthesis correspond with Section 2 references (page 45).

1. This list is not complete for all aquatic species known in the southeastern region. The species included were considered abundant and frequent in the commercial and/or recreational catch.

2. (F) refers to freshwater habitat; (F+S) is fresh, salt and brackish water habitat; no designation refers to saltwater.

3. There are many additional anchovy and sardine species. The species listed are based in part on potential fisheries reported by Reintjes (18).

4. Genus Arius is also referred to as Ariopsis by the FAO Species Identification Sheets for Fishery Purposes, Western Central Atlantic (9).

5. Rex Eel (Ophichthidae - snake eel family) is not listed by the American Fisheries Society special publication no. 12. It is identified as an emerging fishery by Burgess, et al. (5).

6. The American Fisheries Society considers the terms "triggerfishes" and "filefishes" mutually exclusive. Thus they choose the term "leatherjackets" for the family Balistidae, which includes triggerfish and filefish.

7. There are other puffer species which exist in the southeast. Possible toxicity for most species has not been analytically determined, but the bandtail puffer Sphoeroides spengleri (not listed) has been shown to be toxic (Burklew and Morton, 1971. Toxicol. 3, vol 9, pp. 205-210).

8. Market names listed in parenthesis are provided by the investigator and do not represent those proposed by NMFS or FDA.

9. Southern red snapper L. purpureus, as identified by FAO (Species Identification Sheets for Fishery Purposes, Western Central Atlantic, Fishing Area 13, Vol III), is included with this list due to frequency of use in the southeastern commercial fishery and similarity to red snapper (northern) L. campechanus.

10. There are many additional tilapia including some hybrids developed for culture. Likewise, there are other cichlids occasionally taken in the recreational catch.

TABLE 2.1 ENDNOTES (continued)

11. Nomenclature for crustaceans is based on initial unpublished working drafts compiled by the FDA and NMFS (13), in their continuing efforts to establish official common and market name designations.

12. In 1989, the original scientific names Geryon fenneri and Geryon quinquedens were changed to Chaseon fenneri and Chaseon quinquedens, as reported by Manning and Holthius (14).

13. Nomenclature for mollusks is based on American Fisheries Society special publication No. 16 (2).

14. The abbreviation "spp." refers to multiple species.

Table 2.2 REGIONAL NAMES FOR SOUTHEASTERN FINFISH

Seafood products are sometimes referred to by regional names rather than their official common names. Regional names tend to be descriptive and their usage can vary from one part of the country to another. They are not officially recognized by scientific or regulatory agencies, and therefore their use in labeling fishery products is discouraged. The following table lists some regional names and allows users to identify the corresponding common names. (Note: you should first refer to Table 2.1 to see if the name you're looking up is the official common name; if not, then assume you have a regional name and refer to Table 2.2.)

Example 1: If you're interested in determining the nutrient value of "marbeled rockfish," you would not be able to find that term listed as a common name in Table 2.1, and so you should suspect that "marbeled rockfish" is a regional name. Next, you would check this table, and on page 39, you would find that "marbeled rockfish" is a regional name used to describe black grouper.

Example 2: Similarly, "rockfish" does not appear in Table 2.1 as a common name. By referring to Table 2.2 (page 39), you will find that "rockfish" is a regional name for striped bass, black grouper and nassau grouper. In this case, you will have to obtain more information or make the most logical choice from the common names listed.

(Note: since regional names are used informally, and their usage can vary from one part of the country to another, this list serves as only a general guide and is not considered to be all inclusive.)

Table 2.2 REGIONAL NAMES FOR SOUTHEASTERN FINFISH

Regional Name (alphabetical order)	Common Name
Aku	Tuna, Skipjack
Agika Prieta	Marlin, Blue
Ahi	Tuna, Yellowfin
Ahi-B	Tuna, Bigeye
Albacore	Tuna, Bluefin
Alewife	Manhaden, Gulf
Amberjack	Amberjack, Banded Rudderfish
Amberjack, Atlantic	Amberjack, Greater
American Cownose	Ray, Cownose
Anchovy, Common	Anchovy, Bay
Anchovy, Fry	Anchovy, Striped

Table 2.2 REGIONAL NAMES FOR SOUTHEASTERN FINFISH (cont'd)

Regional Name (alphabetical order)	Common Name
Angelfish	Spadefish, Atlantic
Arnillo	Snapper, Black
Ballonfish	Puffer, Northern
Bananafish	Bonefish
Barb	Kingfish, Northern
Barjack	Amberjack, Almaco Jack
Barracuda, Short	Barracuda, Great
Bass, Banks	Bass, Banks Sea
Bass, Black	Bass, Largemouth (F)
Bass, Black	Bass, Smallmouth (F)
Bass, Black	Bass, Black Sea
Bass, Channel	Drum, Red (F+S)
Bass, Hogfish	Bass, Smallmouth (F)
Bass, Largemouth Osego	Bass, Largemouth (F)
Bass, Rock	Bass, Black Sea
Bass, Silver	Bass, White (F+S)
Bass, Silver	Perch, White (F+S)
Bass, Spotted	Drum, Red (F+S)
Bass, Strawberry	Tripletail
Bass, White	Bass, Rock (F)
Bass, White Lake	Bass, White (F+S)
Bass, White Lake	Perch, White (F+S)
Becuna	Barracuda, Great
Beeliner	Snapper, Vermilion
Big Eye	Tuna, Bigeye
Blackback	Flounder, Winter
Blackfish	Bass, Black Sea
Blacktip	Shark, Blacktip
Blanguill	Tilefish, Goldface
Blanguillo	Tilefish, Sand
Blowfish	Puffer, Northern
Blue Cat	Catfish, Blue (F)
Blue Catfish	Catfish, Blue (F)
Bluefin, Giant	Tuna, Bluefin
Bluefin, Northern	Tuna, Bluefin
Bluefish	Bass, Black Sea
Bonacigato	Grouper, Tiger
Bonefish	Ladyfish (F+S)
Bonejack	Shad, Hickory (F+S)
Bonita	Cobia
Bonito	Amberjack, Greater
Bonito, Belted	Bonito, Atlantic
Bonito, Belted	Bonito, Striped
Bonito, Ocean	Tuna, Skipjack
Bonito, Oriental	Bonito, Striped
Bony Fish	Ladyfish (F+S)
Boohoo	Marlin, Blue
Boucanello	Snapper, Blackfin

Table 2.2 REGIONAL NAMES FOR SOUTHEASTERN FINFISH (cont'd)

Regional Name (alphabetical order)	Common Name
Bowfish	Bowfin
Bream	Sunfish, Bluegill (F)
Bream, Yellow	Sunfish, Redear
Broadbill	Swordfish
Buckbill cat	Paddlefish
Buffalofish	Buffalo, Smallmouth
Buffalofish, Largemouth	Buffalo, Bigmouth
Buffalofish, Razorbacked	Buffalo, Smallmouth
Buffalofish, Redmouth	Buffalo, Bigmouth
Bullhead	Catfish, Blue (F)
Bumper, Little	Bumper, Atlantic
Bunker	Menhaden, Atlantic
Butterfish	Pompano, Florida
Caballa	Mackerel, Atlantic
Cabellerote	Snapper, Gray
Cabio	Cobia
Capitan	Hogfish
Caronero	Jack, Bar
Carp, European	Carp (F)
Carp, German	Carp (F)
Carp, Mirror	Carp (F)
Casebe	Bumper, Atlantic
Catfish, Channel	Catfish, White (F)
Catfish, Lake	Catfish, Channel (F)
Catfish, Sea	Catfish, Gafftopsail
Catfish, Sea	Catfish, Hardhead
Catfish, Spotted	Catfish, Channel (F)
Catfish, White	Catfish, Channel (F)
Cavalla	Mackerel, King
Cavally	Jack, Crevalle
Cero	Mackerel, King
Charr, Alsation	Trout, Brook (F)
Cherna, Americana	Grouper, Red
Cherna, Criolla	Grouper, Nassau
Chicharro	Scad, Bigeye
Chiro	Ladyfish (F+S)
Chobie	Tripletail
Chub	Bass, Largemouth (F)
Chuckleheaded Cat	Catfish, Blue (F)
Cibi	Jack, Bar
Cigarfish	Scad, Round
Cocino	Triggerfish, Queen
Cod	Hake, Spotted
Conger, Southern	Eel, Conger
Cowfish	Ray, Cownose
Crabeater	Cobia
Croaker	Drum, Freshwater (F)
Croaker, Post	Spot (F+S)

Table 2.2 REGIONAL NAMES FOR SOUTHEASTERN FINFISH (cont'd)

Regional Name (alphabetical order)	Common Name
Cubby Yew	Cobia
Cubera	Snapper, Cubera
Cucuyo	Triggerfish, Gray
Cybium, Spotted	Mackerel, Spanish
Dogfish	Bowfin
Dogfish, Picked	Spiny Dogfish
Dogfish, Spiked	Spiny Dogfish
Dollarfish	Butterfish
Dolphinfish, Common	Dolphin
Dorado	Dolphin
Drum	Drum, Freshwater (F)
Drum, Gray	Drum, Black
Drum, Oyster	Drum, Black
Drum, Sea	Drum, Black
Drumfish	Drum, Black
Eel, Atlantic	Eel, American (F+S)
Eel, Common	Eel, American (F+S)
Eel, Freshwater	Eel, American (F+S)
Eel, Sea	Eel, Conger
Eel, Silver	Eel, Conger
Emperado	Swordfish
Espada	Swordfish
Falsher	Tripletail
Flounder, Blackback	Flounder, Winter
Flounder, Georges Bank	Flounder, Winter
Fluke, Northern	Flounder, Summer
Flying Fish	Searobin, Northern
Gag	Grouper, Tiger
Gaspergou	Drum, Freshwater (F)
Globefish	Puffer, Northern
Goggle eye	Bass, Rock (F)
Goggle eye Jack	Scad, Bigeye
Gogle eye	Scad, Bigeye
Gogle eye Scad	Scad, Bigeye
Goody	Spot (F+S)
Grayfish	Smooth Dogfish
Grayfish	Spiny Dogfish
Grayfish, Smooth	Smooth Dogfish
Green eye	Searobin, Northern
Grindle	Bowfin
Grouper, Black	Grouper, Misty
Grouper, Black	Grouper, Warsaw
Grouper, Yellowfin	Grouper, Yellowmouth
Grouper, Yellowfinned	Grouper, Yellowedge
Grubber	Bonefish
Grunt, Black	Grunt, White
Grunt, Boar	Grunt, Bluestriped
Grunt, Boar	Grunt, White

Table 2.2 REGIONAL NAMES FOR SOUTHEASTERN FINFISH (cont'd)

Regional Name (alphabetical order)	Common Name
Grunt, Common	Grunt, White
Grunt, Humpback	Grunt, Bluestriped
Grunt, Yellow	Grunt, Bluestriped
Gurnard	Searobin, Northern
Hairtail	Cutlassfish, Atlantic
Hake	Kingfish, Northern
Hamlet	Grouper, Nassau
Hardhead	Croaker, Atlantic (F+S)
Hardtail	Runner, Blue
Harvestfish	Butterfish
Herring, Bigeye	Ladyfish (F+S)
Herring, Blue	Herring, Blueback (F+S)
Herring, Common	Herring, Atlantic
Herring, Fall	Shad, Hickory (F+S)
Herring, Glut	Herring, Blueback (F+S)
Herring, Labrador	Herring, Atlantic
Herring, Shad	Shad, Hickory (F+S)
Herring, Summer	Herring, Blueback (F+S)
Hick	Shad, Hickory (F+S)
Hogsnapper	Hogfish
Hound, Smooth	Smooth Dogfish
Jack, Common	Jack, Crevalle
Jack, Crevalle	Runner, Blue
Jack, Green	Jack, Bar
Jack, Hardtail	Runner, Blue
Jack, Hickory	Shad, Hickory (F+S)
Jack, Runner	Jack, Crevalle
Jack, Yellow	Runner, Blue
Jackfish	Amberjack, Banded Rudderfish
Jewfish, Black	Grouper, Warsaw
Jiki	Marlin, White
Jumper	Bass (F), Largemouth
Jurel	Jack, Horse-eye
Kahala	Amberjack, Almaco Jack
Kamanu	Runner, Rainbow
Koiro	Eel, Conger
Kurokajiki	Marlin, Blue
Ladyfish	Bonefish
Lawyer	Snapper, Gray
Leatherjacket	Triggerfish, Gray
Linesides	Bass, Striped (F+S)
Liza	Mullet, White (F+S)
Lumpfish	Tripletail
Macabi	Bonefish
Mackerel, Banded	Amberjack, Banded Rudderfish
Mackerel, Bay	Mackerel, Spanish
Mackerel, Common	Mackerel, Atlantic

Table 2.2 REGIONAL NAMES FOR SOUTHEASTERN FINFISH (cont'd)

Regional Name (alphabetical order)	Common Name
Mackerel, Common	Mackerel, Chub
Mackerel, Japan(ese)	Mackerel, Chub
Mackerel, Spotted	Mackerel, Spanish
Madregal	Amberjack, Almaco Jack
Madregal	Amberjack, Greater
Manjua	Anchovy, Striped
Marlin, Atlantic White	Marlin, White
Menhaden, American	Menhaden, Atlantic
Menhaden, Largescale	Menhaden, Gulf
Mississippi Cat	Catfish, Blue (F)
Moonfish	Spadefish, Atlantic
Mossbunker	Menhaden, Atlantic
Mouthbrooder, African	Tilapia, Mozambique (F)
Mouthbrooder, Mozambique	Tilapia, Mozambique (F)
Mudfish	Bowfin
Muller, Sea	Mullet, Striped (F+S)
Mullet, Black	Mullet, Striped (F+S)
Mullet, Blueback	Mullet, White (F+S)
Mullet, Grey	Mullet, Striped (F+S)
Mullet, River	Mullet, Striped (F+S)
Mullet, Sea	Kingfish, Northern
Mullet, Sea	Kingfish, Southern
Mullet, Virginia	Kingfish, Gulf
Muttonfish	Snapper, Mutton
Negre	Grouper, Red
Ngoio	Eel, Conger
Oilfish	Oilfish
Ojanco	Snapper, Mahogany
Oldwife	Spot (F+S)
Oldwife	Triggerfish, Queen
Paguala	Spadefish, Atlantic
Palu I'Usama	Snapper, Yellowtail
Pargo	Snapper, Mutton
Pargo Criollo	Snapper, Mutton
Pargo Prieto	Snapper, Gray
Pelamid	Bonito, Atlantic
Perch, Black	Bass, Smallmouth (F)
Perch, Black	Tripletail
Perch, Silver	Perch, White (F+S)
Perch, Sun	Bass, Rock (F)
Perch, White	Drum, Freshwater (F)
Perro Perro	Hogfish
Pickerel, Barred	Pickerel, Redfin
Pickerel, Eastern	Pickerel, Chain
Pickerel, Grass	Pickerel, Chain
Pickerel, Grass	Pickerel, Redfin
Pickerel, Mud	Pickerel, Chain

Table 2.2 REGIONAL NAMES FOR SOUTHEASTERN FINFISH (cont'd)

Regional Name (alphabetical order)	Common Name
Pickerel, Smaller	Pickerel, Redfin
Picuda	Barracuda, Great
Pike	Barracuda, Great
Pike	Pickerel, Chain
Pike, Saltwater	Snook (F+S)
Pilchard	Sardine, Redear
Pilchard, Redear	Sardine, Redear
Plaice	Flounder, Summer
Plaicefish	Flounder, Summer
Pogy	Menhaden, Atlantic
Pompano, Atlantic	Pompano, Florida
Pompano, Common	Pompano, Florida
Pompano, Ovate	Permit
Pompano, Palometa	Permit
Pompano, Round	Permit
Porgy	Spadefish, Atlantic
Porgy	Spot (F+S)
Porgy, Pink	Porgy, Red
Princess Rockfish	Grouper, Yellowmouth
Quia Quia	Scad, Round
Ray, Atlantic stingray	Ray, Atlantic Stingray
Redbreast	Sunfish, Redbreast
Redfish	Bass, Rock Sea
Redfish, Bull	Drum, Red (F+S)
Ribbonfish	Cutlassfish, Atlantic
Roach	Sunfish, Bluegill (F)
Robalo	Snook (F+S)
Robin	Searobin, Northern
Robin, Carolina	Searobin, Northern
Robin, Round	Scad, Round
Rock	Bass, Striped (F+S)
Rockfish	Bass, Striped (F+S)
Rockfish	Grouper, Black
Rockfish	Grouper, Nassau
Rockfish Tiger	Grouper, Tiger
Rockfish, Marbled	Grouper, Black
Rockfish, Monkey	Grouper, Yellowfin
Rockfish, Ragtailed	Grouper, Tiger
Rockfish, Red	Grouper, Yellowfin
Ronco Prieto	Grunt, White
Roundhead	Kingfish, Southern
Rudderfish	Amberjack, Banded Rudderfish
Rudderfish	Jack, Crevalle
Runner	Grouper, Black
Runner	Runner, Rainbow
Sailfish	Marlin, Blue
Salmon	Trout, Rainbow (F)

Table 2.2 REGIONAL NAMES FOR SOUTHEASTERN FINFISH (cont'd)

Regional Name (alphabetical order)	Common Name
Salmon, Rock	Amberjack, Almaco Jack
Sandfish	Perch, Sand
Sandfish	Tilefish, Sand
Sanducha	Bonefish
Sardina	Sardine, Redear
Sardine	Herring, Atlantic
Sardine	Sardine, Redear
Sardine, Gilt or Pilchard	Sardine, Spanish
Sardine, Smooth	Sardine, Spanish
Sawbelly	Shad, Gizzard (F+S)
Scabbardfish	Cutlassfish, Atlantic
Scad, Dotted	Scad, Round
Sea Squab	Puffer, Northern
Seapike	Barracuda, Great
Seatrout, White	Seatrout, Silver
Sergeantfish	Cobia
Serrano	Perch, Sand
Shad	Menhaden, Atlantic
Shad	Menhaden, Gulf
Shad, Atlantic	Shad, American (F+S)
Shad, Atlantic	Shad, Gizzard (F+S)
Shad, Hickory	Shad, Gizzard (F+S)
Shad, Lake	Shad, Gizzard (F+S)
Shad, Mud	Shad, Gizzard (F+S)
Shad, North Silver	Shad, American (F+S)
Shad, Potamac	Shad, American (F+S)
Shad, Yellowfin	Menhaden, Yellowfin
Shark, Atlantic Gray	Shark, Sandbar
Shark, Bay	Shark, Dusky
Shark, Brown	Shark, Dusky
Shark, Cub	Shark, Bull
Shark, Fish	Shark, Bull
Shark, Grey	Shark, Blacktip
Shark, Longnosed Blackfin	Shark, Spinner
Shark, Nurse	Smooth Dogfish
Shark, Pigeye	Shark, Bull
Shark, Roundnose	Shark, Bull
Shark, Shovelnose	Shark, Dusky
Shark, Small Blacktip	Shark, Blacktip
Shark, Yellow	Shark, Lemon
Shellcracker	Sunfish, Redear
Shoemaker	Runner, Rainbow
Shortfinned Tunny	Bonito, Atlantic
Sierra	Mackerel, King
Skate, Clearnose	Skate, Clearnose
Skipjack	Bonito, Striped
Skipjack	Butterfish

Table 2.2 REGIONAL NAMES FOR SOUTHEASTERN FINFISH (cont'd)

Regional Name (alphabetical order)	Common Name
Skipjack	Jack, Bar
Skipjack	Menhaden, Atlantic
Skipjack	Runner, Rainbow
Skipjack, Little	Jack, Bar
Smallmouth	Bass, Smallmouth (F)
Snakefish	Cutlassfish, Atlantic
Snapper	Bluefish
Snapper, Caribbean Red	Snapper, Red
Snapper, Clubhead	Snapper, Vermilion
Snapper, Cuban	Snapper, Cubera
Snapper, Day	Snapper, Silk
Snapper, Longfin Red	Snapper, Silk
Snapper, Mangrove	Snapper, Gray
Snapper, Mexican	Snapper, Red
Snapper, Night	Snapper, Vermilion
Snapper, Pink	Porgy, Red
Snapper, Red	Snapper, Blackfin
Snapper, Red Southern	Snapper, Red (Southern)
Snapper, Redtail	Snapper, Lane
Snapper, Silk	Snapper, Lane
Snapper, Silver	Porgy, Red
Snapper, Spot	Snapper, Lane
Snapper, Wenchman	Snapper, Wenchman
Snapper, West Indian	Snapper, Silk
Snook, Common Marine	Snook (F+S)
Soupfin	Shark, Blacktip
Sperling	Herring, Atlantic
Spikefish	Marlin, Blue
Splake	Trout, Brook (F)
Spoonbill	Paddlefish
Spot, Norfolk	Spot (F+S)
Spottail	Drum, Red (F+S)
Spotted Codling	Hake, Spotted
Sprat	Sardine, Redear
Springer	Grouper, Black
Spur Dog	Spiny Dogfish
Squeteague	Seatrout, Silver
Squeteague	Seatrout, Spotted (F+S)
Squirrelfish	Perch, Sand
Striper	Bass, Striped (F+S)
Sturgeon, American Atlantic	Sturgeon, Atlantic (F+S)
Sturgeon, Sea	Sturgeon, Atlantic (F+S)
Sturgeon, Sharpnosed	Sturgeon, Atlantic (F+S)
Sturgeon, Shortnose	Sturgeon, Shortnose (F+S)
Sturgeon, Spoonbilled	Paddlefish
Suckermouth	Buffalo, Smallmouth
Sunfish	Bass, Rock (F)

Table 2.2 REGIONAL NAMES FOR SOUTHEASTERN FINFISH (cont'd)

Regional Name (alphabetical order)	Common Name
Sunfish	Pompano, Florida
Sunfish	Sunfish, Bluegill (F)
Sunfish, Blue	Sunfish, Bluegill (F)
Sunfish, Redbellied	Sunfish, Redbreast
Sunfish, Yellowbellied	Sunfish, Redbreast
Swellfish	Puffer, Northern
Swordfish, Brownbilled	Swordfish
Tailor	Bluefish
Tallywag	Bass, Black Sea
Tarakito	Jack, Black
Tarpon	Bonefish
Tenpounder	Ladyfish (F+S)
Tilefish, Blackline	Tilefish, Goldface
Tilefish, Blue	Tilefish, Tilefish
Tinosa	Jack, Black
Torro	Jack, Crevalle
Triggerfish, Spotted	Triggerfish, Gray
Triggerish, Bluestriped	Triggerfish, Queen
Tripletail	Spadefish, Atlantic
Trout	Bass, Largemouth (F)
Trout, Ablacore	Tuna, Albacore
Trout, Brook	Trout, Rainbow (F)
Trout, Coastal Rainbow	Trout, Rainbow (F)
Trout, Cyprus	Bowfin
Trout, Gator	Seatrout, Spotted (F+S)
Trout, Salmon	Trout, Brown (F)
Trout, Sand	Seatrout, Sand
Trout, Sea	Trout, Brown (F)
Trout, Silver	Trout, Rainbow (F)
Trout, Speckled	Seatrout, Spotted (F+S)
Trout, White	Seatrout, Sand
Tuna, Lesser	Tuna, Skipjack
Tunny	Tuna, Bluefin
Turbot	Triggerfish, Gray
Ulua, Black	Jack, Black
Weakfish, Bastard	Seatrout, Silver
Weakfish, Spotted	Seatrout, Spotted (F+S)
Wench, Old	Triggerfish, Queen
Whitebait	Anchovy, Bay
Whiting, Carolina	Kingfish, Southern
Whiting, King	Kingfish, Gulf
Whiting, Northern	Kingfish, Northern
Whiting, Sand	Kingfish, Southern
Whiting, Sea	Kingfish, Northern
Whiting, Silver	Kingfish, Gulf
Whiting, Surf	Kingfish, Gulf
Xurel	Jack, Horse-eye

Table 2.2 REGIONAL NAMES FOR SOUTHEASTERN FINFISH (cont'd)

Regional Name (alphabetical order)	Common Name
Yellowjack	Jack, Horse-eye
Yellowtail	Amberjack, Greater
Yellowtail	Bumper, Atlantic
Yellowtail	Runner, Rainbow

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SECTION 3:
NUTRIENT CONTENT OF
SELECTED SOUTHEASTERN SEAFOOD SPECIES

This section provides the approximate nutrient values and ranges for 127 southeastern species, listed alphabetically by common name. Data is provided for 100 gram raw, edible portions. Users wanting information on adjusting these values for cooked products should refer to Section 5.

(Note: For users wanting data that is not species specific, estimated nutrient profiles for species groups are presented in Section 4).

NUTRIENT VALUES FOR SOUTHEASTERN SEAFOODS: IMPORTANT CONSIDERATIONS

Nutrient data for all foods has certain limitations, and seafood is no exception. While compiling data for Table 3, we noted a significant amount of variability, as well as questionable and insufficient information throughout the literature. Users should be aware of these limitations, which are described below (see page 53 for references noted in this discussion).

1) **Variable data** - Many references have demonstrated that natural and environmental factors (maturity, sex, size, season, location, migration, etc.) are partially responsible for the variability found in seafood composition data (1-11). Also, lab variation, both within and between labs, accounts for a portion of variance found in the literature (12). To accommodate the variability in the data, Table 3 provides an average nutrient value, the number of references used, and an overall range.

2) **Questionable data** - A considerable amount of erroneous data exists in the literature, most of which is related to mislabeled tables and misidentified species. For the purpose of this handbook, erroneous data was designated as "background" unless: 1) we obtained correct information from the investigator, 2) we were familiar with the author's work, or 3) the error was fairly obvious. In those cases so corrected, we retained the publications as primary references and made appropriate endnotes to the reference file (see section 6).

3) **Insufficient data** - Often, a reference supplied only part of the necessary information. For example, most fatty acid data is reported as weight percent of fatty acids, rather than grams of fatty acid per 100 grams of tissue (13). Therefore, conversion factors developed by Weihrauch et. al (14) were used to estimate the actual fatty acid content. As another example, some references provided fatty acid data without reporting total fat, or gave data on a dry weight basis without providing a moisture value. In these cases, it was necessary to use average lipid or moisture values from other references in order to make the necessary conversions.

We have also demonstrated a general lack of data in the literature for certain species and nutrients. For example, limited analytical work has been done on species of a more recent commercial interest, such as rock shrimp and shark. Likewise, researchers have focused on the proximate and fatty acid content of seafoods, while less attention has been given to nutrients such as vitamins, trace minerals and amino acids. The intent for documenting this lack of data is to encourage more basic analytical research on seafoods.

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Table 3

APPROXIMATE NUTRIENT VALUES
FOR SOUTHEASTERN SEAFOOD SPECIES*
(for 100 gram raw, edible portions)

*(Note: Species are listed in alphabetical order according to common name)

Species Common Name[1]	Amberjack, Greater	Anchovy, Bay	Barracuda, Great[2]	Bass, Black Sea	Bass, Large-mouth (F)	Bass, Rock (F)	Bass, Striped (F&S)	Bass, White (F)	Bluefish	Bonito, Atlantic	Bowfin (F)	Buffalo, Big-mouth (F)	Buffalo, Small-mouth (F)	Butterfish, Butterfish	Butterfish, Har-vestfish	Carp (F)	Drum, Freshwater (F)
Calories[3]	[106]	-	104	93	89	82	95	110	110	-	-	-	-	111	-	115	113
Pro (g)	[21]	-	22.2 20.4-23.9 (1)	18.5 17.8-19.3 (5)	[18]	17.8 17.3-18.6 (1)	17.7 16.6-16.8 (2)	19.1 18.0-22.0 (2)	19.9 18.5-22.2 (3)	-	-	-	-	17.5 16.2-18.2 (3)	-	17.8 -- (1)	17.8 17.1-18.2 (2)
Fat[4,5] (g)	1.8 1.5-2.0 (1)	-	1.0 0.8-1.3 (1)	1.5 0.6-3.0 (5)	1.3 -- (1)	0.7 0.5-0.9 (1)	2.2 1.5-2.9 (3)	3.1 2.3-4.6 (2)	2.8 0.6-7.2 (4)	-	-	-	-	4.0 0.9-22.2 (6)	-	4.3 1.0-5.6 (5)	4.1 0.8-6.1 (2)
Sat'd[6] (g)	-	-	0.29 -- (1)	0.14 -- (2)	0.25 -- (1)	0.13 -- (1)	0.48 -- (2)	0.49 -- (1)	0.76 -- (2)	-	-	-	-	0.75 -- (2)	-	0.95 -- (3)	0.88 -- (2)
Mono[6] (g)	-	-	0.18 -- (1)	0.10 -- (2)	0.29 -- (1)	0.13 -- (1)	0.65 -- (2)	0.90 -- (1)	1.13 -- (2)	-	-	-	-	1.08 -- (2)	-	2.06 -- (3)	1.67 -- (2)
Poly[6] (g)	-	-	0.25 -- (1)	0.19 -- (2)	0.43 -- (1)	0.21 -- (1)	0.72 -- (2)	0.66 -- (1)	0.87 -- (2)	-	-	-	-	0.65 -- (3)	-	1.17 -- (3)	0.91 -- (2)
n-3[6] (g)	-	-	0.18 -- (1)	0.13 -- (2)	0.22 -- (1)	0.12 -- (1)	0.70 -- (2)	0.37 -- (1)	0.66 -- (2)	-	-	-	-	0.38 -- (2)	-	0.34 -- (3)	0.41 -- (2)
Choles-terol (mg)	43 43-44 (1)	-	-	[80]	[68]	50 -- (1)	80 -- (1)	67 -- (1)	57 54-59 (2)	-	-	-	-	61 48-70 (3)	-	66 -- (1)	64 -- (1)
Na (mg)	36 33-38 (1)	-	46 43-49 (1)	62 56-68 (2)	[60]	50 -- (1)	69 -- (1)	70 -- (1)	56 32-79 (3)	-	-	-	-	89 81-96 (2)	-	49 -- (1)	68 60-75 (2)
K (mg)	420 410-430 (1)	-	155 146-164 (1)	306 256-356 (2)	-	390 -- (1)	-	390 -- (1)	383 327-490 (3)	-	-	-	-	375 338-411 (2)	-	333 -- (1)	333 275-390 (2)
P (mg)	-	-	-	194 -- (1)	-	180 -- (1)	-	200 -- (1)	235 227-490 (3)	-	-	-	-	-	-	415 -- (1)	180 -- (2)
Ca (mg)	5 4-5 (1)	-	-	10 -- (1)	-	80 -- (1)	-	80 -- (1)	10 7-19 (3)	-	-	-	-	-	-	41 -- (1)	80 -- (2)

Mg (mg)	-	-	-	41 -- (1)	-	30 -- (1)	-	30 -- (1)	36 33-42 (2)	-	-	-	-	-	-	29 -- (1)	30 -- (2)
I (mcg)	-	-	-	-	3 -- (1)	-	45 -- (1)	-	36 26-49 (2)	-	2.0 --- (1)	2.0 --- (1)	2.0 --- (1)	-	-	1 -- (1)	<1 -- (1)
Mn (mg)	-	-	0.01 -- (1)	0.02 <.01-.05 (2)	-	0.70 -- (1)	0.02 0.01-0.02 (2)	0.90 -- (1)	0.02 0.01-0.03 (4)	0.03 0.01-0.04 (1)	-	-	-	0.02 0.01-0.03 (2)	0.02 - (1)	-	0.70 -- (2)
Zn (mg)	-	11.1 -- (1)	0.5 -- (1)	0.3 0.1-0.4 (3)	-	1.2 -- (1)	0.4 0.3-0.5 (3)	1.1 -- (1)	0.7 0.4-1.2 (4)	0.8 0.6-1.0 (1)	-	-	-	0.7 0.3-0.9 (2)	0.7 0.6-0.8 (1)	1.5 -- (1)	0.8 0.7-0.9 (2)
Cu (mg)	-	0.28 -- (1)	0.05 -- (1)	0.02 <.06-.01 (3)	-	0.30 -- (1)	0.04 0.03-0.05 (3)	0.40 -- (1)	0.06 0.02-0.08 (4)	0.15 0.10-0.20 (1)	-	-	-	0.06 0.03-0.08 (2)	0.03 0.08-0.09 (1)	0.06 -- (1)	0.22 0.20-0.23 (2)
Se (mg)	-	-	0.07 -- (1)	0.06 0.04-0.07 (1)	-	-	0.06 0.03-0.09 (1)	-	0.08 0.06-0.11 (2)	0.14 0.13-0.14 (1)	-	-	-	0.05 0.01-0.07 (1)	0.09 0.08-0.09 (1)	-	-
Fe (mg)	-	-	-	0.1 --- (1)	-	0.8 --- (1)	0.8 --- (1)	1.5 --- (1)	0.5 0.5-0.7 (3)	-	-	-	-	0.5 --- (1)	-	1.2 --- (1)	0.9 --- (2)
Thia (mg)	-	-	-	-	-	-	-	-	0.09 0.06-0.12 (2)	-	-	-	-	-	-	-	-
Ribo (mg)	-	-	-	-	-	-	-	-	0.09 0.08-0.09 (2)	-	-	-	-	-	-	-	-
Nia (mg)	-	-	-	-	-	-	-	-	3.9 1.9-6.0 (2)	-	-	-	-	-	-	-	-
Panto (mg)	-	-	-	-	-	-	-	-	0.83 -- (1)	-	-	-	-	-	-	-	-
B6 (mg)	-	-	-	-	-	-	-	-	0.40 -- (1)	-	-	-	-	-	-	0.19 --- (1)	-
B12 (mcg)	-	-	-	-	-	-	3.82 --- (1)	-	5.39 --- (1)	-	-	-	-	-	-	1.53 --- (1)	-
Vit A (RE)	-	-	-	-	-	-	-	-	119 --- (1)	-	-	-	-	-	-	9 -- (1)	-

Species Common Name[1]	Drum, Red (cultured) (F&S)	Drum, Red (wild) (F&S)	Eel, American	Eel, Conger	Eel, Rex	Flounder, Gulf	Flounder, Southern (F&S)	Flounder, Summer	Flounder, Winter	Grouper, Black	Grouper, Gag	Grouper, Jewfish	Grouper, Red	Grouper, Scamp	Grouper, Snowy	Grouper, Speckled-Hind	Grouper, Yellow-edge
Calories[3]	105	93	180	-	137	-	87	93	91	[94]	103	[97]	100	102	93	128	89
Pro (g)	20.1 – (1)	20.1 18.9-20.7 (2)	19.1 – (1)	-	19.0 – (1)	-	19.1 16.3-20.8 (2)	20.1 16.6-20.6 (4)	19.9 15.5-21.2 (3)	[20]	21.0 20.2-21.6 (1)	[20]	21.7 – (1)	20.2 19.0-20.7 (2)	19.6 19.1-20.5 (2)	20.6 19.2-22.1 (1)	19.0 18.4-19.6 (1)
Fat[4,5] (g)	2.1 – (1)	0.8 0.6-1.1 (2)	10.9 3.4-18.3 (2)	-	6.2 6.0-6.4 (1)	-	0.6 0.5-0.8 (2)	0.8 0.1-1.2 (4)	0.8 0.2-1.5 (5)	1.0 0.4-1.6 (2)	1.5 0.6-3.6 (2)	1.3 – (1)	0.8 0.8-0.9 (2)	1.8 0.8-3.0 (3)	1.0 0.6-1.1 (2)	4.4 1.2-7.4 (1)	0.9 0.5-1.6 (2)
Sat'd[6] (g)	0.55 – (1)	0.16 – (3)	2.35 – (2)	-	-	-	0.11 – (2)	0.34 – (2)	0.23 – (2)	0.07 – (1)	0.64 – (1)	0.30 – (1)	0.20 – (2)	0.66 – (2)	0.21 – (2)	1.49 – (1)	0.19 – (1)
Mono[6] (g)	0.49 – (1)	0.12 – (3)	5.11 – (2)	-	-	-	0.06 – (2)	0.19 – (2)	0.49 – (2)	0.04 – (1)	0.52 – (1)	0.30 – (1)	0.12 – (2)	0.53 – (2)	0.20 – (2)	1.13 – (1)	0.15 – (1)
Poly[6] (g)	0.63 – (1)	0.19 – (3)	1.60 – (2)	-	-	-	0.13 – (2)	0.46 – (2)	0.44 – (2)	0.12 – (1)	0.49 – (1)	0.40 – (1)	0.24 – (2)	0.60 – (2)	0.24 – (2)	0.80 – (1)	0.26 – (1)
n-3[6] (g)	0.20 – (1)	0.11 – (3)	0.79 – (2)	-	-	-	0.09 – (2)	0.32 – (2)	0.26 – (2)	0.08 – (1)	0.36 – (1)	0.30 – (1)	0.20 – (2)	0.42 – (2)	0.17 – (2)	0.60 – (1)	0.19 – (1)
Cholesterol (mg)	[64]	[64]	[126]	-	82 81-83 (1)	-	[60]	59 57-60 (1)	61 57-66 (1)	54 – (1)	44 – (1)	49 – (1)	[49]	42 – (1)	[49]	[49]	49 45-53 (1)
Na (mg)	[55]	[55]	-	-	67 61-73 (1)	-	[54]	64 60-67 (1)	33 – (1)	66 59-73 (1)	35 – (1)	[55]	63 47-66 (2)	55 – (1)	[55]	[55]	75 62-88 (1)
K (mg)	-	-	-	-	69 65-73 (1)	-	-	217 203-231 (1)	595 – (1)	420 400-440 (1)	435 – (1)	-	339 140-444 (2)	410 – (1)	-	-	300 280-320 (1)
P (mg)	-	-	-	-	-	-	-	-	220 – (1)	-	-	-	136 – (1)	-	-	-	-
Ca (mg)	-	-	-	-	12 11-12 (1)	-	-	-	13 – (1)	6 – (1)	11 – (1)	-	12 – (1)	8 – (1)	-	-	12 – (1)

Mg (mg)	-	-	-	-	-	-	-	-	47 -- (1)	-	-	-	33 -- (1)	-	-	-	-
I (mcg)	-	-	-	-	-	-	-	-	18 -- (1)	-	-	-	-	-	-	-	-
Mn (mg)	-	0.02 0.01-0.03 (1)	0.03 0.03-0.04 (1)	0.02 -- (1)	-	0.04 0.02-0.07 (1)	0.03 0.01-0.07 (1)	0.02 0.02-0.03 (1)	0.01 0.01-0.02 (2)	<0.01 -- (1)	<0.01 -- (1)	<0.01 -- (1)	0.01 -- (2)	<0.01 -- (1)	-	<0.01 -- (1)	-
Zn (mg)	-	0.4 0.3-0.5 (1)	1.0 0.6-1.5 (2)	0.6 -- (1)	-	0.4 0.3-0.4 (1)	0.6 0.4-0.8 (2)	0.4 0.4-0.5 (2)	0.4 0.3-0.6 (2)	0.4 0.4-0.5 (1)	0.4 -- (1)	0.5 0.4-0.6 (1)	0.4 0.4-0.5 (2)	0.3 -- (1)	-	0.5 -- (1)	-
Cu (mg)	-	0.03 0.02-0.03 (1)	0.02 0.02-0.03 (2)	0.02 -- (1)	-	0.02 0.01-0.02 (1)	0.04 0.02-0.06 (2)	0.03 0.02-0.03 (1)	0.03 0.01-0.06 (2)	0.02 -- (1)	0.02 -- (1)	0.02 -- (1)	0.03 0.02-0.03 (2)	0.02 -- (1)	-	0.03 -- (1)	-
Se (mg)	-	0.06 0.04-0.08 (1)	0.04 0.03-0.05 (1)	0.06 -- (1)	-	0.07 0.05-0.09 (1)	0.09 0.07-0.11 (1)	0.07 0.06-0.08 (2)	0.06 0.03-0.09 (1)	0.10 0.08-0.12 (1)	0.10 0.08-0.10 (1)	0.05 0.04-0.07 (1)	0.07 0.07-0.08 (1)	0.07 -- (1)	-	0.09 -- (1)	-
Fe (mg)	-	-	-	-	-	-	-	0.3 0.2-0.3 (1)	0.1 -- (1)	-	-	-	0.3 -- (1)	-	-	-	-
Thia (mg)	-	-	-	-	-	-	-	0.08 -- (1)	-	-	-	-	-	-	-	-	-
Ribo (mg)	-	-	-	-	-	-	-	0.10 -- (1)	-	-	-	-	-	-	-	-	-
Nia (mg)	-	-	-	-	-	-	-	2.5 2.4-2.6 (1)	-	-	-	-	-	-	-	-	-
Panto (mg)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
B6 (mg)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
B12 (mcg)	-	-	-	-	-	-	-	2.10 2.00-2.10 (1)	-	-	-	-	-	-	-	-	-
Vit A (RE)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Species Common Name[1]	Grouper, Yellowmouth	Grunt, Bluestriped	Grunt, Pigfish	Grunt, White	Hake, Silver	Hake, Spotted	Herring Alewife (F&S)	Herring, Atlantic	Herring, Round	Herring, Thread (F&S)	Hogfish	Jack, Crevalle	Kingfish, Northern	Kingfish, Southern	Ladyfish (F&S)	Mackerel, Atlantic	Mackerel, Chub
Calories[2]	[103]	-	-	94	88	-	118	159	[121]	110	-	125	-	122	137	177	118
Pro (g)	[20]	-	-	20.5 19.4-21.6 (1)	15.4 14.3-15.8 (2)	-	17.5 -- (1)	18.0 -- (1)	[19]	20.3 20.1-20.6 (2)	-	21.1 20.1-22.4 (1)	-	17.8 17.2-19.5 (2)	22.7 21.8-23.6 (1)	19.3 16.0-23.8 (4)	21.1 -- (1)
Fat[3,4] (g)	1.9 1.5-2.2 (1)	-	-	0.7 0.6-1.0 (1)	2.5 1.3-5.6 (3)	-	4.8 -- (1)	9.1 6.2-11.2 (4)	4.4 -- (1)	2.6 2.6-2.7 (2)	-	3.9 1.0-11.3 (1)	-	5.1 1.0-7.9 (2)	4.4 1.9-6.6 (1)	10.5 2.7-14.2 (7)	3.1 -- (1)
Sat'd[4] (g)	-	-	-	0.14 -- (1)	0.62 -- (1)	-	-	2.04 -- (4)	1.26 -- (1)	0.99 -- (2)	-	1.16 -- (1)	-	1.63 -- (2)	1.41 -- (1)	3.05 -- (5)	0.95 -- (1)
Mono[5] (g)	-	-	-	0.09 -- (1)	1.70 -- (1)	-	-	3.60 -- (4)	0.91 -- (1)	0.46 -- (2)	-	0.76 -- (1)	-	1.87 -- (2)	1.36 -- (1)	4.35 -- (5)	0.61 -- (1)
Poly[5] (g)	-	-	-	0.21 -- (1)	1.05 -- (1)	-	-	2.00 -- (4)	1.55 -- (1)	0.88 -- (2)	-	1.01 -- (1)	-	0.68 -- (2)	0.67 -- (1)	2.91 -- (5)	1.16 -- (1)
n-3[6] (g)	-	-	-	0.12 -- (1)	0.79 -- (1)	-	-	1.31 -- (4)	1.23 -- (1)	0.57 -- (2)	-	0.70 -- (1)	-	0.41 -- (2)	0.40 -- (1)	1.80 -- (5)	0.71 -- (1)
Choles-terol (mg)	56 55-57 (1)	-	-	-	38 19-68 (3)	-	[63]	72 60-84 (2)	[63]	54 -- (1)	-	-	-	-	-	73 70-81 (4)	61 -- (1)
Na (mg)	34 31-36 (1)	-	-	-	16 -- (1)	-	-	90 -- (1)	-	-	50 48-52 (1)	-	[85]	[85]	-	65 46-115 (4)	[91]
K (mg)	425 410-440 (1)	-	-	-	-	-	-	327 -- (1)	-	-	422 400-444 (1)	-	-	-	-	352 292-437 (3)	-
P (mg)	-	-	-	-	-	-	-	236 -- (1)	-	-	-	-	-	-	-	217 -- (1)	-
Ca (mg)	14 -- (1)	-	-	-	21 12-32 (2)	-	-	57 -- (1)	-	-	-	-	-	-	-	9 6-12 (2)	-

Mg (mg)	-	-	-	-	22 -- (1)	-	-	32 -- (1)	-	-	-	-	-	-	-	53 30-76 (2)	-
I (mcg)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	14 -- (1)	-
Mn (mg)	<0.01 -- (1)	0.01 -- (1)	0.03 0.01-0.08 (1)	0.01 0.01-0.02 (1)	0.02 0.01-0.06 (2)	0.03 0.02-0.03 (1)	-	0.04 0.02-0.10 (2)	-	-	-	0.02 0.01-0.02 (1)	0.02 -- (1)	0.02 0.01-0.02 (1)	0.02 -- (1)	0.02 0.01-0.02 (3)	-
Zn (mg)	0.4 -- (1)	0.4 0.3-0.4 (1)	0.5 0.4-0.7 (1)	0.4 0.4-0.5 (1)	0.3 0.3-0.5 (2)	0.4 0.3-0.5 (1)	-	1.0 0.06-1.6 (2)	-	-	-	0.6 0.5-0.9 (1)	0.6 -- (1)	0.5 0.4-0.5 (1)	1.4 -- (1)	0.7 0.5-0.9 (5)	-
Cu (mg)	0.01 -- (1)	0.03 0.02-0.03 (1)	0.04 0.03-0.05 (1)	0.03 -- (1)	0.03 0.02-0.05 (2)	0.04 0.03-0.05 (1)	-	0.09 0.06-0.01 (2)	-	-	-	0.06 0.06-0.01 (1)	0.03 -- (1)	0.04 -- (1)	0.06 -- (1)	0.06 0.05-0.11 (3)	-
Se (mg)	0.06 -- (1)	0.05 0.04-0.06 (1)	0.06 0.04-0.08 (1)	0.05 0.04-0.05 (1)	0.06 0.05-0.08 (1)	0.04 -- (1)	-	0.06 0.04-0.08 (1)	-	-	-	0.07 0.05-0.09 (1)	0.06 -- (1)	0.10 0.10-0.11 (1)	0.10 -- (1)	0.05 0.03-0.09 (3)	-
Fe (mg)	-	-	-	-	0.2 --- (1)	-	-	1.1 --- (1)	-	-	-	-	-	-	-	1.4 1.1-1.5 (4)	-
Thia (mg)	-	-	-	-	-	-	-	0.09 -- (1)	-	-	-	-	-	-	-	0.15 0.13-0.20 (4)	-
Ribo (mg)	-	-	-	-	-	-	-	0.23 -- (1)	-	-	-	-	-	-	-	0.33 0.27-0.40 (4)	-
Nia (mg)	-	-	-	-	-	-	-	3.2 --- (1)	-	-	-	-	-	-	-	7.3 4.8-9.1 (4)	-
Panto (mg)	-	-	-	-	-	-	-	0.65 -- (1)	-	-	-	-	-	-	-	0.86 -- (1)	-
B6 (mg)	-	-	-	-	-	-	-	0.30 -- (1)	-	-	-	-	-	-	-	0.40 -- (1)	-
B12 (mcg)	-	-	-	-	-	-	-	13.67 --- (1)	-	-	-	-	-	-	-	9.31 8.71-9.90 (2)	-
Vit A (RE)	-	-	-	-	-	-	-	28 -- (1)	-	-	-	-	-	-	-	50 -- (1)	-

Species Common Name[1]	Mackerel, King	Mackerel, Spanish	Mackerel, Wahoo	Menhaden, Atlantic	Menhaden, Gulf	Mullet, Striped (F&S)	Mullet, White (F&S)	Oilfish	Perch, Sand	Perch, Silver (F&S)	Perch, White (F&S)	Perch, Yellow (F)	Permit	Pompano, Florida	Porgy, Knobbed	Porgy, Red	Porgy, Scup
Calories[3]	105	132	-	-	-	112	-	-	-	-	107	91	-	130	107	103	111
Pro (g)	20.9 20.3-23.0 (3)	19.8 17.6-21.6 (8)	-	-	-	18.5 14.2-20.8 (5)	-	-	-	-	19.8 19.5-20.0 (1)	19.4 19.3-19.5 (1)	-	19.1 18.2-20.3 (3)	21.1 – (1)	21.9 21.4-22.4 (1)	18.5 18.4-19.1 (4)
Fat[4,5] (g)	1.7 0.8-2.6 (3)	5.3 0.5-13.8 (8)	-	-	-	3.7 0.2-11.8 (7)	-	14.9 – (1)	-	-	2.5 1.6-5.1 (2)	0.9 0.8-1.0 (2)	-	5.4 1.7-9.5 (4)	1.9 – (1)	1.0 0.7-1.3 (1)	3.6 1.2-5.9 (5)
Sat'd[6] (g)	0.43 – (3)	1.89 – (6)	-	-	-	1.23 – (6)	-	0.18 – (1)	-	-	0.51 – (2)	0.18 – (2)	-	1.95 – (3)	0.51 – (1)	0.22 – (1)	0.73 – (1)
Mono[6] (g)	0.42 – (3)	1.50 – (6)	-	-	-	1.00 – (6)	-	6.58 – (1)	-	-	0.79 – (2)	0.10 – (2)	-	1.84 – (4)	0.30 – (1)	0.12 – (1)	0.86 – (1)
Poly[6] (g)	0.47 – (3)	1.52 – (6)	-	-	-	1.06 – (6)	-	1.01 – (1)	-	-	0.60 – (2)	0.37 – (2)	-	1.01 – (4)	0.41 – (1)	0.32 – (1)	1.06 – (1)
n-3[6] (g)	0.33 – (3)	1.07 – (6)	-	-	-	0.63 – (6)	-	0.15 – (1)	-	-	0.27 – (2)	0.19 – (2)	-	0.50 – (3)	0.22 – (1)	0.25 – (1)	0.70 – (1)
Cholesterol (mg)	53 – (1)	76 – (2)	-	-	-	49 – (1)	-	-	-	-	60 79-60 (2)	90 89-90 (2)	-	50 – (1)	[38]	[38]	38 – (1)
Na (mg)	158 – (1)	49 28-63 (4)	-	-	-	73 65-81 (2)	-	-	-	-	50 – (1)	50 – (1)	-	65 – (2)	[56]	[56]	43 23-63 (2)
K (mg)	435 – (1)	390 135-509 (4)	-	-	-	325 292-357 (2)	-	-	-	-	350 – (1)	340 – (1)	-	414 381-447 (2)	-	-	287 – (1)
P (mg)	248 – (1)	224 205-244 (2)	-	-	-	221 – (1)	-	-	-	-	210 – (1)	200 – (1)	-	209 195-223 (2)	-	-	-
Ca (mg)	31 – (1)	11 10-11 (2)	-	-	-	41 – (1)	-	-	-	-	70 – (1)	80 – (1)	-	23 22-24 (2)	-	-	40 – (2)

Mg (mg)	32 -- (1)	32 31-33 (2)	-	-	-	29 -- (1)	-	-	-	-	30 -- (1)	30 -- (1)	-	28 27-30 (2)	-	-	23 -- (2)
I (mcg)	-	40 -- (1)	-	-	-	-	-	-	-	-	42 -- (1)	-	-	8 -- (1)	-	-	30 -- (1)
Mn (mg)	0.01 <0.01-0.02 (2)	0.01 <0.01-0.3 (3)	<0.01 -- (1)	0.08 -- (1)	0.06 0.04-0.07 (1)	0.02 0.01-0.06 (2)	0.02 -- (1)	-	0.01 -- (1)	0.02 -- (1)	0.37 0.04-0.70 (2)	0.7 -- (1)	0.01 -- (1)	0.01 -- (3)	-	-	0.03 0.01-0.04 (3)
Zn (mg)	0.6 0.5-0.7 (1)	0.5 0.4-0.8 (5)	0.5 -- (1)	0.7 -- (1)	0.7 0.5-0.8 (1)	0.5 0.4-0.7 (3)	0.8 0.7-0.8 (1)	-	0.6 -- (1)	0.8 0.7-0.8 (2)	0.8 0.4-0.8 (2)	1.2 -- (1)	0.5 -- (1)	0.8 0.6-0.9 (3)	-	-	0.4 0.3-0.5 (3)
Cu (mg)	0.03 0.01-0.04 (1)	0.05 0.02-0.06 (4)	0.03 -- (1)	0.11 -- (1)	0.08 0.06-0.10 (1)	0.05 0.02-0.07 (3)	0.05 0.04-0.06 (1)	-	0.02 -- (1)	0.07 0.02-1.00 (1)	0.14 0.04-0.20 (2)	0.30 -- (1)	0.04 -- (1)	0.05 0.03-0.09 (3)	-	-	0.05 0.02-0.06 (3)
Se (mg)	0.08 0.06-0.12 (1)	0.06 0.04-0.12 (2)	0.08 -- (1)	0.08 -- (1)	0.06 0.04-0.09 (1)	0.04 0.03-0.06 (1)	0.04 0.03-0.07 (1)	-	0.05 -- (1)	0.06 0.05-0.07 (1)	0.09 0.05-0.15 (1)	-	0.06 -- (1)	0.06 0.05-0.08 (1)	-	-	0.07 0.04-0.15 (1)
Fe (mg)	1.8 --- (1)	0.5 0.4-0.6 (3)	-	-	-	1.0 --- (1)	-	-	-	-	1.0 --- (1)	0.8 --- (1)	-	0.7 0.6-0.7 (2)	-	-	0.5 --- (2)
Thia (mg)	0.08 0.05-0.10 (2)	0.16 0.13-0.20 (2)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ribo (mg)	0.48 -- (1)	0.17 -- (1)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nia (mg)	8.6 -- (1)	2.3 -- (1)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Panto (mg)	0.84 -- (1)	-	-	-	-	0.76 -- (1)	-	-	-	-	-	-	-	-	-	-	-
B6 (mg)	0.44 -- (1)	-	-	-	-	0.43 -- (1)	-	-	-	-	-	-	-	-	-	-	-
B12 (mcg)	15.60 --- (1)	2.40 -- (1)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Vit A (RE)	218 --- (1)	-	-	-	-	37 -- (1)	-	-	-	-	-	-	-	-	-	-	-

Species Common Name[1]	Porgy, Sheepshead (F&S)	Ray, Cownose	Runner, Blue	Sailfish	Sardine, Spanish	Scad, Round	Searobins, Northern	Seatrout, Sand	Seatrout, Silver	Seatrout, Spotted (F&S)	Seatrout, Weakfish	Shad, American (F&S)	Shad,Gizzard (F&S)	Shark, Blacktip	Shark, Bull	Shark, Dusky	Shark, Lemon
Calories[3]	102	99	-	-	108	112	-	102	82	105	99	197	-	[87]	-	-	90
Pro (g)	18.8 14.7-22.4 (3)	20.9 -- (1)	-	-	21.2 20.1-22.4 (2)	22.2 -- (1)	-	18.7 -- (1)	18.0 -- (1)	19.7 19.2-19.9 (2)	17.9 15.7-19.0 (4)	17.5 15.7-21.0 (3)	-	[19]	-	-	19.7 19.5-19.9 (1)
Fat[4,4] (g)	2.4 1.2-3.2 (3)	1.1 -- (1)	-	-	1.9 1.3-3.2 (3)	1.9 -- (1)	-	2.5 2.3-2.7 (2)	0.6 -- (1)	2.3 1.6-3.7 (3)	2.5 0.9-4.2 (4)	13.6 9.0-20.3 (3)	-	0.7 0.6-0.8 (1)	-	-	0.6 0.5-0.6 (1)
Sat'd[5] (g)	0.67 -- (3)	-	-	-	0.74 -- (2)	0.59 -- (1)	-	0.78 -- (2)	-	0.64 -- (3)	0.29 -- (2)	2.00 -- (1)	-	-	-	-	0.11 -- (1)
Mono[6] (g)	1.00 -- (3)	-	-	-	0.37 -- (2)	0.33 -- (1)	-	0.76 -- (2)	-	0.66 -- (3)	0.26 -- (2)	4.35 -- (1)	-	-	-	-	0.07 -- (1)
Poly[7] (g)	0.74 -- (3)	-	-	-	0.86 -- (2)	0.71 -- (1)	-	0.46 -- (2)	-	0.40 -- (3)	0.28 -- (2)	1.63 -- (1)	-	-	-	-	0.15 -- (1)
n-3[8] (g)	0.35 -- (3)	-	-	-	0.54 -- (3)	0.44 -- (1)	-	0.33 -- (2)	-	0.25 -- (3)	0.21 -- (2)	1.38 -- (1)	-	-	-	-	0.08 -- (1)
Choles-terol (mg)	[38]	-	-	-	64 -- (1)	-	-	-	-	-	-	-	-	33 31-35 (1)	-	-	[35]
Na (mg)	71 59-84 (2)	-	-	-	-	-	-	-	-	-	50 41-59 (2)	53 51-54 (2)	-	61 53-68 (1)	-	-	-
K (mg)	404 -- (1)	-	-	-	-	-	-	-	-	-	435 317-554 (1)	357 330-384 (2)	-	515 500-530 (1)	516 390-641 (1)	503 285-721 (1)	-
P (mg)	313 -- (1)	-	-	-	-	-	-	-	-	-	217 -- (1)	272 -- (1)	-	-	218 163-267 (1)	222 145-301 (1)	-
Ca (mg)	21 -- (1)	-	-	-	-	-	-	-	-	-	14 -- (1)	47 -- (1)	-	6 5-7 (1)	7 5-10 (1)	8 4-13 (1)	-

Mg (mg)	32 -- (1)	-	-	-	-	-	-	-	-	-	50 -- (1)	30 -- (1)	-	-	-	-	-
I (mcg)	-	-	-	-	-	-	-	-	-	-	-	-	1.0 -- (1)	28 26-31 (1)	-	-	-
Mn (mg)	0.01 -- (1)	-	0.01 0.01-0.02 (1)	0.01 .01-.02 (1)	-	-	0.02 0.02-0.04 (1)	0.02 0.01-0.03 (1)	0.02 0.01-0.02 (1)	0.02 <0.01-0.04 (1)	0.02 <0.01-0.02 (1)	0.03 0.02-0.04 (2)	-	0.01 -- (1)	-	0.04 <.01-.09 (1)	-
Zn (mg)	0.4 -- (1)	0.2 -- (1)	0.5 0.4-0.6 (1)	0.6 0.5-0.7 (1)	-	0.4 -- (1)	0.5 0.4-0.6 (1)	0.5 0.4-0.5 (1)	0.4 -- (1)	0.4 0.3-0.6 (2)	0.5 0.4-0.5 (1)	0.4 0.3-0.4 (2)	-	0.4 0.3-0.5 (1)	0.3 0-0.8 (1)	0.5 0.1-1.5 (3)	-
Cu (mg)	0.03 -- (1)	0.06 -- (1)	0.09 0.06-0.11 (1)	0.04 .02-.07 (1)	-	0.05 -- (1)	0.04 0.02-0.06 (1)	0.04 0.02-0.05 (1)	0.03 0.02-0.03 (1)	0.12 0.01-0.21 (2)	0.04 0.02-0.05 (1)	0.07 0.06-0.09 (2)	-	0.04 0.03-0.05 (1)	0.25 0-0.91 (1)	0.11 0.03-0.61 (3)	-
Se (mg)	-	-	0.09 0.06-0.13 (1)	0.07 0.04-.10 (1)	-	-	0.05 0.03-0.09 (1)	0.08 0.06-0.09 (1)	0.08 0.06-0.09 (1)	0.07 0.05-0.12 (1)	0.08 0.05-0.06 (1)	0.05 <0.01-0.09 (1)	-	0.11 0.08-0.14 (2)	0.06 0-0.26 (1)	0.08 0.03-0.13 (2)	-
Fe (mg)	0.5 --- (1)	-	-	-	-	-	-	-	-	-	0.2 --- (1)	1.0 --- (1)	-	-	0.2 0-0.3 (1)	0.1 0-0.2 (1)	-
Thia (mg)	-	-	-	-	-	-	-	-	-	-	-	0.15 --- (1)	-	-	-	-	-
Ribo (mg)	-	-	-	-	-	-	-	-	-	-	-	0.24 --- (1)	-	-	-	-	-
Nia (mg)	-	-	-	-	-	-	-	-	-	-	-	8.4 --- (1)	-	-	-	-	-
Panto (mg)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
B6 (mg)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
B12 (mcg)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Vit A (RE)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Species Common Name[1]	Shark, Mako, Shortfin	Shark, Sandbar	Shark, Silky	Shark, Smooth Dogfish	Shark, Spiny Dogfish	Skate, Clearnose	Snapper, Blackfin	Snapper, Gray	Snapper, Lane	Snapper, Red	Snapper, Silk	Snapper, Vermillion	Snapper, Yellowtail	Snook (F&S)	Spot (F&S)	Sturgeon, Atlantic (F&S)	Sunfish, Bluegill (F)
Calories[3]	-	81	-	-	164	91	-	[91]	[96]	98	[91]	92	-	-	120	[103]	[87]
Pro (g)	-	18.2 -- (1)	-	-	12.6 10.9-15.0 (1)	19.7 -- (1)	-	[20]	[20]	20.6 18.5-23.6 (3)	[20]	20.2 18.3-21.3 (1)	-	-	18.6 16.7-20.5 (7)	[16]	[19]
Fat[4,6] (g)	-	0.4 0.3-0.5 (2)	-	-	12.2 10.1-14.1 (3)	0.8 -- (1)	-	0.6 -- (1)	1.2 1.1-1.2 (1)	1.1 0.1-2.3 (7)	0.6 0.5-0.6 (1)	0.6 0.5-0.8 (2)	-	-	4.5 0.4-10.1 (7)	3.8 2.0-6.0 (3)	0.7 0.5-0.9 (1)
Sat'd[5] (g)	-	0.07 -- (2)	-	-	3.16 -- (4)	-	-	-	-	0.29 -- (6)	-	0.10 -- (2)	-	-	1.27 -- (5)	0.80 -- (3)	0.12 -- (1)
Mono[5] (g)	-	0.03 -- (2)	-	-	4.67 -- (4)	-	-	-	-	0.23 -- (6)	-	0.05 -- (2)	-	-	1.23 -- (5)	1.30 -- (3)	0.12 -- (1)
Poly[5] (g)	-	0.10 -- (2)	-	-	2.97 -- (4)	-	-	-	-	0.41 -- (6)	-	0.16 -- (2)	-	-	0.91 -- (5)	1.06 -- (3)	0.25 -- (1)
n-3[6] (g)	-	0.05 -- (2)	-	-	1.76 -- (4)	-	-	-	-	0.27 -- (6)	-	0.12 -- (2)	-	-	0.52 -- (5)	0.59 -- (3)	0.10 -- (1)
Choles-terol (mg)	-	36 36-37 (1)	-	-	60 52-75 (2)	-	-	47 -- (1)	53 50-56 (1)	[40]	30 28-32 (1)	30 29-31 (1)	-	-	-	-	36 25-45 (1)
Na (mg)	-	81 80-82 (1)	-	-	16 13-19 (1)	-	-	53 50-55 (1)	44 33-55 (2)	62 53-70 (2)	35 34-36 (1)	38 37-38 (1)	39 36-42 (1)	-	-	-	-
K (mg)	-	535 530-540 (1)	-	-	-	-	-	510 500-520 (1)	255 125-390 (2)	401 323-478 (2)	285 250-280 (1)	435 430-440 (1)	157 145-165 (1)	-	-	-	-
P (mg)	-	-	-	-	-	-	-	-	-	154 98-240 (2)	-	-	-	-	-	-	-
Ca (mg)	-	4 -- (1)	-	-	10 4-6 (1)	-	-	13 8-17 (1)	11 -- (1)	42 20-57 (2)	12 -- (1)	7 -- (1)	-	-	-	-	-

Mg (mg)	-	-	-	-	-	-	-	-	-	32 -- (1)	-	-	-	-	-	-	-
I (mcg)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	58 -- (1)	-	4 -- (1)
Mn (mg)	<0.01 -- (1)	-	-	0.01 <0.01-0.02 (1)	0.05 <0.01-0.10 (2)	-	<0.01 -- (1)	0.01 0.01-0.02 (1)	-	0.01 <0.01-0.02 (2)	-	0.01 <0.01-0.02 (1)	<0.01 -- (1)	0.01 <0.01-0.02 (1)	0.03 0.02-0.04 (3)	-	-
Zn (mg)	0.3 -- (1)	-	0.3 -- (1)	0.5 0.3-0.7 (1)	0.3 0.3-0.5 (3)	0.5 -- (1)	0.3 -- (1)	0.4 0.4-0.5 (1)	-	0.4 0.3-0.6 (2)	-	0.3 0.3-0.4 (1)	0.4 -- (1)	0.4 0.4-0.5 (1)	0.5 0.4-0.6 (4)	-	-
Cu (mg)	0.04 -- (1)	-	0.06 -- (1)	0.03 0.02-0.04 (1)	0.05 0.02-0.07 (3)	0.07 -- (1)	0.03 -- (1)	0.04 0.03-0.04 (1)	-	0.03 0.02-0.04 (2)	-	0.03 0.01-0.04 (1)	0.03 0.03-0.04 (1)	0.02 <0.01-0.02 (1)	0.05 0.03-0.07 (3)	-	-
Se (mg)	0.11 -- (1)	-	-	0.08 0.04-0.13 (1)	0.05 0.03-0.08 (1)	-	0.07 -- (1)	0.05 0.03-0.06 (1)	-	0.08 0.06-1.10 (1)	-	0.09 0.07-0.14 (1)	0.09 0.08-0.10 (1)	0.06 0.05-0.07 (1)	0.08 0.05-0.13 (1)	-	-
Fe (mg)	-	-	-	-	0.5 0.4-0.7 (1)	-	-	-	-	0.2 -- (1)	-	-	-	-	-	-	-
Thia (mg)	-	-	-	-	0.05 -- (1)	-	-	0.17 -- (1)	-	0.18 0.17-0.18 (1)	-	-	-	-	-	-	-
Ribo (mg)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nia (mg)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Panto (mg)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
B6 (mg)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
B12 (mcg)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Vit A (RE)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Species Common Name[1]	Sunfish, Crappie, Black (F)	Sunfish, Crappie, White (F)	Sunfish, Pumpkinseed (F)	Swordfish	Tilefish, Blackline	Tilefish, Blueline	Tilefish, Golden	Triggerfish, Gray	Trout, Brook (F)	Trout, Rainbow (F)	Tuna, Albacore	Tuna, Bigeye	Tuna, Blackfin	Tuna, Bluefin	Tuna, Little Tunny	Tuna, Skipjack	Tuna, Yellowfin
Calories[2]	94	-	89	116	91	105	92	93	121	112	[160]	[105]	-	197	-	103	116
Pro (g)	18.6 18.4-19.0 (1)	-	19.4 18.9-19.6 (1)	19.9 19.8-19.9 (2)	19.3 -- (1)	19.7 18.6-21.1 (1)	18.3 17.4-19.8 (3)	20.6 19.4-21.9 (1)	21.5 20.9-21.8 (1)	19.7 18.5-20.6 (2)	[23]	[23]	-	23.3 -- (1)	-	22.0 -- (1)	23.4 -- (1)
Fat[1,4] (g)	1.5 0.6-2.9 (1)	-	0.7 0.4-1.1 (1)	3.4 2.6-4.0 (3)	0.9 -- (1)	2.3 1.2-4.8 (2)	1.5 0.8-2.3 (4)	0.6 0.4-1.0 (2)	3.2 2.1-5.2 (3)	3.1 1.7-5.4 (6)	6.8 4.9-12.8 (3)	0.6 -- (1)	-	10.8 4.7-23.1 (3)	-	1.0 0.9-1.0 (2)	1.8 0.5-4.2 (4)
Sat'd[5] (g)	0.32 -- (1)	-	0.15 -- (2)	0.77 -- (3)	0.18 -- (1)	0.53 -- (2)	0.25 -- (3)	0.11 -- (2)	0.70 -- (2)	0.58 -- (5)	1.67 -- (2)	-	-	1.25 -- (2)	-	0.31 -- (2)	0.60 -- (3)
Mono[6] (g)	0.37 -- (1)	-	0.13 -- (2)	1.21 -- (3)	0.16 -- (1)	0.55 -- (2)	0.29 -- (3)	0.06 -- (2)	0.84 -- (2)	0.84 -- (5)	1.66 -- (2)	-	-	1.43 -- (2)	-	0.18 -- (2)	0.94 -- (3)
Poly[7] (g)	0.46 -- (1)	-	0.27 -- (2)	0.80 -- (3)	0.22 -- (1)	0.46 -- (2)	0.36 -- (3)	0.17 -- (2)	0.96 -- (2)	1.06 -- (5)	2.40 -- (2)	-	-	1.54 -- (2)	-	0.26 -- (2)	0.71 -- (3)
n-3[8] (g)	0.24 -- (1)	-	0.12 -- (2)	0.62 -- (3)	0.14 -- (1)	0.33 -- (2)	0.26 -- (3)	0.11 -- (2)	0.43 -- (2)	0.57 -- (5)	1.82 -- (2)	-	-	1.17 -- (2)	-	0.22 -- (2)	0.56 -- (3)
Cholesterol (mg)	71 -- (1)	-	67 66-67 (1)	50 39-60 (2)	[47]	45 42-47 (1)	49 -- (1)	41 38-43 (1)	66 57-68 (2)	53 50-57 (2)	41 27-54 (2)	44 44-45 (1)	-	39 -- (1)	-	47 -- (1)	42 32-45 (3)
Na (mg)	70 -- (1)	-	80 -- (1)	90 -- (1)	-	69 68-69 (1)	61 53-68 (2)	71 65-77 (1)	60 -- (1)	29 27-30 (2)	30 26-34 (2)	69 -- (1)	-	39 -- (1)	-	37 -- (1)	54 37-87 (2)
K (mg)	440 -- (1)	-	350 -- (1)	266 -- (1)	-	300 -- (1)	377 320-433 (2)	330 -- (1)	430 -- (1)	483 470-495 (2)	359 293-430 (2)	480 460-500 (1)	-	252 -- (1)	-	407 -- (1)	463 420-500 (1)
P (mg)	200 -- (1)	-	180 -- (1)	263 -- (1)	-	-	187 -- (1)	-	250 -- (1)	250 -- (2)	-	-	-	-	-	222 -- (1)	191 -- (1)
Ca (mg)	100 -- (1)	-	80 -- (1)	4 -- (1)	-	13 -- (1)	18 9-26 (2)	11 -- (1)	80 -- (1)	74 67-80 (2)	5 3-7 (1)	6 -- (1)	-	-	-	28 -- (1)	12 4-15 (2)

Mg (mg)	30 -- (1)	-	30 -- (1)	27 -- (1)	-	26 -- (1)	28 -- (1)	-	40 -- (1)	31 30-31 (2)	-	-	-	-	-	34 -- (1)	-
I (mcg)	-	1 -- (1)	-	-	-	-	-	-	-	-	34 29-38 (1)	27 26-29 (1)	-	-	-	-	27 19-32 (1)
Mn (mg)	0.70 -- (1)	-	0.70 -- (1)	0.02 -- (1)	-	-	0.01 -- (2)	-	0.90 --- (1)	0.70 -- (2)	-	-	0.01 -- (1)	0.02 -- (1)	0.02 -- (1)	0.02 -- (1)	0.02 -- (1)
Zn (mg)	1.1 --- (1)	-	1.5 1.4-1.6 (2)	1.2 --- (1)	-	-	0.4 --- (2)	-	1.2 --- (1)	1.0 --- (2)	-	-	0.5 -- (1)	0.6 -- (1)	0.4 0.2-0.7 (2)	0.8 --- (1)	0.5 --- (1)
Cu (mg)	0.30 -- (1)	-	0.30 -- (1)	0.13 -- (1)	-	-	0.03 0.02-0.04 (2)	-	0.40 -- (1)	0.21 -- (2)	-	-	0.11 -- (1)	0.09 -- (1)	0.06 .05-.07 (2)	0.09 -- (1)	0.06 -- (1)
Se (mg)	-	-	-	0.22 0.08-0.48 (1)	-	0.05 -- (1)	0.11 0.09-0.13 (1)	-	-	-	0.12 -- (1)	0.10 0.09-0.10 (1)	0.08 -- (1)	-	0.17 -- (1)	-	0.11 0.10-0.13 (1)
Fe (mg)	1.1 --- (1)	-	1.2 --- (1)	0.8 --- (1)	-	-	0.3 --- (1)	-	1.4 --- (1)	1.9 --- (2)	-	-	-	1.0 --- (1)	-	1.3 --- (1)	0.7 --- (1)
Thia (mg)	-	-	-	0.04 --- (1)	-	-	-	-	-	0.07 -- (1)	-	-	-	0.24 --- (1)	-	0.03 -- (1)	0.43 -- (1)
Ribo (mg)	-	-	-	0.10 --- (1)	-	-	-	-	-	0.19 -- (1)	-	-	-	0.25 -- (1)	-	-	0.05 -- (1)
Nia (mg)	-	-	-	9.7 --- (1)	-	-	-	-	-	-	-	-	-	8.7 --- (1)	-	-	9.6 --- (1)
Panto (mg)	-	-	-	0.4 --- (1)	-	-	-	-	-	-	-	-	-	1.05 --- (1)	-	-	-
B6 (mg)	-	-	-	0.33 -- (1)	-	-	-	-	-	-	-	-	-	0.46 -- (1)	-	0.85 -- (1)	-
B12 (mcg)	-	-	-	1.8 --- (1)	-	-	-	-	-	-	-	-	-	6.56 3.70-9.43 (2)	-	-	-
Vit A (RE)	-	-	-	36 -- (1)	-	-	-	-	-	19 -- (1)	-	-	-	855 --- (1)	-	16 -- (1)	18 -- (1)

Species Common Name[1]	Crab, Blue (F&S) (raw)	Crab, Blue[7] (F&S) (cooked)	Crab, Blue (F&S) (soft)	Crab, Golden[7] (cooked)	Crab, Jonah[7,9] (cooked)	Crab, Red[7,9] (cooked)	Crab, Rock[7] (cooked)	Crab, Stone, Florida	Crayfish, Red Swamp (F)	Lobster, American	Lobster, Slipper	Lobster, Spiny	Shrimp, Brown	Shrimp, Pink	Shrimp, Rock	Shrimp, Royal Red	Shrimp, White[9]
Calories[3]	82	95	54	98	94	77	[83]	-	101	87	-	82	96	113	[94]	-	99
Pro (g)	16.8 11.9-19.2 (3)	19.2 15.3-21.1 (3)	9.8 8.6-10.9 (2)	18.9 18.3-19.2 (1)	16.2 – (1)	15.1 15.0-15.1 (1)	[17]	-	22.9 – (1)	16.8 – (1)	-	16.2 – (1)	19.8 17.5-21.8 (3)	21.6 – (1)	[21]	-	16.3 16.8-19.6 (4)
Fat[4,8] (g)	1.1 0.8-1.5 (5)	1.4 0.8-2.5 (5)	1.4 1.4-1.5 (3)	1.9 1.4-2.8 (1)	1.3 0.8-1.9 (3)	0.8 0.7-1.0 (3)	1.1 1.1-1.2 (2)	0.4 – (1)	0.4 – (1)	0.6 0.7-0.9 (2)	0.7 0.6-0.7 (1)	1.4 0.6-2.1 (3)	1.3 0.8-2.2 (7)	2.2 – (1)	0.8 – (1)	0.6 – (1)	1.1 0.8-1.5 (6)
Sat'd[5] (g)	0.24 – (2)	0.21 – (3)	0.39 – (1)	-	0.14 – (1)	0.10 – (1)	0.17 – (1)	-	-	-	-	0.20 – (1)	0.25 – (4)	-	-	-	0.20 – (2)
Mono[6] (g)	0.21 – (2)	0.23 – (3)	0.23 – (1)	-	0.20 – (1)	0.19 – (1)	0.26 – (1)	-	-	-	-	0.20 – (1)	0.22 – (4)	-	-	-	0.17 – (2)
Poly[6] (g)	0.42 – (2)	0.60 – (3)	0.36 – (1)	-	0.36 – (1)	0.27 – (1)	0.37 – (1)	-	-	-	-	0.60 – (1)	0.45 – (4)	-	-	-	0.55 – (2)
n-3[6] (g)	0.34 – (2)	0.41 – (3)	0.15 – (1)	-	0.30 – (1)	0.23 – (1)	0.34 – (1)	-	-	-	-	0.30 – (1)	0.29 – (4)	-	-	-	0.30 – (2)
Choles-terol (mg)	72 49-104 (3)	63 25-100 (2)	94 93-95 (1)	[68]	74 68-78 (3)	63 50-76 (3)	72 60-86 (3)	54 53-56 (1)	[170]	81 70-95 (3)	80 79-81 (1)	105 70-140 (2)	152 89-201 (6)	[152]	122 114-129 (1)	155 141-168 (1)	151 96-182 (4)
Na (mg)	281 252-429 (3)	168 57-303 (2)	446 400-486 (2)	-	276 – (1)	405 331-480 (1)	-	350 340-360 (1)	-	-	125 120-130 (1)	-	144 91-228 (2)	-	330 320-340 (1)	-	193 116-236 (2)
K (mg)	339 195-438 (3)	401 295-479 (2)	272 250-300 (2)	-	279 – (1)	283 278-289 (1)	-	360 350-370 (1)	-	-	80 – (1)	-	247 150-398 (3)	-	415 330-500 (1)	320 310-330 (1)	173 157-182 (2)
P (mg)	261 119-277 (3)	226 202-246 (2)	309 – (1)	-	-	-	-	-	-	-	14 13-14 (1)	-	235 207-258 (1)	-	-	-	269 – (1)
Ca (mg)	79 43-188 (3)	82 59-129 (2)	391 350-422 (2)	-	96 – (1)	46 42-50 (1)	-	35 33-36 (1)	-	-	-	-	50 17-82 (1)	-	205 180-230 (1)	200 190-210 (1)	47 70-94 (2)

Mg (mg)	34 25-47 (3)	20 8-36 (2)	65 -- (1)	-	33 -- (1)	31 29-32 (1)	-	-	-	-	-	-	37 29-43 (1)	-	-	-	46 -- (1)
I (mcg)	-	-	36 9-76 (2)	-	-	-	-	127 107-149 (1)	-	138 --- (1)	27 23-30 (1)	-	-	-	130 72-187 (1)	195 102-287 (1)	45 -- (1)
Mn (mg)	0.15 0.03-0.36 (3)	0.20 <.13-.20 (2)	0.6 --- (1)	-	-	0.05 --- (1)	0.16 0.07-0.34 (1)	-	-	0.05 0.02-0.12 (1)	-	0.01 0.01-0.02 (1)	0.10 0.04-0.26 (2)	0.03 0.02-0.07 (1)	-	-	0.07 0.04-0.11 (2)
Zn (mg)	3.7 2.3-6.9 (4)	4.2 4.2-4.3 (1)	1.9 --- (1)	-	-	3.5 3.2-3.8 (1)	4.9 1.6-8.1 (1)	-	-	2.6 1.5-6.0 (1)	-	1.8 1.2-2.2 (1)	1.4 0.9-2.0 (3)	1.1 0.9-1.1 (1)	-	-	1.3 0.9-1.4 (3)
Cu (mg)	0.67 0.30-1.31 (4)	0.85 0.59-1.06 (2)	0.43 -- (1)	-	-	0.74 0.71-0.76 (1)	0.85 0.48-1.54 (1)	-	-	1.40 0.53-2.23 (1)	-	0.32 0.32-0.33 (1)	0.35 0.23-0.58 (2)	0.21 0.12-0.31 (1)	-	-	0.28 0.18-0.38 (2)
Se (mg)	0.07 0.03-0.13 (1)	-	0.08 -- (1)	-	-	0.23 0.19-0.27 (1)	0.19 0.08-0.26 (1)	0.18 0.16-0.19 (1)	-	0.07 0.05-0.11 (1)	<0.01 -- (1)	0.03 0.02-0.04 (1)	0.05 0.03-0.08 (2)	0.05 0.04-0.06 (1)	0.01 -- (1)	0.04 -- (1)	0.05 0.04-0.07 (2)
Fe (mg)	0.8 0.3-1.1 (1)	0.8 0.7-0.9 (2)	2.2 --- (1)	-	-	-	-	-	-	-	-	-	1.1 0.4-3.3 (2)	-	-	-	1.4 0.5-2.2 (3)
Thia (mg)	0.06 -- (1)	0.06 -- (1)	-- 0.85-1.00 (1)	-	-	-	-	-	-	-	-	-	0.03 -- (1)	-	-	-	0.04 0.02-0.05 (2)
Ribo (mg)	-	-	-	-	-	-	-	-	-	0.05 -- (1)	-	-	0.05 -- (1)	-	-	-	0.04 0.03-0.04 (1)
Nia (mg)	-	-	-	-	-	-	-	-	-	1.5 --- (1)	-	-	3.1 2.9-3.3 (1)	-	-	-	2.6 1.5-3.6 (2)
Panto (mg)	-	-	-	-	-	-	-	-	-	1.63 -- (1)	-	-	-	-	-	-	-
B6 (mg)	-	-	-	-	-	-	-	-	-	0.93 -- (1)	-	-	-	-	-	-	0.85 0.70-1.00 (1)
B12 (mcg)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Vit A (RE)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Species Common Name[1]	Clam, Softshell	Clam, Surfclam, Atlantic	Octopus	Oyster, Eastern[2]	Quahog, Northern	Scallop, Bay[2]	Scallop, Calico[2]	Scallop, Sea[2]	Squid, Longfin	Squid, Shortfin, Northern	Whelk
Calories[3]	[61]	73	73	66	36	75	61	97	75	82	[109]
Pro (g)	[11]	15.6 14.6-16.7 (1)	14.9 – (1)	8.0 4.5-10.4 (6)	7.1 3.2-9.7 (2)	14.8 13.4-21.6 (2)	16.0 13.3-18.5 (3)	16.6 13.9-19.0 (4)	14.4 9.8-17.0 (4)	15.4 11.5-20.5 (1)	[24]
Fat[4,5] (g)	1.6 0.6-3.0 (3)	0.7 0.1-0.9 (4)	1.0 – (1)	1.9 0.6-4.1 (12)	0.6 0.1-1.2 (4)	0.7 0.3-0.9 (3)	0.7 0.1-1.1 (5)	0.9 0.3-1.1 (6)	1.5 1.1-1.8 (4)	1.8 1.0-2.0 (3)	0.6 – (1)
Sat'd[6] (g)	0.34 – (2)	0.10 – (2)	0.23 – (1)	0.49 – (4)	0.05 – (2)	0.09 – (2)	0.14 – (3)	0.15 – (5)	0.34 – (2)	0.50 – (2)	-
Mono[6] (g)	0.24 – (2)	0.09 – (2)	0.16 – (1)	0.21 – (4)	0.04 – (2)	0.06 – (2)	0.07 – (2)	0.08 – (5)	0.10 – (2)	0.16 – (2)	-
Poly[6] (g)	0.71 – (2)	0.25 – (2)	0.24 – (1)	0.65 – (4)	0.08 – (2)	0.28 – (2)	0.32 – (3)	0.35 – (5)	0.53 – (2)	0.80 – (2)	-
n-3[6] (g)	0.42 – (2)	0.16 – (2)	0.16 – (1)	0.38 – (4)	0.05 – (2)	0.17 – (2)	0.23 – (3)	0.26 – (5)	0.46 – (3)	0.70 – (3)	-
Cholesterol (mg)	46 41-50 (2)	41 – (1)	46 – (1)	47 23-63 (4)	57 31-86 (2)	[36]	[36]	36 15-47 (3)	190 81-450 (2)	212 108-336 (1)	66 – (1)
Na (mg)	-	-	-	163 57-496 (5)	56 – (1)	[85]	[85]	87 – (1)	44 – (1)	-	-
K (mg)	-	-	-	176 58-229 (5)	314 — (1)	-	-	412 — (1)	-	-	-
P (mg)	-	194 110-265 (1)	186 — (1)	126 57-240 (4)	107 50-145 (2)	-	215 — (1)	218 150-320 (2)	-	-	-
Ca (mg)	-	41 17-80 (1)	53 – (1)	94 17-350 (6)	49 20-91 (2)	-	32 – (1)	16 9-30 (2)	12 – (1)	-	-

Mg (mg)	-	-	-	51 18-74 (4)	9 -- (1)	-	-	56 -- (1)	33 -- (1)	-	-
I (mcg)	-	-	-	85 31-138 (2)	137 --- (1)	-	-	-	-	-	-
Mn (mg)	0.65 -- (1)	0.22 0.06-0.38 (1)	0.03 -- (1)	0.40 0.09-1.84 (5)	1.07 0.07-5.00 (1)	0.28 0.16-0.40 (1)	0.03 0.01-0.05 (1)	0.04 0.02-0.09 (2)	0.03 0.02-0.03 (2)	0.03 0.02-0.06 (1)	-
Zn (mg)	1.5 --- (2)	1.4 1.2-1.6 (1)	1.7 --- (1)	74.5 6.2-117.4 (7)	2.2 0.1-4.8 (1)	1.2 1.0-1.5 (1)	1.1 1.1-1.2 (1)	1.4 1.2-1.7 (2)	1.0 0.06-1.6 (2)	1.4 1.1-1.6 (1)	-
Cu (mg)	0.42 -- (1)	0.14 0.03-0.25 (1)	0.44 -- (1)	2.93 0.58-16.05 (4)	0.15 0.04-0.55 (2)	0.03 0.02-0.04 (1)	0.03 0.02-0.03 (1)	0.05 0.02-0.11 (2)	0.28 0.06-0.78 (2)	0.56 0.25-1.24 (1)	-
Se (mg)	0.09 -- (1)	0.05 0.03-0.07 (1)	-	0.07 0.03-0.10 (2)	0.06 0.03-0.13 (1)	0.03 -- (1)	0.05 -- (1)	0.06 0.02-0.10 (1)	0.05 0.03-0.09 (1)	0.06 0.03-0.09 (1)	-
Fe (mg)	-	-	5.3 --- (1)	6.8 3.3-11.4 (5)	2.5 --- (1)	-	-	0.11 --- (1)	0.19 --- (1)	-	-
Thia (mg)	-	-	0.03 -- (1)	0.18 0.07-0.29 (1)	-	-	-	-	-	-	-
Ribo (mg)	-	-	0.04 -- (1)	0.19 0.06-0.35 (2)	-	-	-	-	-	-	-
Nia (mg)	-	-	2.1 --- (1)	2.0 1.3-3.9 (2)	-	-	-	-	-	-	-
Panto (mg)	-	-	-	0.3 0.1-0.5 (2)	-	-	-	-	-	-	-
B6 (mg)	-	-	-	0.13 0.05-0.3 (2)	-	-	-	-	-	-	-
B12 (mcg)	-	-	-	19.1 -- (1)	-	-	-	-	-	-	-
Vit A (RE)	-	-	-	-	-	-	-	-	-	-	-

TABLE 3 ENDNOTES

[1] F = freshwater habitat; (F&S) = fresh, brackish and/or saltwater habitat. No designation implies saltwater.

[2] Although barracuda is included in this listing, it is occasionally associated with ciguatera poisoning. Therefore, barracuda is not recommended for human consumption.

[3] Calories were calculated based on the average nutrient values obtained for protein and fat (and carbohydrate for shellfish). These values were multiplied by the factors used by Exler: protein, 4.27 cal/gm; fat, 9.02 cal/gm; and carbohydrate in shellfish, 4.11 cal/gm. (Exler, J. 1987. Composition of Foods: Finfish and Shellfish Products - Raw, Processed Prepared. US Dept. Agriculture Handbook 8-15, 192 pp). Since calorie values were calculated based on the average nutrient values for protein, fat and carbohydrate, no ranges or number of references are given.

[4] Total fat values for finfish products that are reported in the literature as less than 0.7 grams/100 grams may be considered suspect in relation to actual values, because of extraction methods that may underestimate actual lipid content (Ackman, R.G. 1989. Lipid Analyses: Part 1 - Properties of fats oils and lipids: recovery and basic compositional studies with gas-liquid chromatography and thin layer chromatograph. In "The Role of Fats in Human Nutrition," Academic Press, p. 441). However, for the purposes of this handbook, these lower values were retained and used to calculate "average nutrient values", and in many cases were recorded as the low end of the range. Please note that these extremely low values may slightly underestimate the actual fat content of the species.

[5] Average values for total fat and fatty acids were often determined from independent sources, since many publications report total fat without reporting fatty acids. Therefore, in some cases, the average value for total fat appears inconsistent (too high or too low) when compared to the sum of fatty acid values.

[6] Values for omega-3 fatty acids were obtained by adding values for eicosapentaenoic acid (20:5) and docosahexaenoic acid (22:6).

[7] Nutrient analysis of crabs is most often performed on cooked product. Therefore, data for the following crab species is presented on the basis of 100 gram **cooked**, edible portions: Blue (cooked), Golden, Jonah, Red, and Rock.

[8] Primary references provided only a limited amount of data on the carbohydrate content of various shellfish, which is listed below. The reference numbers correlate with numbers in the Seafood Nutrition Reference File (see section 6).

Species	CHO (gm/100 gm)	Ref. #
Crab, Jonah	3.1	251
Crab, Red	1.4 (1.3-1.6)	251
Shrimp, White	2.7	18
Oyster, Eastern	3.6 (0.5-7.2)	78
Scallop, Bay	1.3 (0.1-3.9)	61
Scallop, Calico	1.5 (0.4-3.7)	61
Scallop, Sea	4.3 (0.3-8.7)	61

SECTION 4:
NUTRIENT PROFILES FOR SPECIES GROUPS

This section provides estimated nutrient profiles for twenty-two **species groups**. These profiles were compiled by averaging data for species with similar common and/or market names, and is meant to represent general categories that consumers typically encounter in the southeast.

Data for **species groups** can be used when the common name of a particular species is unknown, or when more general information is needed. For example, to analyze a recipe that simply calls for grouper, a user can either refer to Section 3 and choose a particular grouper species, or use this section, which provides an estimated nutrient profile for the species group "grouper."

SPECIES GROUPS

The twenty-two **species groups** are listed in Table 4.1, and in parenthesis are the individual species that were averaged together to create each category. Table 4.2 provides estimated nutrient values for these categories (for 100 gm raw, edible portions).

Table 4.1 SPECIES COMBINED TO CREATE SPECIES GROUPS

Bass, freshwater (largemouth, rock, white, striped)
Bass, saltwater (black sea, striped)
Catfish (F) (bullhead brown, channel {cultured}, channel {wild}, white)
Drum (black, red {cultured}, red {wild})
Eel (American, rex)
Flounder (gulf, southern, summer, winter)
Grouper (black, gag, jewfish, red, scamp, snowy, speckled hind, yellowedge, yellowmouth)
Herring (alewife, atlantic, round, thread)
Perch (sand, silver, white, yellow)
Porgy (knobbed, red, scup, sheepshead)
Seatrout (sand, silver, spotted, weakfish)
Shark (blacktip, lemon, sandbar)
Snapper (blackfin, gray, lane, red, silk, vermilion, yellowtail)
Sunfish (bluegill, black crappie, pumpkinseed, white crappie)
Tilefish (blackline, blueline, golden)
Trout (brook, rainbow)
Tuna (bigeye, yellowfin)
Crab (cooked) (blue, golden, jonah, red, rock)
Lobster (American, slipper, spiny)
Shrimp (brown, pink, white)
Scallop (bay, calico, sea)
Squid (longfin, shortfin)

Table 4.2

ESTIMATED NUTRIENT PROFILES FOR SPECIES GROUPS
(for 100 gram raw, edible portions)

Species Group	Bass (F)	Bass (S)	Catfish (F)	Drum	Eel	Flounder	Grouper	Herring	Perch	Porgy	Seatrout	Shark	Snapper	Sunfish	Tilefish	Trout	Tuna
Calories[1]	94 82-110	94 93-95	100 84-113	96 93-105	159 137-180	90 87-93	103 89-128	129 110-159	99 91-107	106 102-111	97 82-105	86 81-90	95 92-98	92 87-94	96 91-105	117 112-121	116
Protein (g)	18 17-22	18 17-19	18 14-24	19 16-21	19	20 16-22	20 18-21	19 18-21	20 19-20	20 15-22	19 16-20	19 18-20	20 18-24	19 16-20	19 17-21	21 19-22	23
Fat[2] (g)	1.8 0.5-4.6	1.9 0.6-3.0	2.7 0.1-7.7	1.8 0.6-2.8	8.6 3.4-18.3	0.7 0.1-1.5	1.6 0.4-7.4	5.2 2.6-11.2	1.7 0.6-5.1	2.2 0.7-5.9	2.0 0.6-4.2	0.6 0.3- 0.8	0.8 0.1-2.3	1.0 0.4-2.9	1.6 0.8-4.8	3.2 1.7-5.4	1.3 0.5-4.2
Sat'd[2] (g)	0.3	0.3	0.6	0.3	2.4	0.2	0.5	1.4	0.3	0.6	0.6	<0.1	0.2	0.2	0.3	0.6	0.6
Mono[2] (g)	0.5	0.4	1.0	0.3	5.1	0.2	0.4	1.7	0.4	0.6	0.6	<0.1	0.1	0.2	0.3	0.8	0.9
Poly[2] (g)	0.5	0.5	0.6	0.3	1.8	0.3	0.4	1.5	0.5	0.6	0.4	0.1	0.3	0.3	0.3	1.0	0.7
n-3[3] (g)	0.4	0.4	0.2	0.1	0.8	0.2	0.3	1.0	0.2	0.4	0.3	<0.1	0.2	0.2	0.3	0.5	0.6
Choles-terol (mg)	66 50-80	80	54 20-74	64 60-68	82 81-83	60 57-66	49 42-57	63 54-84	85 79-90	38	-	35 31-37	41 28-56	59 25-71	47 42-49	61 50-68	43 32-45
Na (mg)	63 50-70	66 56-69	63 30-102	87 85-89	67 61-73	49 33-67	55 35-96	90	50	58 23-84	50 41-59	71 53-82	45 33-70	75 70-80	65 53-89	45 27-60	62 37-87
K (mg)	390	306	384	365	69	406	398	327	345	346	435	525	337	395	339	457	472
P (mg)	190	194	213	-	-	220	138	236	205	313	217	-	154	190	187	250	191
Ca (mg)	60	10	53	19	12	13	11	57	75	31	14	5	17	90	16	77	9

Mg (mg)	30	41	27	-	-	47	33	32	30	28	50	-	32	30	27	36	-
I (mcg)	3	45	-	-	-	18	-	-	42	30	-	28	-	3	-	-	27
Mn (mg)	0.50	0.02	0.10	0.02	-	0.03	<0.01	0.04	0.28	0.02	0.02	0.01	0.01	0.70	0.01	0.80	0.02
Zn (mg)	0.9	0.4	0.9	0.5	-	0.5	0.4	1.0	0.9	0.4	0.5	0.4	0.4	1.3	0.4	1.1	0.5
Cu (mg)	0.25	0.03	0.09	0.03	-	0.04	0.02	0.09	0.13	0.04	0.06	0.04	0.03	0.30	0.03	0.31	0.09
Se (mg)	0.06	0.06	0.03	0.07	0.04	0.07	0.09	0.06	0.07	0.07	0.07	0.11	0.06	-	0.33	-	0.11
Fe (mg)	1.0	0.9	0.7	-	-	0.2	0.3	1.1	0.9	0.5	0.2	-	0.2	1.2	0.3	1.7	0.7
Thiamin (mg)	-	-	0.34	-	-	0.08	-	0.09	-	-	-	-	0.18	-	-	0.07	0.43
Riboflavin (mg)	-	-	0.07	-	-	0.10	-	0.23	-	-	-	-	-	-	-	0.19	0.05
Niacin (mg)	-	-	2.3	-	-	2.5	-	3.2	-	-	-	-	-	-	-	-	9.8
Panto (mg)	-	-	0.6	-	-	-	-	0.65	-	-	-	-	-	-	-	-	-
Vit B6 (mg)	-	-	0.20	-	-	-	-	0.30	-	-	-	-	-	-	-	-	-
Vit B12 (mcg)	3.8	3.8	-	-	-	2.1	-	13.7	-	-	-	-	-	-	-	-	-
Vit A (RE)	-	-	-	-	-	-	-	28	-	-	-	-	-	-	-	19	16

Species Group	Crab (cooked)[1]	Lobster	Shrimp[4]	Scallop[4]	Squid
Calories[1]	91 77-95	85 82-87	103 96-113	84 75-97	79 75-82
Protein (g)	17 15-19	18 16-19	20 17-22	16 13-22	15 10-21
Fat[2] (g)	1.3 0.7-2.8	1.0 0.6-2.1	1.5 0.8-2.2	0.8 0.1-1.1	1.7 1.1-2.0
Sat'd[2] (g)	0.2	0.2	0.2	0.1	0.4
Mono[2] (g)	0.2	0.2	0.2	<0.1	0.1
Poly[2] (g)	0.4	0.6	0.5	0.3	0.7
n-3[3] (g)	0.3	0.3	0.3	0.2	0.6
Cholesterol (mg)	66 25-100	89 70-140	152 89-201	36 15-47	201 81-450
Na (mg)	283 57-480	125 120-130	169 91-238	87	44
K (mg)	321	80	210	412	-
P (mg)	226	14	252	217	-

Ca (mg)	75	-	49	24	12
Mg (mg)	28	-	42	56	33
I (mcg)	-	83	45	-	-
Mn (mg)	0.14	0.03	0.07	0.11	0.03
Zn (mg)	4.2	2.2	1.3	1.2	1.2
Cu (mg)	0.64	0.86	0.28	0.04	0.42
Se (mg)	0.18	0.04	0.05	0.05	0.06
Fe (mg)	0.8	-	1.3	0.1	0.2
Thiamin (mg)	0.06	-	0.04	-	-
Riboflavin (mg)	-	0.05	0.05	-	-
Niacin (mg)	-	1.5	2.9	-	-
Pantothenic Acid (mg)	-	1.63	-	-	-
Vitamin B6 (mg)	-	0.93	0.85	-	-
Vitamin B12 (mcg)	7.3	-	-	-	-
Vitamin A (RE)	-	-	-	-	-

TABLE 4 ENDNOTES

[1] Calories were determined by averaging the calorie values from Table 3 for the appropriate species.

[2] Average values for total fat and fatty acids were determined by averaging values from Table 3. Since publications often report total fat without reporting fatty acids, the average value for total fat sometimes appears inconsistent (too high or too low) when compared to the sum of fatty acid values.

[3] Values for omega-3 fatty acids were obtained by adding values for eicosapentaenoic acid (20:5) and docosahexaenoic acid (22:6).

[4] Primary references provided only a limited amount of data on the carbohydrate content of various shellfish. Average values for specific species are listed below. The reference numbers correlate with numbers in the Seafood Nutrition Reference File (see Section 6).

Species	CHO (gm/100 gm)	Ref. #
Crab, Jonah	3.1	251
Crab, Red	1.4 (1.3-1.6)	251
Shrimp, White	2.7	18
Oyster, Eastern	3.6 (0.5-7.2)	78
Scallop, Bay	1.3 (0.1-3.9)	61
Scallop, Calico	1.5 (0.4-3.7)	61
Scallop, Sea	4.3 (0.3-8.7)	61

SECTION 5: YIELDS, WEIGHTS AND MEASURES FOR DETERMINING THE NUTRIENT COMPOSITION OF SEAFOODS

Researchers most often report nutrient data for seafoods on the basis of 100 gram, raw, edible portions. However, in practical situations, users often require data for cooked seafoods of various weights, and they sometimes need to account for a certain amount of refuse (bones, skins, etc.). Likewise, data in the literature is often given on a weight basis without any reference to size or volume. But in many situations, such as dietary recalls, the amount eaten is given as a certain size or volume, rather than an estimation of weight. Therefore conversion factors are often necessary.

This section provides a summary of available information needed to make these various conversions. The data was compiled from USDA handbooks, scientific papers and correspondence with the seafood industry (see Section 5 references).

CONVERTING DATA FOR COOKED SEAFOODS

Often, it is necessary to estimate the nutrient value of cooked products using data for uncooked seafoods. The tables in this section can help to convert "uncooked" data to "cooked", but do realize the resulting values will only be estimates. **Actual** nutrient content of the cooked product depends on cooking method, temperature, time, added liquids and moisture loss. Consider these main points when adjusting "uncooked" data:

-Seafoods generally lose moisture during cooking. For example, a 5 ounce uncooked grouper fillet will yield a 3.8 ounce baked fillet (approximately).

-Because of this moisture loss, most of the nutrients become more concentrated, although there is not an actual net gain of nutrients. In other words, the total amount of protein in the grouper fillet described above remains about the same after cooking, but the amount per 100 grams appears to increase.

-Some nutrients, such as thiamin, are partially destroyed during normal cooking procedures. Also, some can be lost into the cooking medium. The percentage of the nutrient that remains after cooking is known as the <u>percent retention</u>.

<u>TO ADJUST UNCOOKED DATA:</u>

1) **Determine the weight of the product before it was cooked.** Usually, this weight is already known. If not, refer to Tables 5.1 through 5.4 for size/weight relationships and cooking yields.

2) **Determine how the cooking method affects the retention of the nutrients you are interested in.** In practical situations, you can assume 100% retention of most nutrients, since the amount lost during cooking is usually insignificant. The nutrients affected the most are certain B vitamins, but except in the case of canning, there's only a slight loss. If, for your purposes, it's important to estimate that loss, refer to Table 5.5, which provides estimated nutrient retention factors.

3) **For deep fried items, refer to table 5.6 to estimate how much fat is absorbed.** Compared to other cooking methods, deep frying dramatically increases the fat content. Table 5.6 can help estimate this increase, but realize that the values in the table are based on limited data and are only for general reference. Consider amount and type of breading, surface area of product, etc.

Table 5.1 WEIGHT/SIZE RELATIONSHIPS FOR CRUSTACEANS

Ref #	Seafood/Description	weight (grams)
1	CRAB, steamed[1]	
	1 cup (not packed), large pieces	155 gm
	1 cup (not packed), flakes	125 gm
	1 cup (packed)	210 gm
1	CRAYFISH, raw (average weights)	
	15-25 per pound, whole (shell-on)	24 gm ea.
	15-25 per pound, edible portion	3.4 gm ea.
1	LOBSTER, meat, cooked[1]	
	1 cup bite size pieces	145 gm
2,4	SHRIMP, raw, headless (average weights)[1,2]	
	"Jumbo" (21-25 count/lb)	
	shell-on	20 gm ea.
	peeled & deveined	16 gm ea.
	"Large" (31-40 count/lb)	
	shell-on	13 gm ea.
	peeled & deveined	10 gm ea.
	"Medium" (41-50 count/lb)	
	shell-on	10 gm ea.
	peeled & deveined	8 gm ea.
	"Small" (51-60 count/lb)	
	shell-on)	8 gm ea.
	peeled & deveined	6 gm ea.

1 Shrimp sizes are based on generally accepted commercial size descriptions for various counts per pound (see reference 4).

2 Peeled and deveined weights are based on yields of 78-82% as stated in Reference 2. Values were rounded off.

Table 5.2 WEIGHT/SIZE RELATIONSHIPS FOR MOLLUSKS

Ref #	Seafood/Description	weight (grams)
1	CLAMS, hard, raw (average meat wt.)	
	Chowders (ex. large, ≤ 14 clams/lb)...	>32 gm ea.
	Mediums (large,14-22 clams/lb).....	27 gm ea.
	Cherry Stones (med., 22-31 clams/lb)...	18 gm ea.
	Littlenecks (small, >31 clams/lb).....	<15 gm ea.
3	CLAMS (yields),	
	HARD, Yield of edible meat from whole clam, in shell.....	10-15%
	SOFT, Yield of edible meat from whole clam, in shell.....	13-30%
1,6	OYSTERS, Eastern, raw (average meat wt.)	
	Counts (extra large, < 19/lb).....	<24 gm ea.
	Extra Selects (large, 19-25/lb), ...	21 gm ea.
	Selects (medium, 25-36/lb), ...	15 gm ea.
	Standards (small, 36-59/lb), ...	10 gm ea.
3	OYSTERS (yield),	
	Yield of edible meat from whole oyster, in shell.....	6-11%

TABLE 5.3 YIELDS FOR SOUTHEASTERN SEAFOOD SPECIES [1,2]
(% yield of edible meat from whole animal)

<20%[3]	20-30%	30-40%	40-50%	>50%
Crayfish	Butterfish	Bass (freshwater & saltwater)	Amberjack	Bluefish
Oysters, Eastern	Catfish, Bullhead Brown	Carp	Cobia	Catfish, Channel "dressed out"
Quahog, Northern	Drum, Black	Catfish, Channel	Drum, Red	Croaker (pan dressed)
	Flounder	Crappie, Black	Mackerel, Spanish	Kingfish
	Perch	Croaker	Shad	Herring
	Spot	Drum, Freshwater	Trout (whole fillets)	Mackerel, Wahoo
	Sunfish	Jack Cravelle	Shrimp	Marlin
	Triggerfish	Grouper		Permit
	Crab, Blue	Mullet, Striped		Shark
	Spiny Lobster	Porgies		Trout (yield from eviscerated)
		Sea Trout		Tuna, Yellowfin
		Sheepshead		
		Snapper		
		Tilefish		
		Trout		
		Tuna, Skipjack		

[1] Unless noted otherwise, % yield = $\frac{\text{weight of skinless, boneless fillet}}{\text{weight of whole animal}} \times 100$

[2] Data compiled from references 2, 7-13, 15, 16 and 20 (see Section 5 references)

[3] % yield for shellfish = $\frac{\text{weight of edible meat}}{\text{weight of whole animal (including shell)}} \times 100$

TABLE 5.4 YIELDS OF COOKED SEAFOODS AFTER VARIOUS COOKING METHODS[1]

Cooking method	Reference numbers[2]	Seafood description before cooking	% yield after cooking[3]
Broiling	3,9,15	finfish fillets (skinless, boneless)	78 (68-85)[4]
Broiling	9	mollusks (edible meat)	60 (59-61)
Baking	3,15,17, 18,19	finfish fillets (skinless, boneless)	79
Baking	17,18	shrimp (peeled and deveined)	85 (79-90)
Microwaving	15,17,18	finfish fillets (skinless, boneless)	87
Microwaving	17	shrimp (peeled and deveined)	80 (76-85)
Boiling	17, 18	shrimp (peeled and deveined)	80 (74-86)
Pan fried	19	finfish fillets (no breading or batter)	75 (72-77)

[1] % yield is defined as: $\frac{\text{weight of cooked item}}{\text{weight of uncooked item}} \times 100$

[2] See Section 5 reference list

[3] Yield values represent averages calculated from the references listed. Actual yields will vary dramatically, depending on time, temperature, added liquids, etc.

[4] Numbers in parenthesis indicate the highest and lowest yields reported in the references listed. Actual ranges may vary considerably.

Table 5.5 RENTENTION OF NUTRIENTS IN COOKED FISH [1, 2, 3]

Cooking procedure	Thiamin	Ribo-flavin	Niacin	Panto-thenic acid	Vitamin B-6	Fol-acin	Vitamin B-12	Vitamin A
	Percent retained							
Dry Heat:								
Finfish:								
Less than 5% fat...	90	95	95	90	90	90	90	90
More than 5% fat...	95	100	100	90	90	90	75	85
Shellfish.....	90	80	95	80	95	95	95	85
Moist Heat:								
Finfish, more than 5% fat.....	90	100	95	90	90	90	95	95
Shellfish.....	95	100	95	95	95	90	100	95
Fried with coating:								
Finfish, less than 5% fat.....	85	95	100	90	90	90	90	85
Shellfish.....	85	95	95	85	90	80	85	95

[1] Reprinted, with permission, from USDA Agriculture Handbook No. 8-15 (2).
[2] Retention of minerals is 100 percent for all cooking procedures.
[3] Values developed for USDA food consumption surveys and based on data from NFPA studies (17,18).

TABLE 5.6 AVERAGE INCREASES IN FAT CONTENT FOR BREADED AND FRIED SEAFOODS[1]

Reference numbers [2]	Description before cooking (100 gm portions)	Weight of breading[3]	Description after cooking	Increase in fat (grams)[4]
17,18	breaded shrimp[5]	35%	deep fried, drained	8.6
17,18	breaded whiting[5]	28%	deep fried, drained	7.3
17,18	breaded pollock[5]	19%	deep fried, drained	5.5
19	trout breaded w/ tempura batter & bread crumbs[6]	NA	deep fried, drained	8.5
19	sucker breaded w/ tempura batter & bread crumbs[6]	NA	deep fried, drained	8.6

[1] Values for increased fat represent averages calculated from the references listed. Actual values for fat will vary dramatically, depending on time, temperature, amount of oil, size and shape of product, etc.

[2] See section 5 References

[3] Percent of breading will vary; typical levels include:
≤ 50% for frozen breaded shrimp
≤ 35% for lightly breaded shrimp

[4] Increase in fat content = $\frac{\text{gm. of fat increased}}{\text{100 gm of breaded raw product}}$

(calculated from references as follows:
% fat in fried item x % cooked yield - % fat in breaded raw item)

[5] Based on 11 samples.

[6] Based on 2 samples.

SECTION 5 REFERENCES

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SECTION 6:
INDEXED NUTRITION REFERENCE FILE

This section is primarily intended for persons needing more detailed information and/or background information about a species. Tables 6.1 and 6.2, used in conjunction with the Seafood Nutrition Reference File, can guide users to the appropriate citations for original references.

A USER'S GUIDE TO TABLES 6.1 & 6.2 - THE SPECIES/REFERENCE TABLES

Data in this handbook represents a summary of data from numerous analytical studies, which are cited in the Seafood Nutrition Reference File (page 151). Tables 6.1 and 6.2, in turn, catalog the data in each reference, according to the species and nutrient values given. The numbers in Tables 6.1 and 6.2, in both bold and regular type, correlate with the numbers in the Seafood Nutrition Reference File.

Primary references are printed in **bold** type (i.e., **247, 250, 255**). These references contain original data and provide proper species identification, acceptable sample treatment and appropriate analytical methods.

Background references, printed in regular type (i.e., 8, 68, 138), contain questionable or unacceptable species identification and/or methods. Also, review papers were considered background, as were results that substantially deviated from the mean of values reported in other references. (Note: several references contained both primary and background data, and thus appear as both bold and regular type within the table).

Example: This excerpt from the table indicates that six references provide proximate data for swordfish: **247, 250**, 7, 8, 68 and 138 (these numbers correlate with numbers in the reference list). **247** and **250** are primary references, while 7,8,68 and 138 contain background information. If a nutrient category is blank (ie., cholesterol and amino acids for Atlantic Sturgeon), then no data is available.

Common Name	Proximates	Lipid/ Fatty Acids	Cholesterol	Amino Acids
Sturgeon, Atlantic	7	**1,5,70,44,181**		
Swordfish	**247,250**,7, 8,68,138	**12,247,250**, 1,8,10	**250**,1,7,8	**250**

(Note: Although both primary and background references are indexed in this table, only values from primary references were averaged together to construct Table 3, the nutrient data table.)

TABLE 6.1 Species/Reference Table: Proximates, Lipids, Amino Acids, Vitamins[1]

The numbers in the table below correspond to reference numbers in the Seafood Nutrition Reference File (page 151). Bold numbers indicate primary references, while numbers in regular text indicate background references. For a detailed guide on using this table, see page 101. For minerals, refer to Table 6.2 (page 127).

Bold print = primary references
Regular print = background references

Common Name[2]	Proximates[3]	Lipid/ Fatty Acids[4]	Cholesterol	Amino Acids	Vitamins
Amberjack,					
Almaco Jack					
Banded Rudderfish					
Greater	7,138	**255,138**	**255**	7	
Anchovy,	163				
Bay					
Dusky					
Silver					
Striped	7,45,138, 239,240, 241				
Barracuda,					
Great	**247,7**	**247**			7

Bass (F)[5],	250	1,250	1,250	250	
Largemouth	28	**25,262,**2,181			28,7
Rock	**114,262,**2,7 181	**25,262,**181	**114,**181		
Smallmouth					
Spotted					
Suwanne					
White	**86,114,262,** 7,181	**25,262,**2,181	**114,**181		
Yellow					
Bass,					
Bank Sea	7				
Black Sea	**9,46,48,51, 67,247,**2,7,181, 250	**67,247,** 12,250		250	250
Rock Sea					
Striped (F+S)	**51,250,**7,68	**5,250,**1,2,181	**250,**1,68	**250**	**250,**68
Bluefish	**9,247,250,** 7,68,138,181	**247,250,255,** 1,2	**250,255,1,** 2,68	**250,**7	**98,250,**7, 68,139
Bonefish					

Table 6.1 (cont'd)

Bold print = primary references
Regular print = background references

Common Name[2]	Proximates[3]	Lipid/ Fatty Acids[4]	Cholesterol	Amino Acids	Vitamins
Bonito,					
Atlantic	7				
Striped					
Bowfin (F)	7				
Buffalo (F)					
Bigmouth					
Smallmouth					
Bumper,					
Atlantic	7,45,239, 241				
Butterfish,	68		68		68
Butterfish	**51,98,107,181 245,250,257,**7, 45,86,138,239, 240,241,242	**12,181,257**	**181,250,257,** 2	**250**	
Gulf					
Harvestfish	7,45				
Carp (F)	**114,250,262,**7, 46,101,138,181	**5,12,25,144,250,** 1,2,147,181,199,227	**250,**1,7,181	7,**250**	**250,**7,101, 102,139

Catfish (F),	8,28,68	8	8,68		8,28,68
Blue					
Bullhead, Brown	**114,262,2,181**	**25,262,1**	**114,1,181**		7
Channel,	7,250	1,2,5,250	1,250	250	250
(cultured)	**137,159,161, 160,258**	**78,129,157,158, 160,197,258,88,** 154,156	**258**		
(wild)	**137,247**	**78,129,197, 247,12,181**			
White					
Catfish,	8	8	8		8
Gafftopsail					7
Hardhead	7,239,241				
Cobia					
Croaker (F+S),					
Atlantic	**9,51,67,190,247 250,259,260,2,7,** 45,54,68,86,181, 239,241,242	**67,190,247,250** 1	**250,1,68**	**250,7**	**102,7,54,68**
Cutlassfish,					
Atlantic	7,45,239,241				
Dolphin (fish)	**247,250,** 7	**247,250,1**	**250**	**250,7**	7,139

Table 6.1 (cont'd)

Bold print = primary references
Regular print = background references

Common Name[2]	Proximates[3]	Lipid/ Fatty Acids[4]	Cholesterol	Amino Acids	Vitamins
Drum,					
Black	**190**,2,7,181	**190**,**255**,1,181	**255**		
Freshwater (F)	**114**,**250**,**262** 2,7,138	**25**,**250**,1,2	**114**,**250**,1,2	**250**,7	7
Red (F+S)					
(cultured)	**94**	**94**			
(wild)	**67**,**94**,**247**, 7,28	**67**,**94**,**247**			28
Eel,	163				
American (F+S)	**62**,2,7,181, 250	**5**,**62**,83,181,250	250	7,250	7,250
Conger			7		
Rex	**246**,**255**		**255**,7		
Escolar		130			
Flounder	8,68,204	1,8,92,204	1,8,27,68,92, 118,136,204	8,68,204	
Gulf	7				
Southern (F+S)	**67**,**247**,7	**67**,**247**			

Flounder (cont'd)					
Summer	48,67,98, 256,7	67,256	256	7	256
Winter	9,48,51,257, 7,98,138,181,245	12,257	257		7
Grouper,	8,68	8	8,68		8,68
Black	7	12,255	255		102
Coney					
Gag	247	247,255	255		
Graysby					
Jewfish		1	1		
Marbled					
Misty					
Mutton Hamlet					
Nassau					
Red	29,2,7,181	1,29,181		7	7
Red Hind					
Rock Hind					
Scamp	67,247	67,247,255,3	255		
Snowy	67,247	67,247,3			

Table 6.1 (cont'd)

Bold print = primary references
Regular print = background references

Common Name[2]	Proximates[3]	Lipid/ Fatty Acids[4]	Cholesterol	Amino Acids	Vitamins
Grouper (cont'd)					
Speckled Hind	**247**	**247**,3			
Tiger					
Warsaw					
Yellowedge	**247**	**247,255**	**255**		
Yellowfin					
Yellowmouth		**255**	**255**		
Grunt,	241				
Bluestriped	7,45				
Margate	45				
Pigfish	7,45				
Sailor's Choice	45				
White	**247**,7,45	**247**			7
Hake,		1			
Gulf					

Hake (cont'd)					
Silver	**257,261,264,181**	**257**	**257,261,264,181**	**264**	
Southern					
Spotted	7				
Herring,	68,163	30	27,68		68
Alewife (F+S)	**51**,2,7,71,181	71,72,74		7	7
Atlantic	**250,257**,7,138	**5,12,250,257** 1,2,7,73,74,95, 106,181,224,234	**250,257**,1,7, 90	**250**	**250**,7
Blueback (F+S)					
Round	7,241	**5**,1,2,181	1,7		7
Thread (F+S)	**31,32**,45,181 239,240,242	**31,32**,181	**31**		
Hogfish					
Jack,					7,139
Bar					
Black					
Crevalle	**247**	**247**	7	7	7
Horse-eye					
Kingfish,					
Gulf					

Table 6.1 (cont'd)

Bold print = primary references
Regular print = background references

Common Name[2]	Proximates[3]	Lipid/ Fatty Acids[4]	Cholesterol	Amino Acids	Vitamins
Kingfish (cont'd),					
Northern	51				
Southern	**67,247,**7,242	**67,247**			
Ladyfish (F+S)	**247,**7	247			7
Mackerel,	8,68	8,115,167	8,27,68,136		8,68
Atlantic	**12,98,107,122, 204,250,256,**2, 7,89,138	**5,11,12,122, 250,204,**1,7,73, 74,95,106,165,166	**122,204,250,256,** 1,2,7,90,138	**122,250,7**	**98,102,204, 250,256,**7
Cero					
Chub	**31,**7,168,181	**31,**1,5,73,181	**31,**1,168	7,168	
King	**67,247,250,** 7,68	**67,247,250,** 1	**250,**1,68	**250**	**102,250,**7, 68
Spanish	**29,51,66,67, 204,247,250** 2,7,28,46,68,98	**29,66,67,204, 247,250**	**204,250,**68	**66,250**	**102,204,250,** 7,28,68
Wahoo					
Marlin,				7	
Blue	7			7	
White				7	

Menhaden,		7,74,230		7	
Atlantic	2,7,229	11,73,229,232		7	7
Finescale					
Gulf	2,7,45,229, 241	229			
Yellowfin					
Mullet,	68	1	1,7,68	7	68,102
Fantail					
Liza					
Redeye					
Striped (F+S)	**46,51,67,107,190 247,250,7,28,** 138,168,181	**12,67,104,247,250** 1,2,5,10,11,40,181	**250,1,168**	**250,7,** 168	**250,7,** 28
White (F+S)					
Oilfish		**5,2,181,204**			
Paddlefish (F)					
Perch,					
Sand					
Silver (F+S)	7,45,241				
White (F+S)	**114,262,181,250**	**1,25,181,250**	**1,114,181,250**	250	
Yellow (F)	**114,262,181,250**	**1,25,181,250**	**1,114,181,250**		

Table 6.1 (cont'd)

Bold print = primary references
Regular print = background references

Common Name[2]	Proximates[3]	Lipid/ Fatty Acids[4]	Cholesterol	Amino Acids	Vitamins
Permit					
Pickerel (F),					
Chain					
Redfin					
Pomfret	181				
Pompano,					102
Florida	**29,247,250,** 2,181	**12,29,247,** **250,1,181**	**250,1**	**250**	7
Porgy,			7		7
Jolthead					
Knobbed	**67**	**67**			
Pinfish (F+S)					
Red	**247**	**247**			
Scup	**48,51,250,264,** 2,7,46,68,138, 181	**12**	**264,68,181**	**250,264**	68
Sheepshead (F+S)	**190,247,250,2**	**190,247,250,1,181**	181	**250**	

Puffer,					
Northern					
Southern					
Ray,					
Stingray, Atlantic					
Cownose	**252**				
Runner,					
Blue	7			7	
Rainbow	7	2	2		
Sailfish	7		7		
Sardine,	163		108		
False Pilchard					
Redear	7				
Scaled	7				
Spanish	**31,32,2,7,181**	**31,32,2,181**	**31**		
Scad,		1	1		7,139
Bigeye	7				7
Rough	7,45,241				
Round	**32,2,7,181**	**32**	7		

Table 6.1 (cont'd)

Bold print = primary references
Regular print = background references

Common Name[2]	Proximates[3]	Lipid/ Fatty Acids[4]	Cholesterol	Amino Acids	Vitamins
Searobin,	86		7		102
Bighead					
Northern					
Seatrout,	68,241,250	250	68,250	250	68
Sand	**190**,7,86,242	**1,190**			
Silver	**260**,2,7,45,181, 239				
Spotted (F+S)	**67,247**,7	**1,67,247**			
Weakfish	**9,51,67, 247**,2,7, 28,46,138	**67,247**			28
Shad (F+S),					
American	**46,51,247, 250**,7,138,143,181	**247**		**250**,7	**98**,7
Gizzard	7				7
Hickory	7				
Threadfin	7				
Shark,		1	1		
Blacktip	7,8	**255**,8	**255**,8		8

Shark (cont'd)					
Bull					
Dusky					
Hammerhead, Great					
Lemon	**247**	**247,3**			
Mako	8	8	8		8
Longfin					
Shortfin					7
Night					
Reef					
Sandbar	**247,7**	**247,255**	**255**		
Silky					
Smooth Dogfish	7,68,250	250	68,250	250	7,68,250
Spinner					
Spiny Dogfish	**263,2,7,68,143,** 181,250	**1,5,263,11,12,74,** 106,181,250	**1,263,7,68,181,** 250	250	**102,7,68,** 250
Thresher	7		7		
Skate,					102
Clearnose	**252,143,181**				

Table 6.1 (cont'd)

Bold print = primary references
Regular print = background references

Common Name[2]	Proximates[3]	Lipid/ Fatty Acids[4]	Cholesterol	Amino Acids	Vitamins
Snapper,	250	250	250	250	7,139 250
Black					
Blackfin					
Cubera					
Cardinal					
Dog					
Gray	7	**255**	**255**		**102**
Lane		**255**	**255**		
Mahogeny					
Mutton					
Queen					
Red (Northern)	**29,46,137,247,** 2,7,8,68,181	**1,5,12,29,78,** **247,8,10,181**	7,8,68	7	**102,7,8,68**
Red (Southern)	68		68		68
Schoolmaster					
Silk		**255**	**255**		

Snapper (cont'd)					
Vermilion	**247**	**247,255**	**255**		
Wenchman					
Yellowtail	7			7	
Snook (F+S)	7,138				7,139
Spadefish,					
Atlantic	7				7,139
Spot (F+S)	**9,51,53,67, 247,250,260,2,7, 45,86,138,181, 239,240,241,242**	**12,53,67,247, 250**		**53,250**	
Sturgeon (F+S),	250	250		250	250
Atlantic	7	**1,5,70,44,181**			7
Shortnose					
Sunfish (F),					
Bluegill	**55,7,181**	**55,7,181**	**55,181**		
Crappie, Black	**114,262,181**	**25,181**	**114,181**		7
Crappie, White	7				
Pumpkinseed	**114,250,2,181**	**25,250,1,181**	**114,250,1,181**	**250**	
Redbreast					

Table 6.1 (cont'd)

Bold print = primary references
Regular print = background references

Common Name[2]	Proximates[3]	Lipid/ Fatty Acids[4]	Cholesterol	Amino Acids	Vitamins
Sunfish (cont'd)					
Redear					
Swordfish	**247,250,7,8,** 68,138	**12,247,250,** 1,8,10	**181,250,1,7,8,** 68	**250**	**250,7,8,68**
Tilapia (F),	181,190				
Blue					
Mozambique	7			7	
Tilefish,	8	8	8		7,8,139
Blackline	**67**	**67**			
Blueline	**247**	**247,255**	**255**		
Goldface					
Sand					
Golden	**98,247,250,7**	**247,250,255**	**255**	**250**	
Triggerfish,					7
Gray	**247**	**247,255**	**255**		
Queen					
Tripletail	7				

Trout (F),	250	250	136,250	250	250
Brook	**114,262,2,7,181**	**1,25,5**	**1,114**	7	7
Brown	7	106			7
Rainbow	**114,250,262,2,** 7,8,68,138,143, 163,228	**5,11,12,25,** **250,1,7,8,** 10,149,199	**114,250,1,7,** 8,68	**250,7**	**250,7,8,68**
Tuna,	163	1	118		7,139
Albacore	**98,2,7,** 46,143	**1,5,12,73,115,** 173,181,255	**1,255,7**	7	7
Bigeye	7,138	**255**	**255,7,90**	7	7
Blackfin					
Bluefin	**250,257,2,7,138,** 181	**5,250,257,1,181**	**250,257,1,2**	**250,7**	**79,250,7**
Little Tunny	7				
Skipjack	**250,7,181**	**5,250,1,7,115,** 169,170,181	**250,1,7,181**	**250,7**	**250,7**
Yellowfin	**250,257,2,** 7,8,98,138	**5,250,255,257,** 8,78,115,173,181	**250,255,257,** 2,7,8	**250,7**	**250,7,8**
CRUSTACEANS----------					
Crab,		92	14,27,92,108	193	
Blue (F+S) (cooked)	**9,116,250**	**57,78,250**	**35,250**	**250**	**102,250**

Table 6.1 (cont'd)

Bold print = primary references
Regular print = background references

Common Name[2]	Proximates[3]	Lipid/ Fatty Acids[4]	Cholesterol	Amino Acids	Vitamins
Crab (cont'd)					
Blue (F+S) (raw)	**9,43,58,250,** 7,16,68, 138,182	**57,250,**1,7, 10,11,16,236	**35,43,250,** 1,7,16,68, 138	**17,250,** 7,16	**102,**7,68
Blue (soft)	**59,64**	**64,255**	**255**		**102**
Golden	**63**				
Jonah	**33,251,253,**7,181	**253,**181	**33,181,253,**2		
Red	**33,251,253,**7,181	**253,**181	**33,181,253,**2		
Rock	**33,253,**132,181	**253,**181	**33,181,253,**2		
Stone (FL)		**255**	**255**		
Stone (Gulf)					
Crayfish (F),	33,250	1,47,93 129,250	1,33,250	250	250
Red Swamp	**116,**7	198			
White River					

Lobster,		115	14,136	193	7,139
American	**250**,7,33, 68,89	**99**,80, 109	**99,181,250,** 33,68,109	**250**	**250**,7,68
Slipper		**255**	**255**		
Spanish (aequino.)					
Spanish (brasil.)					
Spanish (notifer)					
Spiny (argus)	**33,116**,7, 28,68,250	**1**,78,181,236,250	**1,33**,68,181,250	250	28,68,250
Shrimp,	2,8,68,89, 225	1,2,8,92,115, 129,236	1,2,8,14,27, 68,92,108, 117,118		8,60,58,225
Brown	**43,116,188**,7, 181,250,256	**1,15,78,119,188,256 266**,2,7,181,250	**1,43,119,188, 256**,2,181,250	**188**,7,250	**256**,186,250
Pink	**116**,2,7,28, 181,250	250	2,250	250	28,250
Rock	7	**255**	**255**,2,181,268		
Royal Red		**255**	**255**		
White	**18,43,65,116, 187,204**,7, 181,250	**1,78,204**,2,250	**1,35,43,181,204,** 2,250,268	**19,191,** 7,192, 193,250	**18,65,204**,7,250

Table 6.1 (cont'd)

Bold print = primary references
Regular print = background references

Common Name[2]	Proximates[3]	Lipid/ Fatty Acids[4]	Cholesterol	Amino Acids	Vitamins
MOLLUSKS----------					
Clam,	68	68,92	14,68,92, 117,118		7,68,139
Freshwater				195	
Softshell	138	**1,78,194,**120	**27,194,**218,268	7	7,120
Sunray, Venus					
Surfclam, Atlantic	**137,**7,265	**1,78,194,**4,265	**194,**218,265,268	7	
Conch,					
Fighting (alatus)					
Fighting (pugillus)					
Horse					
Milk					
Queen					
Octopus (ssp.)	**250**	**250,**1,106,181,236	**250,**1,2,7	**250,**7	**250,**7,139

Oyster,			108		
Eastern	**9,43,91, 116,137,153, 211,212,213, 217,250,7,8,** 28, 68,138,181,205	**22,43,44,78,116, 210,250,254,1,** 4,7,8,74,92,194, 181,215,236	**22,35,43,250** 1,8,14,21,23,27, 27,68,91,92,105, 117,118,127,138 181,194,211,213, 215,216,218	**153,213, 250,258,** 7,195	**24,250,7,8** 28,68
Quahog,	8	8	8		8
Northern	**9,43,137,7**	**1,44,78,4,** 20,181,194	**1,43,27,** 181,194,268	7	7
Southern					
Scallop,	68,89,138,250	1,115,181,236,250	1,14,27,68,108, 117,181,194,250	250	68,250
Bay	**36,61,7,138**	**36,78,4,7**	138		
Calico	**36,61,137,7,8,** 138	**1,36,78,4,7,8**	8	8	
Sea	**9,36,61,137,** 7,8,128,181	**1,11,36,44,78, 112,4,7,8,80,194**	**1,112,181,8,97**		8
Squid,	68,138,250	1,250	68,250	250	68,250
Arrow		140			
Brief, Atlantic	7	7			**264,195**
Longfin	**81,116,181,249, 264,7,181**	**1,44,81,4,140,181**	**81,264,2,181**	7	7

Table 6.1 (cont'd)

Bold print = primary references
Regular print = background references

Common Name[2]	Proximates[3]	Lipid/ Fatty Acids[4]	Cholesterol	Amino Acids	Vitamins
Squid (cont'd)					
N. Shortfin	**81**	**1,34,81**,4,44, 74,181,236	**81**,2		
Whelk (spp.)	250	**194**,250	**194**,218,250	7,250	7,250

TABLE 6.1 ENDNOTES

[1] Each reference was evaluated for proper species identification, sampling location, sample form, analytical methods and concurrence with already established data. "Primary" publications provide the most reliable data, as interpreted by the authors.

[2] Common names are based on the references and listings presented in Section 2.

[3] The "Proximate" column lists references that provide data for at least one of the following: moisture, protein, carbohydrate, ash and calories. Some of these references may also provide data on total fat.

[4] The "Lipid/Fatty Acids" column lists references that provide data for total fat and/or fatty acids.

[5] (F)=freshwater habitat; (F+S)=fresh, brackish and/or saltwater habitat. No designation implies saltwater.

Table 6.2 Species/Reference Table: Minerals[1]

The numbers in the table below correspond to reference numbers in the Seafood Nutrition Reference File (page 151). Bold numbers indicate primary references, while numbers in regular text indicate background references. For a detailed guide on using this table, see page 101. For other nutrients, refer to Table 6.1 (page 102).

Bold print = primary references
Regular print = background references

Common Name[2]	Minerals							
	Na	K	Ca	P	I	Hg	Se	Others
Amberjack,	237	237	237	237				237
Almaco Jack								
Banded Rudderfish								
Greater	**255**	**255**	**255**					
Anchovy,	237	163, 237	163, 237	163, 237		222		163,222,237
Bay								**50**
Dusky								
Silver								
Striped						6	6	6
Barracuda,	237	237	237	237	222			222,237
Great	**26**	**26**	7	7		**6**	**6**	**6,7**

Table 6.2 (cont'd)

Bold print = primary references
Regular print = background references

Common Name	Minerals							
	Na	K	Ca	P	I	Hg	Se	Others
Bass (F)[3],	250	250	250	250				250
Largemouth					**244**,7, 222	7,222	7,162 260	222
Rock	**114**,181	**114**	**114**	**114**	222	7,162	**114**	222
Smallmouth					222	7,222	7,162	222
Spotted					222	7,222	7	222
Suwanne					222	222		222
White	**114**,181	**114**	**114**,237	**114**	222	7,222	7,162	**114**,7,222
Yellow			237		222	7,222		222
Bass,								
Bank Sea	237	237	237	237	222			222,237
Black Sea	**9,46**,1,7 181,237 250	**9,46**,7, 237,250	**9**,237, 250	**9**,7, 237,250	222	**6,50**,7	**6**	**6,9,50**,7, 222,237,250
Rock Sea	237	237	237	237	222			222,237
Striped (F+S)	**250**,68	68	7	7	**244**,7	**6,50**,7	6,7,162	**6,50,250**, 7,68
Bluefish	**9,250**, **255**,68, 181	**9,250**, **255**,68	**9,250**, **255**,7	**9,250**, 7	**244**, 255,7, 49,222	**6,50,200**	**6,255**	**6,9,200,250**, 7,68,222

Bonefish								
Bonito,								
Atlantic		7	7					7
Striped								7
Bowfin (F)					244,7, 222	7,222	7	7
Buffalo (F),	46	46						
Bigmouth					244			
Smallmouth					244			
Bumper,								
Atlantic								
Butterfish,	237	237	237	237	222			222
Butterfish	245,250, 68,	245,250, 68,				6	6	6,250,68
Gulf								
Harvestfish						6	6	6
Carp (F)	250,7, 46,147, 237	250,7, 46,147, 237	250,7, 237	250,7, 237	244,7, 222	7,222	162	250,7,222, 237
Catfish (F),	8,68	68	8	8	222	222		8,68,222
Blue						7		7

Table 6.2 - Minerals (cont'd)

Table 6.2 (cont'd)

Bold print = primary references
Regular print = background references

Common Name	Minerals							
	Na	K	Ca	P	I	Hg	Se	Others
Catfish (F) (cont'd)								
Bullhead, Brown	**114,181**	**114**	**114**	**114**		**6,7**	**6,162**	**6,114,7**
Channel,	250	250	250	250	7,244			7,250
(cultured)	**159 258**	**159 258**	**137,159 258**	**137,159 258**		**258**	**258**	**159**
(wild)			**137**	**137**		**6,13**	**6,162**	**6,13**
White						**6**	**6**	**6**
Catfish,	8,237	237	8,237	8,237	222			8,222,237
Gafftopsail			7	7		**6,50**	**6**	**6,50**
Hardhead						**6**	**6**	**6**
Cobia								
Croaker (F+S),								
Atlantic	**9,250,** 7,68, 237	**9,250,** 7,68, 237	**9,250,** 7,237	**9,250,** 7,237		**6**	**6**	**6,9,250,** 7,68,237
Cutlassfish, Atlantic	237	237	237	237	222			222,237
Dolphin (fish)	**250**,7, 237	**250**,7, 237	7,237,	7,237,	7,222	**6,76**,7, 222	**6**	**6,250**,7,222

Drum,	237	237	237	237	222	222		222,237
Black	**255**	**255**	**255**			**6**	**6**	**6**
Freshwater (F)	**114, 250,7**	**114, 250,7**	**114, 250**	**114, 250**	7,244	7	7,162	**114,250, 7**
Red (F+S)								
(cultured)								
(wild)	7	7				**6**	**6**	**6**
Eel,		163	163	163				163
American (F+S)	237, 250	237, 250	7,237, 250	7,237, 250	7,222	**6,50,7, 222**	**6**	**6,50,7,222, 237,250**
Conger	237	237	237	237		**6,222**	**6**	**6,222,237**
Rex	**255**	**255**	**255**			**246, 255**		
Escolar						**76**		
Flounder,	8,68,144 204,237	68,204, 237	8,237	8,237			204	8,68,204 237
Gulf			7	7	222	**6,222**	**6**	**6,222**
Southern (F+S)	7	7	7	7	222	**6,222**	**6**	**6,50,222**
Summer	**256**	**256**			222	**6,222**	**6,256**	**6,256,222**
Winter	**9,181, 245**	**9,245**	**9**	**9**	**244,7 37,49, 222**	**6,7,222**	**6**	**6,9,7,222**

Table 6.2 - Minerals (cont'd)

Table 6.2 (cont'd)

Bold print = primary references
Regular print = background references

Common Name	Minerals							
	Na	K	Ca	P	I	Hg	Se	Others
Grouper,	8,68	68	8	8				8,68
Black	**255**	**255**	**255**			**6**	**6**	**6**
Coney								
Gag	**255**	**255**	**255**			**6**	**6**	**6**
Graysby								
Jewfish						**6**	**6**	**6**
Marbled								
Misty								
Mutton hamlet								
Nassau								
Red	**26,29, 7,181**	**26,29, 7**	**29,7**	**29,7**	**7**	**6**	**6**	**6,29**
Red Hind								
Rock Hind								
Scamp	**255**	**255**	**255**			**6**	**6**	**6**
Snowy								
Speckled Hind						**6**	**6**	**6**

Grouper (cont'd),								
Tiger								
Warsaw								
Yellowedge	**255**	**255**	**255**					
Yellowfin								
Yellowmouth	**255**	**255**	**255**			**6**	**6**	**6**
Grunt,								
Bluestriped			7	7		**6**	**6,7**	**6**
Margate								
Pigfish						**6**	**6**	**6**
Sailor's Choice								
White			7	7		**6**	**6**	**6**
Hake,								
Gulf								
Silver	**264**		**261,264**			**6**	**6**	**6,264**
Southern								
Spotted						**6**	**6**	**6**
Herring,	68,144, 237	68,163, 237	163, 237	163, 237	222	222	41, 238	68,163,222, 237,238

Table 6.2 (cont'd)

Bold print = primary references
Regular print = background references

Common Name	Minerals							
	Na	K	Ca	P	I	Hg	Se	Others
Herring (cont'd),								
Alewife (F+S)					49,244	7		
Atlantic	**250**	**250**,7	**250**,7	**250**,7	7,74	**6**,7,113	**6**,7,113	**6,250**,7, 113,231,238
Blueback (F+S)						6	6	6
Round			7	7		6,7	6	6
Thread (F+S)			7	7				
Hogfish	**26**	**26**						
Jack,	237	237	237	237	222	222		222,237
Bar								
Black								
Crevalle			7	7		**6**	**6**	**6**,7
Horse-eye								
Kingfish,	237	237						
Gulf	7	7						
Northern						**6**	**6**	**6**
Southern						**6**	**6**	**6**

Ladyfish (F+S)						6	6,7	6
Mackerel,	8,46, 68,237	68,237	8,237	8,237	49,222	222		8,68,222, 237
Atlantic	122,204, 250,256 7,89,98	204,250 256,7,89 98	122,250, 7,89	250,7, 89	244,7, 37	6,7,113	6,204, 256,7, 113,238	6,122,204,250, 256,7,113,238
Cero								
Chub					37	6	6	6
King	250,68	250,68	250,7	250,7	7	6	6	6,250,7,68
Spanish	26,29, 204,250 7,46, 68,98	26,29, 204,250, 7,46,68, 98	29,250, 7	29,250, 7	244,7, 49	6,50,7	6,204	6,29,50,204, 250,7,68
Wahoo			7	7		6	6	6
Marlin,								
Blue			7	7		7		
White						76,7, 220		
Menhaden,								
Atlantic	7	7	7	7	7	6,7	6	6,7
Finescale								
Gulf						6	6	6
Yellowfin						6	6	6,7

Table 6.2 - Minerals (cont'd)

Table 6.2 (cont'd)

Bold print = primary references
Regular print = background references

Common Name	Minerals							
	Na	K	Ca	P	I	Hg	Se	Others
Mullet,	68, 237	68, 237	237	237	222	222		68,222,237
Fantail								
Liza			7	7				
Redeye								
Striped (F+S)	**46,250,** 7,98, 147	**46,250,** 7,46,98, 147	**250,7,**	**250,7**	7	**6,50,** 7,261	6,260	**6,50,250,** 7
White (F+S)				7				7
Oilfish								
Paddlefish (F)								
Perch,								
Sand								
Silver (F+S)						**6**	**6**	**6,50**
White (F+S)	**114,262** 181,250	**114,** 250	**114,** 250	**114,7,** 250	**244,** 7,49	**6**	**6**	**6,114,** 7,250
Yellow (F)	**114,46,** 181	**114,46**	**114**	**114**				**114**
Permit			7	7		**6**	**6**	**6,7**

Pickerel (F),								237
Chain						7	7	7
Redfin								
Pomfret								
Pompano,								
Florida	**29,250** 181	**29,250**	**29,250,** 7	**29,250,** 7	**244,7,** 222	**6,222**	**6**	**6,29,250,** 222
Porgy,	237	237	7,237	7,237	222	7,222		7,222,237
Jolthead								
Knobbed								
Pinfish (F+S)								
Red								
Porgy (cont'd)								
Scup	**46,250,** **264,7,** 68,181	**46,250** 7,68	**250,264**		**244,49**	**6**	**6**	**6,250,264,68**
Sheepshead (F+S)	**250,7**	**250**	**250,7**	**250**			7	**250**
Puffer,		237	237	237				222
Northern								
Southern								

Table 6.2 (cont'd)

Bold print = primary references
Regular print = background references

Common Name	Minerals							
	Na	K	Ca	P	I	Hg	Se	Others
Ray,								
Stingray, Atlantic	237	237	237	237				222,237
Cownose				237		**50**		**50,237**
Runner,								
Blue			7	7	7	**6**	**6**	**6**
Rainbow								7
Sailfish						**6,7**	**6**	**6**
Sardine,	237	163, 237	163, 23	163, 237				163,237
False Pilchard								
Redear								
Scaled								
Spanish	52							
Scad,	237	237	237	237				7,237
Bigeye	7	7	7	7		7		7
Rough								
Round						**50,6,7**	6	**50,6,7**

Searobin,					222			237
Bighead								
Northern								
Seatrout,	68,237, 250	68,237, 250	237, 250	237, 250				68,250
Sand	7,98	7,98				6	6	6
Silver						6	6	6
Spotted (F+S)					7	6,50,7	6	6,50,7
Weakfish	9,46,7	9,46,7	9	9	7	6	6	6,9
Shad (F+S),	237	237	237	237				237
American	46,250, 7,98,181	46,250, 7,98,		250	250	6,7	6,7	6,250,7
Gizzard			7	7	244,7	7	162	7
Hickory								
Threadfin			7	7				
Shark,								
Blacktip	255,8, 237	255, 237	255,7, 8,237	7,8, 237	255	6	6,255	6,7,8,237
Bull	237	111, 237	111, 237	111, 237		111	111	111,237
Dusky	237	111, 237	111, 237	111, 237		6,50,76, 111,7	6,111	6,50,111, 7,237

Table 6.2 - Minerals (cont'd)

Table 6.2 (cont'd)

Bold print = primary references
Regular print = background references

Common Name	Minerals							
	Na	K	Ca	P	I	Hg	Se	Others
Hammerhead, Great			237	237		222		222,237
Lemon	237	237	237	237				237
Mako	8		8,237	8,237		222		8,237
Longfin								
Shortfin						**76**,7		
Night	237	237	237	237				237
Reef	237	237	237	237				237
Sandbar	**255**, 237	**255**, 237	**255**, 237	237		7		237
Silky	237	237	237	237		**50**,**76**, 7		**50**,7,237
Smooth Dogfish	**68**,237, 250	**68**,237, 250	7,237, 250	7,237, 250		**6**	**6**	**6**,7,**68**,237, 250
Spinner	237	237	237	237				237
Spiny Dogfish	**213**,68, 181,237, 250	**68**,237, 250	237, 250	237, 250		**6**,**263**, 222	**6**,**50**,7, 222	**6**,**50**,**263**,7,**68**, 222,237,250
Thresher				7,237		7		7,237

Skate,	181,237	237	237	237	222	222		222,237
Clearnose						**50,7**		**50,7**
Snapper,	7,237, 250	7,237, 250	7,237, 250	7,237, 250	7,222	7,222		7,222,237, 250
Black								
Blackfin						**6**	**6**	**6**
Cubera								
Cardinal								
Dog								
Gray	**255**	**255**	**255**			**6**	**6**	**6**
Lane	**26,255,** 7	**26,255,** 7	**255**					
Mahogeny								
Mutton								
Queen								
Red (Northern)	**29,46,7,** 8,42,52, 68,98, 181	**29,46,** 7,42, 68,98	**29,137,** 7,8	**29,137,** 7,8	7	**6,13,7**	**6**	**6,13,29,7** 8,68
Red (Southern)	52,68	68						68
Schoolmaster								

Table 6.2 - Minerals (cont'd)

Table 6.2 (cont'd)

Bold print = primary references
Regular print = background references

Common Name	Minerals							
	Na	K	Ca	P	I	Hg	Se	Others
Silk	**255**	**255**	**255**					
Vermilion	**255**	**255**	**255**			**6**	**6**	**6**
Wenchman								
Yellowtail	**26**	**26**	7	7		**6**	**6**	**6**
Snook (F+S)	7	7	7	7		**6**	**6**	**6,7,222**
Spadefish,	237	237	237	237				**7,222,237**
Atlantic			7	7				**7**
Spot (F+S)	**9,250,** 181	**9,250**	**9,250,** 7	**9,250,** 7	**244,7,** 49	**6**	**6**	**6,9,50, 250**
Sturgeon (F+S),		250			222	222		237,250
Atlantic							162	7
Shortnose							7	
Sunfish (F),	237				222	222	41	222,237
Bluegill			7	7	**244**	7		
Crappie, Black	**114,181**	**114**	**114**	**114**			162	**114,7**
Crappie, White					**244,7**	7		

Sunfish (cont'd),							
Pumpkinseed	114,250 181	114,250	114,250	114,250	7		114,250
Redbreast					7		
Redear							
Swordfish	250,7 8,68, 237	250,7, 68,237	250,7, 8,237	250,7, 8,237	76,221, 7,220, 222	221	250,7,8,68, 222,237
Tilapia (F),							
Blue							
Mozambique	7	7	7	7			7
Tilefish,	8		8	8			8
Blackline							
Blueline	255	255	255		255	255	
Goldface							
Sand							
Golden	250, 255	250, 255	250, 255	250	6	6	6,250
Triggerfish,	237	237	237	237			7,222,237
Gray	255	255	255				
Queen							
Tripletail			7	7			7

Table 6.2 - Minerals (cont'd)

Table 6.1 (cont'd)

Bold print = primary references
Regular print = background references

Common Name	Minerals							
	Na	K	Ca	P	I	Hg	Se	Others
Trout (F),	237, 250	237, 250	237, 250	237, 250	222	222		222,237,250
Brook	**114,181**	**114**	**114**	**114,7**	7	7	7,162	**114,7**
Brown		7	7	7	7	6,7	6,7,162	6,7
Rainbow	**114, 250,7, 8,68**	**114, 250,7, 68,163**	**114, 250,7, 8,163**	**114, 250,7, 8,163**	7,37	7,163	162, 163	**114,250, 8,68,163**
Tuna,	237	163, 237	163, 237	163, 237				163,237
Albacore	**98,255 7,46, 148**	**98, 255,7, 46,148**	**255,7**	7,148	**255,7, 222**	6,7,220, 222	**255,6**	6,7,164,174, 222
Bigeye	**255**	**255**	**255,7**	7	**255, 222**	6,7,220, 222	**255,6**	6,7,222
Blackfin					222	**6,222**	**6**	**6,222**
Bluefin	**250,7**	**250**	7	7	222	**6,76, 220,222**	**6**	**6,250,222**
Little Tunny				7	7	**6,50,222**	**6**	**6,50,7,222**
Skipjack	**250,7, 181**	**250,7**	**250,7**	**250,7**		6,7,220, 222	6	**250,6,7,174, 222**
Yellowfin	**250,255 7,8**	**255,7**	**250,255 7,8**	**250, 7,8**	**255, 222**	6,7,13 222	**255,6**	**13,250,6,7, 8,174,222**

CRUSTACEANS								
Crab,					222	222		222
Blue (F+S) (cooked)	9,185, 250	9,185, 250	9,185, 250	9,185, 250	244			9,185,244 250
Blue (F+S) (raw)	16,185, 250,7, 68	16,185, 250,7, 68,182, 237	16,185, 250,7, 182,237	9,16, 185,250, 7,182, 237	7,182	6,13,7	6,7	6,13,16,185, 250,7,39,68, 182,237
Blue (soft)	64,255	64,255	64,255	64	244, 255,49	64	255	64
Golden								
Jonah	251,7, 181,237	251,7, 237	251,7, 237	7,237				251,7,237
Red	251,7, 181	251,7	251,7	7		6,7	6	6,251,7
Rock						6,7	6	6,7
Stone (FL)	255	255	255		255		255	
Stone (Gulf)								
Crayfish (F), Red Swamp	237, 250	237, 250	237, 250	237, 250	222	222		39,222,237, 250
White River								
Lobster,					49		41	39
American	68,89	68,89	89	89	244,7	6,7	6	250,6,7,68

Table 6.2 - Minerals (cont'd)

Table 6.2 (cont'd)

Bold print = primary references
Regular print = background references

Common Name	Minerals							
	Na	K	Ca	P	I	Hg	Se	Others
Lobster (cont'd),								
Slipper	**255**	**255**	**255**		**255**		**255**	
Spanish (aeqino.)								
Spanish (brasil.)								
Spanish (notifer)								
Spiny (argus)	68,250	68	7,250	7,250		**6,13**	6	**13,6,68,250**
Shrimp,	**8,26, 68,89, 237**	**26,68, 89,237**	**8,89, 237**	**8,89, 237**	49,222	**222**	41	**8,39,68, 222,237**
Brown	**42,188, 256,7, 250**	**42,188, 256,7,25**	**188,7, 250**	**188,7, 250**		**6,13,7**	**6,256**	**6,13,188,256, 7,250**
Pink	250	250	7,250	7,250		6	6	6,7,25
Rock	**255**	**255**	**255**		**255**		**255**	
Royal Red	255	**255**	**255**			**6,255**	**6**	**6,255**
White	**65,187, 204,250**	**65,187, 204,250**	**65,187, 7,18, 250**	**65,187, 7,250**	**244, 7**	**6,13**	**6,204**	**6,13,65,187, 204,7,18,250**

MOLLUSKS								
Clam,	68, 237	68, 237	237	237			41	68,237
Freshwater								222
Softshell			7	7	7	**6,13,7**	**6**	**6,13,39,7,** 222
Sunray, Venus					222	222		222
Surfclam, Atlantic			**137**	**137**		**6,13**	**6**	**6,13**
Conch,								
Fighting (alatus)								
Fighting (pugillus)								
Horse								
Milk								
Queen								
Octopus (ssp.)	7,237	7,237	**250**,7, 237	**250**,7, 237	222	222		**250**,7,222
Oyster,								
Eastern	**9,153, 217,248, 250,8** 68,181, 205,237	**9,153, 212,248, 250**,68, 205,237	**9,137, 153,212, 248,250,** 7,8,205, 237	**9,137, 212,250,** 7,8,237	**153**,7 37,49, 222	**13,153,** 7,222	**153,** 41 222,237	**9,13,39,153, 212,248, 250**,7,8, 68,205,214,

Table 6.2 - Minerals (cont'd)

Table 6.2 (cont'd)

Bold print = primary references
Regular print = background references

Common Name	Minerals							
	Na	K	Ca	P	I	Hg	Se	Others
Quahog,	8		8	8	49			8
Northern	**9**	**9**	**9,137,** 87	**9,137,** 87	**244,7**	**6,13,7**	6	**6,9,13,39,** 7
Southern								
Scallop,	68,181, 237,250	68,237, 250	237, 250	237, 250	49,222	222	41	68,222,237, 250
Bay						**6,13**	**6**	**6,13**
Calico	8		**137,7,** 8	**137,7,** 8		**6,13,7**	**6**	**6,13,7,8**
Sea	**9,8,** 89,181	**9,89**	**9,137,** 7,8,89	**9,137,** 7,8,89		**6,13**	**6**	**6,9,13,8**
Squid,	68,237, 250	68,237, 250	237, 250	237, 250	222	222		68,222,237, 250
Arrow								
Brief, Atlantic								
Longfin	**264,181**	**264,7**	7		**6**	**6**		**6,264,7**
N. Shortfin						**6,7**	**6**	**6**
Whelk (spp.)	7, 250	7,237, 250	7,237, 50	7,237, 250	7			7,222,250

TABLE 6.2 ENDNOTES

[1] Each reference was evaluated for proper species identification, sampling location, sample form, analytical methods and concurrence with already established data. "Primary" publications provide the most reliable data, as interpreted by the authors.

[2] Common names are based on the references and listings presented in Section 2.

[3] (F)=freshwater habitat; (F+S)=fresh, brackish and/or saltwater habitat. No designation implies saltwater.

SEAFOOD NUTRITION REFERENCE FILE
(Numerical List)

The seafood nutrition file lists all primary and background references that were used to compile nutrient data in this handbook. This list is designed to be used in conjuction with the Species/Reference Tables, 6.1 and 6.2 (see p. 101). For an alphabetical listing of the file, go to page 175.

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SEAFOOD NUTRITION REFERENCE FILE
(Alphabetical List)

The seafood nutrition reference file lists all primary and background references that were used to compile nutrient data in this handbook. For a numerical listing of the seafood nutrition reference file, go to page 151.

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ENDNOTES FOR
SEAFOOD NUTRITION REFERENCE FILE

In most cases, nutrient data was collected according to the methods outlined in "Methods for Compilation of Data" (see Section 1). Any special conversions, adjustments or other decisions regarding interpretation of the data are noted below.

[1] Reference #1 (Exler & Weihrauch, 1986) - Provides "provisional" data and preceded publication of USDA Handbook 8-15. For purposes of this database, reference #1 served as a primary reference only for those species that did not later appear in USDA Handbook 8-15.

[2] Reference #5 (Exler & Weihrauch, 1976) - Data provided for "A. sturio" was accepted and used for Atlantic Sturgeon (A. oxrynchus). "A. sturio" was the previous scientific name for this species.

[3] Reference #6 (Hall et al, 1978) - Data was presented for raw crabs and cooked lobsters. The values were adjusted for use in Table 3.1, assuming 85% of cooked product and 100% retention for minerals.

[4] Reference #9 (Anthony et al, 1983) - Manganese data for Northern Quahog was questionable, based on 1) questionable labeling of the table as it appeared in the reference, and 2) deviation from NMFS data. This data was designated as background.

[5] Reference #18 (Ahamad et al, 1983) - Units of measure for thiamin and riboflavin data were questionable, therefore thiamin and riboflavin data was designated as background.

[6] Reference #24 (Fieger, 1956) - For each vitamin, this reference reported seven ranges of values for seven different locations. These ranges were converted into one range using the lowest and highest values provided. An average and midpoint were not determined.

[7] Reference #28 (French, et al, 1951) - We were familiar with the authors and their research on the spiny lobster, which they referred to as "Crayfish (Florida Lobster)" in their publication. Therefore, data from this reference was treated as spiny lobster data.

[8] Reference #31 - (Hale & Brown, 1983) - Data for "sterols" was used as total cholesterol for spanish sardine, thread herring and chub mackerel.

[9] Reference #42 - (Thompson, 1964) - The author states that the purpose of the study was to determine the accuracy of the analytical methods, and that the results are not intended to be used as compositional data. Thus, this data was retained as background information.

[10] Reference #44 - (Paradis & Ackman, 1977) - Data reported in this reference was considered "primary" for all species except Atlantic Sturgeon. Data for Atlantic Stugeon was designated as background, because the author had previously reported it, in more detail, in an earlier reference (Ackman, et al, 1975), which is reference #70 in this listing.

[11] Reference #50 (Windom et al, 1973) - Zn and Cu values were presented as mcg/g dry wt, although moisture data was not provided. The average moisture values from other references were used to convert Zn and Cu data to mg/100 gm edible portion. If an average moisture value was not available from other references, then 72% moisture was used (the authors had stated that the moisture varied form 65% to 78%, the midpoint of which is 71.5%, or 72% rounded off).

[12] Reference #53 (Waters, 1982)- Data for raw, frozen spot (minced and fillets) stored for 12 months was given. The mean values for both minced and fillets were averaged together to determine one average value for each nutrient.

[13] Reference # 62 (Otwell and Rickards, 1981) - Data for "wild" American eels was used; data for cultured eels was also available, but was not included as a category in this database.

[14] Reference #64 (Otwell and Koburger, 1985) - In some cases, table 4 combined saturated and unsaturated fatty acids into single values. Therefore, "14:1 n9 + 15:0" was included in totals for monounsaturated fatty acids. "20:1 n9 + 18:3 n3" was included with totals for polyunsaturated fatty acids.

[15] Reference #67 (Beville and Hale, 1982) - The author confirmed that "SAK" fat refers to the method used to determine total fat and that fatty acid values do represent wt% of total fatty acids.

[16] Reference #78 (Bonnet et al, 1974) - Values for Gulf White Shrimp and South Atlantic Shrimp were averaged together.

[17] Reference #91 (Grodner st al, 1977) - Data from all three states was used (Alabama, Louisiana and Maryland).

[18] Reference #98 (Butler, 1958) - For some nutrients, reference 98 provided ranges rather than exact values. This data was accepted as primary, but the ranges could not be used to determine average nutrient values (which were compiled for Table 3.3). They were, however, used to determine overall ranges in Table 3.3.

[19] Reference #106 (Gunstone et al, 1978) - This reference provided fatty acid data for some species, without providing total fat. The average total lipid value determined from other references was used in conjunction with lipid conversion factors.

[20] Reference #114 (Kinsella et al, 1977) - Based on sodium values provided, table 2 was erroneously labeled (Na data was labeled as ppm rather than gm/100 gm, but values were obviously gm/100 gm). The reference was retained as a primary reference and the sodium values were used as gm/100gm.

[21] Reference #153 (Burnett et al, 1979) - Average moisture of 85% was used to convert data to wet weight basis.

[22] Reference #158 (Gibson and Worthington, 1977) - Although total fat for channel catfish was used as primary data, fatty acid data was considered background, because: 1) only 10 fatty acids were given, 2) a significant amount was listed as "other" fatty acids, and 3) FFA data was expressed as mg/100g of dry fat lypholized tissue, but no moisture value was provided.

[23] Reference #159 (Mustafa and Medeiros, 1985) - Data for samples described as "frozen catfish fillets purchased from a commercial catfish processing plant" was used as primary data. Fatty acid data (wt% fatty acids) was available for only 8 major fatty acids, therefore fatty acid data was noted as background data.

[24] Reference #160 (Heaton et al, 1973) - Data for "Channel Catfish" was used; "Albino Catfish" data was not used.

[25] Reference #162 (Pakkala et al, 1972) - Although this reference was one of the few that provided Se data, it was designated as background, since the samples were obtained from 49 different lakes in New York.

[26] Reference #173 (Shuster et al, 1964) - 5 samples of tuna (4 Albacore, 1 Yellowfin) were taken from either the California coast, Oregon coast or Japan; since these were samples taken from Pacific waters, the data was noted as background information.

[27] Reference #187 (Peplow et al, 1977) - The authors inadvertently stated that they had obtained "brown shrimp (Paneaus setiferus)" from Apalachicola Bay. Since we were familiar with the authors and their work, we were able to correctly identify the species as white shrimp, Paneaus setiferus. The data was used as primary data for white shrimp.

[28] Reference #194 (Idler and Wiseman, 1972) - Tables 1 and 2 provide cholesterol as a percent of total sterols. These values were used in combination with table 3, which listed the sterol content of the edible meat.

[29] Reference #197 (Chanmugam et al, 1986) - Reference stated "cultured catfish," which was assumed to be cultured channel catfish.

[30] Reference #210 (Krishnamoorthy et al, 1978) - Data for immature oysters was not used.

[31] Reference #212 (Lopez et al, 1983) - Only the data for fresh oysters was used.

[32] Reference #213 (Sidwell et al, 1979) - This study presents the same results that were reported in reference #91.

[33] Reference #250 (Exler, 1987)- Although this reference represents a summary of data generated by different researchers using a variety of methods, it was used as a primary reference, since it provided unique information. However, values for "mixed species" were noted as background information. Also, carbohydrate data was not used since, in some cases, it was calculated from independent sources of proximate data.